

Technical Proposal For Budget Software

(A Ready Customizable Module of Coder De Dhaka Ltd.)



Submitted By

Coder De Dhaka Ltd.

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To,
Chief Accounts Officer,
Dhaka Water Supply and Sewerage Authority (DWASA).
WASA Bhaban 12th Floor, 98 Kazi Nazrul Islam Ave, Dhaka 1215.

Integrated Budget Software (IBS)

Dear Sir,

While going through this proposal paper, please consider that Coder de Dhaka Ltd. never compromise with quality and We always focus on client's satisfaction.

We would like to begin by thanking you for giving us this opportunity to submit a proposal letter. This document outlines essential information regarding costing and other technical details on development of Budget System for your Organization.

We hope you will find it worthy and competitive.

Sincerely

Ashraful Alam
Director
Coder de Dhaka ltd.

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Consultant's Organization and Experience

1. IT Farm's Organization Coder De Dhaka Ltd.

1.	Name of the Company:	“Coder De Dhaka Ltd.” a software & ICT services company committed to excellence.
2.	Business:	Software & ICT Services Company for Software Design & Development, Installation and Maintenance Services.
3.	Experience in software development	Since 2016, the company has been developing software for the different Local Companies.
5.	Age of the company	Age on date:5 years (approx.)
6.	Address:	House no. 45/A, Dilu Road, New Eskaton, Bangla MotorDhaka - 1212, Bangladesh.
7.	Contact Details:	Phone: (+88) 01516197588)
8.	E-mails:	codereddhaka@gmail.com

Company Profile

Coder De Dhaka Ltd. is an information technology and consulting companies providing the complete systems solutions from conception to implementation, consulting, training, and maintenance. We provide Integrated Accounts Information System (AIS) solutions to small and large Institutions.

At Coder De Dhaka Ltd., we believe that the most sophisticated system is the one that's simple to use. We want our customers to take advantage of what we are good at, so we work closely with our customer base to create features and functions that are easy to implement.

We are proud of our personal commitment to all our clients to provide superior service and support at all times. Our consulting and training services help organizations to develop effective solutions aimed towards achieving organizational goals.

Vision

- As a pathfinder, always to remain a center of excellence in ICT services by recruiting the best talents available and adhering to an unwavering commitment to quality.
- To always remain agile and vibrant through advanced training and cutting-edge technology in order to meet the needs of our clients.
- To always be a leader & trustworthy as a team to our clients, employees and society in general.

Technical Expertise:

Our range of skills is diverse and it covers all the significant technologies that add value to every project. The skill matrix depicts the most popular of these technologies:

Platforms	Environment
Development Languages & Framework	Oracle Forms-12c, Oracle Reports-12c, Crystal Report11, APEX, SQL/PLUS, PHP (Zend, CodeIgniter, CakePHP, Drupal, WordPress, Magento, OpenCart). Object Oriented Programming- JAVA, Visual Studio, ASP.Net, MVC4, C#, Android Studio, Jasper Reports
RDBMS	Oracle 12c, Oracle RAC, MySQL, MS-Access.
Application Server / Middle-ware	Oracle Web-Logic Server 12c, Apache Tomcat.
Groupware and Document Management	Microsoft SharePoint Services
Project Management Tools	Microsoft Project 10
Operating System	MS-Windows (Windows12, Windows 10, Vista, XP, NT, 2000, Windows Server 2003, 2008), Unix, Linux (Red Hat AS-4,4.5,5) 32/64 bit, MS-DOS, Solaris-10 Oracle Linux 7, 8
Tools	Designer 2000, SD-PRO, TOAD, VISIO
Test tools	Quickest Professional / Selenium IDE.
Data communication and networks	TCP/IP, Bluetooth, XML, mobile communication and network management, WIFI (802.11b), GPRS, GPS, RS232, USB.

Experience in Software Development

Over the journey of more than 5 years with technical & business achievements, Coder De Dhaka Ltd. has successfully delivered a number of large & complex solutions for some organizations and SMEs. Our services include in system analysis, design and development, installation, training, operations and maintenance.

Major Client List:

- Dhaka Carriers (Pvt.) Ltd. - S.A. Khan Corporation - M/S. MUNNA TRANSPORT AGENCY - Hyderabad Transport Agency - DHAKA WASA

- Project-I: Dhaka Carriers (Pvt.) Ltd.:		Approx. value of the contract (in BDT): BDT 17,98,000/=
Assignment Name: Implementation of Accounting and Transport Management Software for Dhaka Carriers (Pvt.) Ltd.		
Country: Bangladesh		Duration of assignments (months): 6 months
Location within the country: Gazipur, Bangladesh		
Name of client: Dhaka Carriers (Pvt.) Ltd.		Total No. of Staff month of the assignment: 20-man months
Address: Gazipur, Bangladesh		
Start Date: (Month/Year) Jan 2020	Completion Date: (Month/Year) July 2020	
Name of JV/associated consultants, if any: NA		No. of Staff-Months of key professional staff provided by JV/associated consultants: N/A
Name of Senior Staff (Project Director/Coordinator, Team Leader) involved and functions performed: Ashraful Alam Acted as the Team Leader for this particular project.		
Description of actual services provided by our staffs: Set the requirements of Integrated MIS and FIS system. 1. System Design & Development 2. Training 3. Implementation of the software.		

Firm's Name:	Coder De Dhaka Ltd.
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- **Project-2: S.A. Khan Corporation**

Assignment Name: Implementation of Accounting and Transport Management Software for S.A. Khan Corporation		Approx. value of the contract (in BDT): BDT 15,50,000/=
Country: Bangladesh Location within the country: Gazipur, Bangladesh		Duration of assignments (months): 6 months
Name of client: S.A. Khan Corporation Address: Gazipur, Bangladesh		Total No. of Staff month of the assignment: 15-man months
Start Date: (Month/Year) May 2017	Completion Date: (Month/Year) Nov 2017	
Name of JV/associated consultants, if any: NA		No. of Staff-Months of key professional staff provided by JV/associated consultants: N/A
Name of Senior Staff (Project Director/Coordinator, Team Leader) involved and functions performed: Saiful Alam Acted as the Team Leader for this particular project.		
Description of actual services provided by our staffs: Set the requirements of Integrated MIS and FIS system. 4. System Design & Development 5. Training 6. Implementation of the software.		

Firm's Name:	Coder De Dhaka Ltd.
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- **Project-3: M/S. MUNNA TRANSPORT AGENCY**

Assignment Name: Implementation of Accounting and Transport Management Software for Dhaka Carriers Pvt. Ltd.		Approx. value of the contract (in BDT): BDT 11,75,000/=
Country: Bangladesh Location within the country: Gazipur, Bangladesh		Duration of assignments (months): 6 months
- Name of client: M/S. MUNNA TRANSPORT AGENCY Address: Gazipur, Bangladesh		Total No. of Staff month of the assignment: 15-man months
Start Date: (Month/Year) Jan 2018	Completion Date: (Month/Year) Aug 2018	
Name of JV/associated consultants, if any: NA		No. of Staff-Months of key professional staff provided by JV/associated consultants: N/A
Name of Senior Staff (Project Director/Coordinator, Team Leader) involved and functions performed: Saiful Alam Acted as the Team Leader for this particular project.		
Description of actual services provided by our staffs: Set the requirements of Integrated MIS and FIS system. 7. System Design & Development 8. Training 9. Implementation of the software.		

Firm's Name:	Coder De Dhaka Ltd.
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- **Project-4: DHAKA WASA**

Assignment Name: Outsource Payment (OPay) Management Software for DHAKA WASA		Approx. value of the contract (in BDT): BDT 3,80,000/=
Country: Bangladesh Location within the country: Dhaka, Bangladesh		Duration of assignments (months): 4 months
- Name of client: DHAKA WASA Address: Dhaka, Bangladesh		Total No. of Staff month of the assignment: 5 -man months
Start Date: (Month/Year) Sep 2020	Completion Date: (Month/Year) Jan 2021	
Name of JV/associated consultants, if any: NA		No. of Staff-Months of key professional staff provided by JV/associated consultants: N/A
Name of Senior Staff (Project Director/Coordinator, Team Leader) involved and functions performed: Ashraful Alam Acted as the Team Leader for this particular project.		
Description of actual services provided by our staffs: Set the requirements of Integrated MIS and FIS system. 10. System Design & Development 11. Training 12. Implementation of the software.		

Firm's Name:	Coder De Dhaka Ltd.
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- **Project-4: DHAKA WASA**

Assignment Name: File Management Software for DHAKA WASA		Approx. value of the contract (in BDT): BDT 2,80,000/=
Country: Bangladesh Location within the country: Dhaka, Bangladesh		Duration of assignments (months): 4 months
- Name of client: DHAKA WASA Address: Dhaka, Bangladesh		Total No. of Staff month of the assignment: 5 -man months
Start Date: (Month/Year) Sep 2020	Completion Date: (Month/Year) Jan 2021	
Name of JV/associated consultants, if any: NA		No. of Staff-Months of key professional staff provided by JV/associated consultants: N/A
Name of Senior Staff (Project Director/Coordinator, Team Leader) involved and functions performed: Linkan Roy Acted as the Team Leader for this particular project.		
Description of actual services provided by our staffs: Set the requirements of Integrated MIS and FIS system. 13. System Design & Development 14. Training 15. Implementation of the software.		

Firm's Name:	Coder De Dhaka Ltd.
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Project proposal of Budget Software

2. Background

"Digital Bangladesh" is one of the dreams of the country, and therefore Digital technology to realize Vision 2021, which we commonly call Digital Bangladesh. Despite some Work is underway to achieve bottlenecks and limitations, Digital Bangladesh. Multiple projects Digitization has been completed and numerous projects are underway. Today's people with over 12 core mobile subscribers and 4.4 core internet subscribers, Digitization in various fields of activity. The ultimate objective is to make more and more services available at the doorsteps of the people with increased digitalization where possible. The government emphasized on four elements of "Digital Bangladesh Vision" which are human resource development, people involvement, civil services and use of information technology in business. The Dhaka WASA (Dhaka Water Supply and Sewerage Authority) is currently taking many initiatives to digitalize different services to make it more efficient available, relevant and persistent. Dhaka WASA intends to bring procurement and Inventory department under ICT automation coverage and ensure information availability for decision makers through integrated dashboard mechanism. This dynamic dashboard will be accumulated information from different types of data source. In this regard, procurement 1 of Dhaka WASA is trying to overcome all the barriers and spread the eservices throughout the under-coverage area. Already there is mentionable progress in ICT. However, the current rank and status in comparison with other government organization and the rapid development of ICT, the involvement of ICT in DWASA activities should be expanded in order to ensure reliability & transparency into its service. Currently, HQ of Dhaka WASA is required to billing information from internal and external data source and providing service for management decision support. The high authority is frequently asking for different types of statistical information from said source. However, it takes a lot of time to collect information because it takes a lot of time. Important paperwork, per-channel communication, data source connectivity, and administrator approval Delays for correct determination and analysis of the current situation.

Purpose of Customized Budget Software

Budget Software User Levels:

This software will be operating in two different modes. User Mode & Administrative mode.

Administrators:

The Administrators will have control over the main features in the system. Some of these include:

- Set up of the annual budget
- Allocate funds to the various Cost Centers/ Circle
- View and draw reports on amounts spent
- View remaining amounts
- Track the funds as the Cost Centers spend
- Draw reports on budget allocations
- Set up alerts to track whether Cost Centers are overspending
- Send notifications to Cost Centers who seem to be overspending
- Block funds

Users:

The users will normally consist of the persons who have access to the funds allocated to their departments. Some features include:

- ✓ View the amount allocated to their Cost Centers/ Circle

- ✓ Enter expenditure information
- ✓ Upload supporting documentation
- ✓ View amounts spent
- ✓ Draw reports on the amounts spent
- ✓ View amount remaining
- ✓ Control what your users view or have access to:
- ✓ Edit Data, View Data
- ✓ Cost Center Access
- ✓ Circle Access
- ✓ Category view/edit rights
- ✓ Approval over user's submissions, Certifications, Verifications, Scrutinizes, Check etc.

Limit User access to certain accounts or Section for any user

Locked down data that can't be edited

Get the layered control over your data you can't get with Excel

Enjoy the collaborative Budgeting process the way it should be:

Better performance review Improve your performance across operational divisions and planning accuracy with streamlined tracking of financial figures in the system and better performance visibility in real time comparative reports.

Improved control over budgeting Centralize your budget information on one place and integrate it with the other financial data in General Ledger in order to make better decisions and gather financial inputs in a timely manner.

Flexible Approval Process Cost Centers the budget approval workflow according to your existing processes and be able to manage your budgets more flexibly.

BM, the Budget software helps the financial fleet Cost Center and Accounts. organizations manage different types of costs from cost center like Contractor, technical, non- technical costs and other costs. It helps to manage your cost center costs while increasing performance and dependability. It helps to keep flexible of the complete details of the cost center and accounts out notifications on renewals like taxes, certifications, oil changes, general services etc. BS also provides information on the changed amount, ledger etc. The budget profitability report is also available in the system which provides adequate

Information for accounts analysis.

This module eliminates costly unscheduled maintenance, increase Trace out value by proper maintenance and checkup. It helps in accurate record keeping for any type of costs and helps to plan annual budgets faster, easier and more accurately.

Major Modules:**1. Integrated Budget Software (IBS).****Key Features:**

- User Friendly Software Interface,
- Three-Tier Architecture,
- Real-time connectivity with Web-portals,
- Complete Self-integrated Solution,
- Online Software with High-end Security Design,
- Real Time Notifications System,
- Comprehensive Reporting,
- Unlimited Users with multiple permission levels,
- Diverse Report generation,
- Data Analytics for decision making and prediction,
- Multiple Dashboard Features,
- Auto Generated Email Systems, and
- Multi Language Support.

Module Details**Menu Setup**

- User Setup
- Units/ Branch Setup
- Administration Setup
- Work Details Setup
- Demand Setup
- Cost center Management
- Circle Setup
- Accounts Setup
- Statement Budget Setup
- Reverse Budget Setup
- Budget Follow up
- Costs related complete information
- Upcoming Events Setup
- Budget Approval
- Notice Board
- Dashboard

Setup Detail

- ✚ User Setup:
 - ✓ Create User
 - ✓ User Access
 - ✓ User Menu Access
 - ✓ User Role
 - ✓ Role Setup
- ✚ Units/ Branch Setup
 - ✓ Create a New Branch
 - ✓ Branch Report
- ✚ Administration Setup
 - ✓ Cost Center Create
- ✚ Work Details Setup
- ✚ Demand Setup
 - ✓ New Ledger Head
- ✚ Cost center Management
 - ✓ Submission Section (Cost center) Record
 - ✓ Certification Section (Cost center) Record
 - ✓ Verification Section (Cost center) Record
 - ✓ Approve Section (Cost center) Record
- ✚ Circle Setup
 - ✓ Submission Section (Circle) Record
 - ✓ Certification Section (Circle) Record
 - ✓ Approve Section (Circle) Record
- ✚ Accounts Setup
 - ✓ Submission Section (Accounts) Record
 - ✓ Certification Section (Accounts) Record
 - ✓ Verification Section (Accounts) Record
 - ✓ Approve Section (Accounts) Record
- ✚ Statement Setup
- ✚ Reverse Budget
- ✚ Budget Follow up
- ✚ Costs related complete information
- ✚ Upcoming Events Setup
- ✚ Budget Approve
- ✚ Notice Board
- ✚ Dashboard
- ✚ Current Operating Budget Report
- ✚ Current Expense Budget Report
- ✚ Variance Reports
- ✚ Burn Ratio Reports
- ✚ Planned Value (PV)
- ✚ Actual Cost (AC)
- ✚ Service Complain Entry
- ✚ Budget Increment per Annum
- ✚ Budget Decrease per Annum

- ✚ Live Work Status Update
- ✚ Multi-level Estimate Create
- ✚ Budget Adjustments
- ✚ Guidelines
- ✚ Fund Transfer
- ✚ Fund Restrictions
- ✚ Download select information into Excel
- ✚ Vouchers
- ✚ Recovery
- ✚ Multi-Level Bill Create
- ✚ Usage Requisition Create
- ✚ Methodologies used to calculate costs

Budget Stage

- ❖ Budget Preparation
- ❖ Budget calendar
- ❖ Budget Controlling
- ❖ Pre-Booking Budget
- ❖ Budget Approval
- ❖ Payment Submit
- ❖ Report & Revolution
- ❖ Monitoring
- ❖ APP (Annual Procurement Plan)
- ❖ RAPP (Reverse Annual Procurement Plan)
- ❖ RAPP & APP Adjustment
 - Flexible set-up of budget submission and approval workflows.
 - Automated creation of Balance Sheet budgets.
 - A wide selection of built-in financial, budgeting and forecasting functions, rules, and algorithms.
 - Allocations and Activity-based Costing (ABC).
 - Financial Consolidations, including multi-currency support.
 - Powerful reporting capabilities, including general ledger reporting, budget to actuals reporting, self-service analysis, scorecards, dashboards, financial statements, budget books, and more.

Single Data Entry Point

- All data is controlled from one place for easy learning and navigation
- Easily add description, vendor or notes to any detail line for reference later
- Categories can be assigned to one or more Cost Center
- Instantly compare Actual data to Budget data
- Enter data quickly using built in spreading tools
- User permissions controlled at Category and Department level
- Attach supporting documents to and sub-categories

Instant Navigation

All Budgeted data is hyperlinked for rapid navigation and look up
Drill down to review underlying assumptions instantly including notes, description or vendor information.

Budget to Actual Reporting is automatically organized by:

- ✓ Cost Center
- ✓ Super Header
- ✓ Header
- ✓ Dimension
- ✓ Group
- ✓ Category
- ✓ Sub-Category
- ✓ User Permissions
- ✓ Perfectly Formatted Reports

All reports export to Excel & PDF and are formatted by:

- ✓ Cost Center
- ✓ Circle
- ✓ Ledger
- ✓ Super Header
- ✓ Header
- ✓ Category
- ✓ Sub-Category
- ✓ Category Notes
- ✓ User Permissions
- ✓ Budget to Actual Comparisons for all Cost Center
- ✓ Reports instantly distributed to all users according to their permissions
- ✓ Easily accessible via the report library

Multi-Department Formulas

Our formulas are built specifically to handle structural changes in multiple department Strategy.

- ✓ Formulas are easy to make but hard to break
- ✓ Navigating our formulas is intuitive and easy
- ✓ Control which assumptions your users can view or edit
- ✓ No need to learn any codes or syntax

Dashboard

Our Dashboards allow you to view your budgets in various ways including P&L by Cost Center, P&L by Period, Budget Comparison and other custom reports.

Historical Data

Budget allows for you to quickly access your historical data instantly through hyperlinking. Drill down into General Ledger data at the transactional level.

Inputs & Outputs:

Inputs: Inputs for the project budget Software include the following documents or sources of information:

- Project contract or initial budget
- Resource requirements
- Resource cost estimates
- Activity duration estimates
- Historical information
- Market conditions
- organization policies
- Chart of accounts structure (COA)

Outputs: The project team will use the above information to develop three important documents for the project:

- Cost estimates by activity
- The Project Budget
- The Budget Variance Report
- Plan - Define and estimate the resource requirements and develops a budget
- Do – Obtain approval, and publish budget, authorize expenses
- Check –Budget control and performance analysis
- Adapt – Update budget, set corrective actions
- Project Budget Baseline
- Budget variance report
- Budget updates
- Resource requirements
- Cost estimates
- Schedule
- Historical information
- Market conditions
- Policies

Project Budgeting is performed on the initial stages of project planning and usually in parallel with the development of the project schedule. The steps associated with budgeting are highly dependent to both the estimated lengths of tasks and the resources assigned to the project. Budgeting serves as a control mechanism where actual costs can be compared with and measured against the budget. The budget is often a fairly set parameter in the execution of the project. When a schedule begins to slip, cost is proportionally affected. When project costs begin to escalate, the project manager should revisit the Project Plan to determine whether the scope, budget, or schedule needs adjusting.

To develop the budget, the applicable cost factors associated with project tasks are identified. The development of costs for each task should be simple and direct and consist of labor, material, and other direct costs. The cost of performing a task is directly related to the personnel assigned to the task, the duration of the task, and the cost of any non-labor items required by the task.

Reports:

Variance Reports, show the difference between what has been expensed and the approved budget, the balance for each account.

Burn Ratio Reports, show the rate at which the project is using the budget according to the original plan, a quick method to see if the project budget is on track.

Planned Value (PV), is the total budget for an activity or the planned budget to be spent on an activity during a given period. If an activity is scheduled to last 5 days and will have a total cost of TK1000, then each day costs TK2000. To get the planned value at a given date one needs to compare the value between the start date

Actual Cost (AC) is the total direct and indirect costs incurred in accomplishing work on an activity during a given period. For the example above the actual costs incurred for each day of work, even though the example above showed a cost of TK 20,000 per day, the project may have incurred in TK 40,000 of additional costs, making the actual costs in the third day higher than the planned 60,000. Actual cost data comes from the accounting records.

The request form entails:

- Indicating the appropriate classification (Ledger)
- The nature and frequency of funding to be received
- The nature and purpose of the expenditures to be incurred and any restrictions that may be made on the use of funds
- The length of time the org will be valid
- Identifying the Budget Unit Director for the Org.

Budget Approval & Operation:

Establishing whom will have signature authority for the Org The request form must be approved by:

- Grants Accounts
- Budget Officer
- Finance Systems Officer
- VAT & TAX Officer

#Budget, Operating (OPAL) – The annual operating budgets of a department or area. The operating budget includes base funding as well as one-time funding for special projects and/or temporary shifts in operating expenditures. Budget units may shift funds within their operating budget to align resources with specific needs in a given year.

#Budget Prep - Each year, budget unit directors are required to put together an estimate of projected expenditures (including justification for increases or decreases) for the following fiscal year. The process of preparing the budget materials and submitting them for approval or modification is referred to as budget prep.

#Encumbrance - When a purchase order is issued, the funds for the purchase must be reserved. The process of reserving the funds is referred to as encumbrance. Once funds are encumbered, they are removed from the balance available. This prevents over-expenditures from occurring and allows departments to monitor available budget balances.

#Expenditures - Refers to the actual funds expended. When a vendor bill is paid, it becomes an expenditure

Fiscal Year - The University's fiscal year runs from January 1 through December 31.

Funds / Fund Balance – A Fund is a self-balancing set of accounts, segregated for specific purposes in accordance with laws and regulations or special restrictions and limitations. The

Fund Balance is the residual balance of Revenues less Expenses of the accounts maintained within the fund.

#Indirect Costs – Auxiliary Enterprises units are required by the State to pay for the indirect costs of services received from E&G activities.

#Insufficient Funds - Prior to a purchase order being issued to a vendor, the funds must be encumbered. If funds in the budget are not adequate to cover the expected expenditure, this lack is referred to as insufficient funds. Funds must be available for all expenditures no matter the method of expenditure (Travel reimbursement, wage/student expenses, etc.

Recovery refers to a special kind of budget used to recover funds expended by a service-oriented unit in the performance of approved activities. Recovery budgets may expend only funds for which they can charge-back other departments. For example, telephones are charged to departments as a recovery.

#Vouchers – Every expenditure made by the University has payment documentation (referred to as a voucher) for record-keeping purposes. A voucher may contain payment for more than one expenditure/invoice.

Fund/Ledger Information

Funds are utilized in Banner to manage and account for funding that is segregated for specific purposes in accordance with laws and regulations or special restrictions and limitations. Funds are further grouped by common designations and/or purposes and financial reporting requirements into what are referred to as Ledgers.

Fund Restrictions

Restricted funds may only be expended for the purposes indicated by the donor or grantor: includes gifts, grants, contracts, and financial aid, ledgers 5, 6, and 8. In the case of ledger 6 gift accounts, the Educational Foundation is responsible for maintaining complete records on restrictions.

o If the grant or contract is “silent” on allowable expenditures, the CAPP Manual rules apply. Unrestricted funds are available for current operations at the discretion of the University within allowable guidelines: includes Educational and General Funds (E&G) and Auxiliary funds, ledgers 1, 2, 3, and 4.

Unrestricted does NOT mean uncontrolled, as CAPP Manual rules and University policy apply.

Managing & Monitoring Budget:

Departments are responsible for monitoring budget activity and resolving any budget variances timely (recommended monthly). Please refer to the Error Correction Process section.

Researching Invoices

If you need to see if an invoice has been paid, you should research the invoice before calling the Accounts Payable processors. Please keep in mind that the date an invoice is posted in Banner is the date that the payment process begins and is not always the date the payment was sent to the vendor. If you have not completed the e-receiver in Banner - the payment process cannot begin. The completed e-receiver serves as payment authorization. (Refer to Procurement and Payment for Goods and Services for more information.)

There are multiple reports and report options available via Insight:

- Base Budget
- Budget Trend
- Current Operating Budget (OPAL)

- Fund/Auxiliary Budgets
- Transaction/Sub-account Detail

Flexible Budget Categories

Categories help define income and expenses in budget software. They form the foundation on which you will build your budget. The software you're considering should let you change categories by editing the name, deleting irrelevant categories, and adding your own. Avoid budget software that locks you into a default set of income and expense categories and doesn't let you make changes.

In the software, you'll assign categories to transactions you make throughout the month. It's important to take these category assignments seriously. The more accurate the budget report, the more useful it'll be. You should be able to split transactions into subcategories if you want more detailed reports.

Adaptable Income and Expense Limits

Everyone has some sort of fluctuating expenses. Heating bills are usually higher in the winter. A person's exact monthly income may rise or fall based on the industry's busy season. If you need to work with fluctuating income, you'll want budget software that doesn't force you to enter the same monthly amount for income.

Financial Information Security

Data encryption is a must if you link accounts to the budget software. The only type of software that doesn't do this is the software that requires you to enter transactions by hand. Read the privacy or security statement for budget software to learn more about how your information is being accessed, and whether it's protected with encryption.

Security is not an issue when you set up accounts with generic names like "Checking" or "MasterCard." These generic accounts won't have access to your account numbers or personal information, so even if your budget software account gets hacked, there would be no way to steal your identity. The downside is that these generic accounts aren't as convenient since they don't have the credentials to automatically download transaction data.

Passwords may not be required for some desktop budget software. If the software you're using doesn't require a password for access, set up password protection for your computer. Your computer should ask for your password when it starts up and after it goes to sleep. Online budget software should always require a password. Don't use online financial software without a password!

Ability to Export Your Data

Most budgeting software will let you export your data to a CSV file that can easily be read by spreadsheet software like Excel. This feature is particularly important if you think you might not use the software for the long-term. If you decide to switch to another budget or personal finance software, having your data in CSV, or another format will save hours of data entry.

While less common for casual budgeters, spreadsheets can be an important tool for people who are serious about financial analysis. If that describes you, you'll want to pay extra close attention to a software's export options.

Easy Setup

You may find this surprising, but an easy setup isn't as important as the other features mentioned above. Once the budget is established, you shouldn't have to work on it except for minor tweaks here and there. Even if the initial setup is a bit cumbersome, it probably won't affect your long-term experience with the software.

However, an overly confusing onboarding process could force you to make mistakes, which could then create issues down the road. The best way to determine the user-friendliness of budget software is to make use of any free trial offers available. If you find yourself not fully understanding the software setup, it could be time to switch to another app.

Importing Data from Multiple Financial Institutions

Before you can budget your money, you have to know where it is—*all* of it. For most Organization, this means pulling and importing financial data from multiple financial institutions into one program. Many survey respondents described having “several brokerage accounts” in addition to 401(k)s, mutual funds, and certificates of deposit, and being able to seamlessly import these multiple accounts into one program was considered a top benefit by 46.43% of users.

Real-Time Expense Tracking

While it’s important to have a robust report with a full breakdown of the details, it’s equally important to be able to quickly check your expenses in *real-time*. This was an extremely popular feature among users, with 18.75% of respondents listing “automatic updates to your financial information” as their favorite benefit of the personal finance software. One user shared their software “Gives me [an] overall picture in one place and flags any illegitimate activity quickly without waiting until [the] monthly statement.”

Exporting Data to Microsoft Excel

You may be asking, “Why would someone need to export data to Excel when you can instead produce a custom report?” The answer is personal preference. As the default software for virtually every financial institution of the last two decades, some individuals just think natively in Excel, and can filter, sort, and pivot data intuitively. A good budgeting software should allow you to view and export the data in whatever format you want.

Setting Customizable Alerts

Having your budget available at all times is useful, but it can also be draining if you have to constantly check it yourself. Customizable alerts (particularly for mobile) help to ensure you’re not overspending or missing payments, and can notify you when you’ve hit certain established benchmarks.

Bill Pay

Up to this point, we’ve talked mostly about the input side of personal budgeting software. However, it’s also important to consider what *outgoing* functions your software has—notably the ability to pay bills to all accounts. When structured properly, this is one of the most compelling features of budgeting software, as you can pay bills from multiple bank accounts via one central location. We’d recommend software with both scheduled and one-time payment functionality.

Net Worth Tracking

A typical budget software user might have a mortgage, 401(k), IRA, savings account, investment account, mutual fund, and revolving debt and expenses. As we’ve seen above, that’s a lot to keep track of, and sometimes it gives peace of mind to know simply, “How much is it all worth?” Having your net worth easily calculated as one figure saves you hours of having to manually do it yourself, and also helps you quickly keep track how you’re doing.

Projecting Balances and Cash Flow

Once individuals get comfortable with creating and using a budget, many want to take it a step further: projecting future balances and cash flows. Your budgeting software should be able to

look at your monthly income and expenses, and not only create a budget, but help forecast how much you'll have saved and by what date—so you can time and hit your financial goals.

Simplicity and Usability

Last and most important: your software should be *easy* to use. Several respondents stated that “reliable” and “simple to understand and use” were the most essential features of a budgeting software. All the tools, such as syncing, categorizing, and exporting, count for nothing if you don't understand how to use your personal budgeting software. So, we recommend a powerful tool—as long as it's simple to use and understand.

The Financial Budgeting Module allows companies with large amounts of divisions and departments to track, report on, manage, create and co-ordinate their department budgets. The budgeting module will interface with the into web Procurement system and other financial systems.

The system as a whole will be managed by one department (usually finance), however general users or other department heads will also have access to the system.

Overhead charge and its use

1. In accordance with the financial procedure, the budget includes a 5%-10% per cent provision to cover administrative overhead costs. Administrative services of the secretariat are funded from the overheads payable on all Organization. Through its Administrative Services programmed, the secretariat has taken full responsibility for the preparation of its operational budget and related allotments, the procurement of goods and services, the arrangements for the travel of staff and participants, and the recruitment and administration of staff and consultants. The programmed provides key management support in terms of programmed planning, results-based budgeting and reporting on programmed and budget performance. It is also responsible for all tasks related to the premises of the secretariat.

2. The greatest portion of the overhead funds is used for the services provided by the Administrative Services programmed. The remainder covers the cost of internal and external audits, payroll, investment and treasury services, staff training and development, services related to the administration of justice and other United Nations support services that are not available in the secretariat, and contributes to covering the costs of sharing common services and premises with other United Nations organizations in Bonn, Germany. The fund is currently undergoing a review to better align expenditure with the income and priorities of the organization.

3. The staffing and resource requirements shown in tables 13 and 14 respectively are indicative only. The Executive Secretary will approve expenditures on the basis of actual income.

Methodologies used to calculate costs

A. Staff costs

1. The secretariat applies the Organization rules governing salaries and employee benefits. The Accounts approved a revised compensation package¹ for the staff in the Professional category based on the recommendations of the Proposal.

2. Fixed-term contract salary and common staff costs are calculated using standard rates for each grade. These rates are determined on the basis of historical analysis of a set of staff cost parameters such as pay scales and employee benefits. As part of the Yearly budget process, a review was undertaken of all the staff cost components, as well as actual staff-related expenditure for This Years. Increases result mainly from step increases and related higher salary costs such as pension and medical contributions.

B. Non-staff costs

3. The costs for consultants include institutional and individual contracts for services that require specialized expertise not available within the secretariat. Costs are estimated on the basis of actual requirements and past expenditures for similar activities.

4. The costs for experts and expert groups encompass the costs of experts' travel, participation in meetings of constituted bodies and work on reviews. Costs are estimated on the basis of actual requirements and past expenditures.

5. General operating expenses include, inter alia, the costs of rental and maintenance of premises and equipment, communications, shipping and other contractual services required for meetings as well as the operation of the secretariat. Costs are estimated on the basis of actual requirements and historical data.

Stages of Development

The total design and development of the software will be done in these phases. The phases are:

Phase 1: Requirement Analysis

Detail requirement's analysis of each phase for which the objectives and functions of the project has been set will be defined and discussed through client interaction in this phase. This phase will be required to compile the detail specifications associated with the proposed project development.

Phase 2: Solution Architecture

According to the requirements gathered from client we will design the core architecture of the software at this phase. After completing the architectural design, we have presented a prototype of the actual system to client.

Phase 3: Design & Development

After confirming the prototype, we will start designing and development of the project at this state. The Software User Interface will and the structural design will be developed at this stage.

Phase 4: Deployment & Training

The project will be deployed in client machine. After first deployment we will run the software for 4 weeks to find necessary changes and errors and also start training for initial usage.

Phase 5: Final Deployment

After testing for 4 Weeks and confirming all changes and fixing all errors the final version will be provided to the client. After this stage there will be no more major changes. Description

Phase 6: Training, Testing and Debugging/ Hand Over: The developed project will be tested and finalized for real operation. Software Manual and other related document will be prepared by this time. At this stage we will do Testing, Training and Debugging period. Training will continue until all users are fully operational.

Development:

This stage involves the Generation of Data Definition Language (DDL) and Data Control Language (DCL) in the form SQL code and database trigger scripts, used to create the physical database and its structure. In addition, decisions need to be taken on the number of tablespaces, their size and the physical disk locations. The number of databases to be created also needs to be determined three at the minimum should be created one for development, testing and the other for live production.

Before building the application, a sample database needs to be created to test whether or not the application functions properly. After the database has been built the executable front-end application codes can be compiled and generated. The following table shows the summary of this phase.

	Objective	Procedure	Input	Output
Component Development				
	To develop components according to design Requirements.	Develop as per the design Requirements.	Baselined Design, SRS	Developed Component
Unit Test & Client Demo				
	To perform unit test and provide demo of tested component to client to minimize gap.	• Ensure that business logic is complete. • Verify whether component works as designed. • Identify unresolved issues. • Report errors. • Take necessary action – recheck/test component again. • Provide demonstration of the tested component to client, record feedback and update accordingly.	Developed Component	Unit Tested Component; Client's feedback log, Unit Test Log
Component Integration & Testing				
	To integrate components and perform integration testing.	• Integrate software and hardware components. • Ensure design objectives are met and build for test.	Unit Tested Components	Integrated and Tested Components, Integration Test Log
Build for Test				
	To build testable version/environment for testing/QA.	• Prepare required environment and build for testing component for testing. • Prepare release notes for QA/Testing	Unit, Integration Tested Component	Build for Test Component; Release Notes

Software Testing:

Creation of multiple test scripts and sample data for program, module/unit and system level testing. Testing and the development of test scripts requires time and thought. To often this stage in a project life cycle is over looked or too little time is spent on it.

Test scripts will be developed based on a sample data, which will be supplied by SACP PROJECT. The CODER DE DHAKA LTD. Analysts will then design test script to determine what data source will be tested and the expected system output, which should be generated.

	Objective	Procedure	Input	Output
Test Plan Preparation				
	To determine test specifications and testing requirement.	• Determine test cases by analyzing SRS and Design Documents. • Determine test inputs requirements, and expected outputs. • Maintain traceability with requirements. • Determine hardware and software requirements for identified test specifications. • Determine tools requirements. • Testing schedule.	SRS; Design Documents	Test Plan Document
Execute Testing				
	To perform system test by executing test plan.	• Check availability of required resources for testing. • Perform test and record results for individual cases. • Prepare list of issues to be clarified.	Test Plan Document; SRS; Design Documents, Integrated component.	List of Issues/ Test Reports
Bugs Management				
	To ensure that identified bugs are fixed and retested.	• Maintain bug information (bug id, status, environment specification). • Assign bugs to respective developers for fixation. • Retest the fixed component/function/class/method.	List of Issues from performing test	Bug Management/Tracking Report; Testing Release Notes

Figure: Testing Strategy

Project Management Plan

CODER DE DHAKA LTD. has a defined infrastructure for effective software development project management methodology, consisting of a technical process, supporting process and management process. These three processes are not mutually exclusive; rather their activities overlap and interact throughout the project. Such infrastructure has enabled CODER DE DHAKA LTD. to deliver the end product with topmost quality, within budget, on time and satisfying all customer requirements.

Figure describes overview of the project management methodology, and the following sections contain a brief description of the processes.

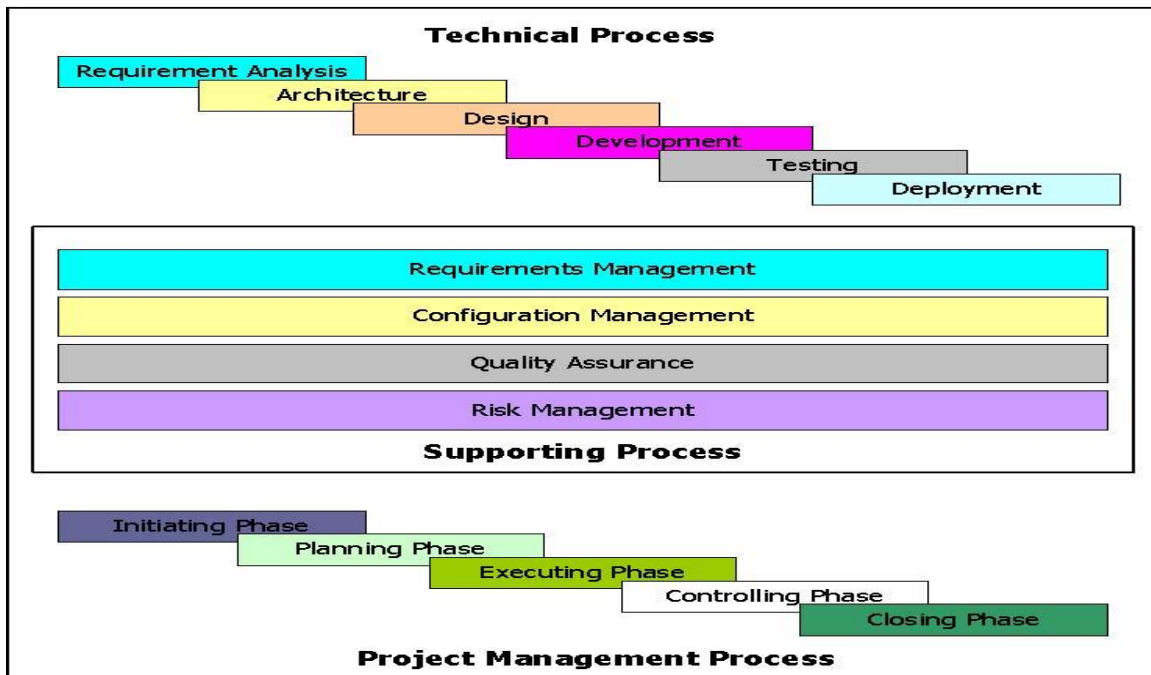


Figure: Software Development Project Management Methodology

Technical Process: It is a product-oriented process, and defines the procedures and methods for creating the product. It includes a life-cycle model and methods for performing the procedures of each phase. All of the phases of the software development life cycle (Requirement Analysis, Design, Development, etc.) are defined in terms of their respective inputs, outputs and procedures.

Supporting Process:

Technical and management process cannot themselves ensure predictability and continuous improvement of quality, cost and time, CODER DE DHAKA LTD. uses a set of defined supporting process for providing required support to the technical and management process. Requirement Management Process, for example, helps to identify the appropriate requirements provider required for proper Requirement Capturing (a step of the technical process). Further, it manages changes to requirements, which in turn helps the management process to determine the overall impact of changes to the project. Other supporting processes - Configuration Management, Quality Assurance and Risk Management, are described in detail in the sections - Quality Assurance Process, Configuration & Change Management, and Issue & Risk Management.

Management Process: This is the project-oriented process. It defines the activities and methods for planning the work, organizing and motivating those who will do the work, and tracking progress to ensure

the project is completed on time within budget and at the highest level of quality. This particular section contains detail description of this process, which is provided in the following sections.

To estimate the task duration, CODER DE DHAKA LTD. Follows a defined and documented process to estimate task duration; cost and other estimation parameters, following section contain description of the defined estimation process.

Estimation Process:

The estimation process can be defined in terms of the followings:

- . • **Estimate size:** Analyzing functional requirements, historical data, and past experience software size in source lines of code (SLOC) or requirements are determined. Maximum, minimum, and most likely estimates are developed and then averages are considered as the final estimates. All of the estimation rationale or assumptions are documented and reviewed.
- . • **Estimate cost and effort:** Labor hours and cost are determined for the identified tasks of software engineering phases, documentation, configuration management, quality assurance, and management efforts. Environmental parameters such as program complexity, programming language, requirements volatility, analyst capability, and execution time constraints are evaluated. In this case also, the estimation is verified against the historical data and assumptions are documented.
- . • **Estimate critical computer resources:** Determine the critical computer resources needed to complete the project are determined and the estimate is then compared to the actual critical resources available. Critical resources are project-specific, and may include memory usage, throughput capacity, timing, software licenses, and hard drive usage. The estimation method that is followed includes historical experience and analogy with similar projects.
- . • **Track and report estimates:** During the project life, actual measurements and status against the estimates are tracked, using organization standard tracking templates. Comparing estimates to actual status over time allows the project to track status and see how accurate the estimates are. Updates to estimates are made as needed. Estimation data, both planned and actual, are recorded for the benefit of other projects in the organization.

Analyze Issues and Determine Corrective Actions:

For controlling the project deviations and other noncompliance, collected issues are analyzed to determine need for corrective action. The appropriate actions needed to address the identified issues are determined and documented. These corrective actions are reflected in the subsequent processes – control scope, control project resources and control cost and schedule.

Control Project Resources:

Resource control involves assessing both how they are being utilized and in the case of human resources, whether they are able to devote the time needed to complete their activities on time. In case of discrepancies, corrective actions as adding resources might occur. In that case the project manager justifiably adds resources to the project.

Modify the Project Plan:

All identified and approved changes are reflected in the project plan document and the execution and controlling phase continues throughout the project life.

Revisit the Planning Phase:

In case of major changes, the planning phase is revisited to determine objectively the impact of changes to the overall project quality, cost and time. Definition of major changes is defined during the planning phase.

1. Closing project

The project requires closure after achieving its objectives. Closing the project not only provides for completion of administrative activities, but also provides evaluation of project performance, which can be a valuable for the future projects.

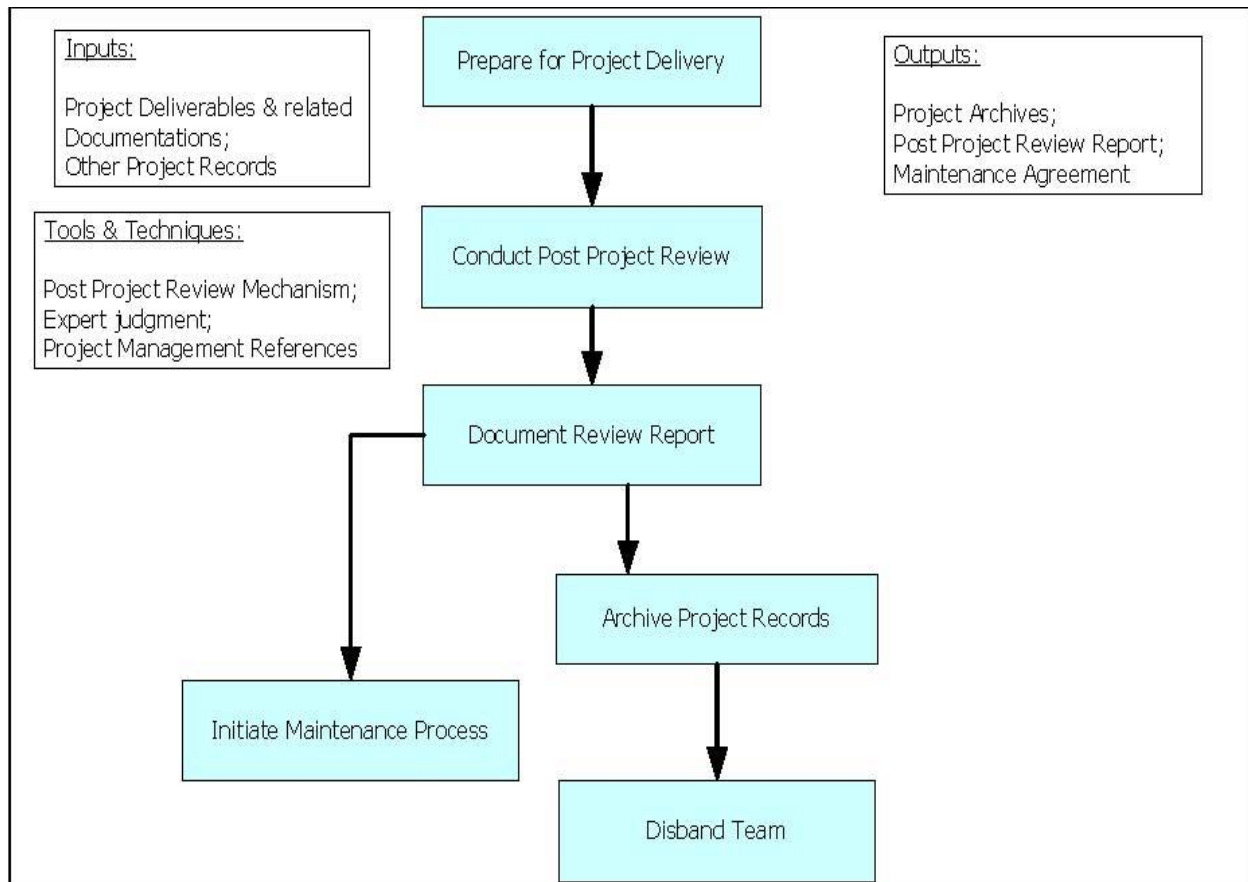


Figure: Closing Phase

2. Prepare for Project Delivery

The project plan, baseline plan, and other project records have been compiled and updated throughout the project's life. Project facts or statistics are compiled from project information that will assist in the assessment of project performance. These might include comparisons of the baseline plan to project plan, plan to actual results, scope changes, milestones to actual results, and others. Decision on project delivery will be based on these comparisons. If the project gets approval for delivery, then the status of the project in the project database will be updated automatically.

3. Conduct Post Project Review

The objective of the review is to bring closure to the project, review project performance, identify open issues, and document all these issues. The review includes primary project stakeholders.

4. Archive Project Records

The project records are reviewed to determine the value of specific records for future projects. Records of no value are discarded. Product documentation and other records are moved to the Project Archives for

future reference.

Progress Reporting Plan:

CODER DE DHAKA LTD. Has its own progress reporting mechanism for its assigned tasks. To keep track of the assigned tasks, CODER DE DHAKA LTD. Made a different reporting format.

There are two types of reporting format:

- a) Daily Report
- b) Weekly Report

Daily Report: it is applicable for all the team members and they need to submit it to the Team Leader/ authorized person by the end of every working day. The report includes the Name of the Employee with his designation, Name of the Team Leader, Date, Tasks assigned to him/her for the particular day, status in percentage, reason if not complete and comments of the authorized person.

Weekly Report: This report is applicable for Team Leaders and they need to submit it on the last day of the week to the CTO. This report includes Team Leader's name, project name, date, overall status of the project. Individual task status and any issues needed to be discussed.

SQA Plan

Software Quality Assurance (SQA) is defined as a planned and systematic approach to the evaluation of the quality of and adherence to software product standards, processes, and procedures. At CODER DE DHAKA LTD. SQA includes the process of assuring that standards and procedures are established and are followed throughout the software project life cycle. That is, the SQA process does not only consider the testing phase for the quality assurance purpose, rather it ensures objectively that the all the process (including software testing) and work products are fulfilling their required quality. This is why, the SQA process is defined as **Process and Product Quality Assurance (PPQA)**, consisting of the following sub-process:

- . • Quality Assurance Plan Development
- . • Objective Evaluation of Process and Work Products (Review & Audit)
- . • Communicate and Ensure Resolution of Noncompliance Issues.

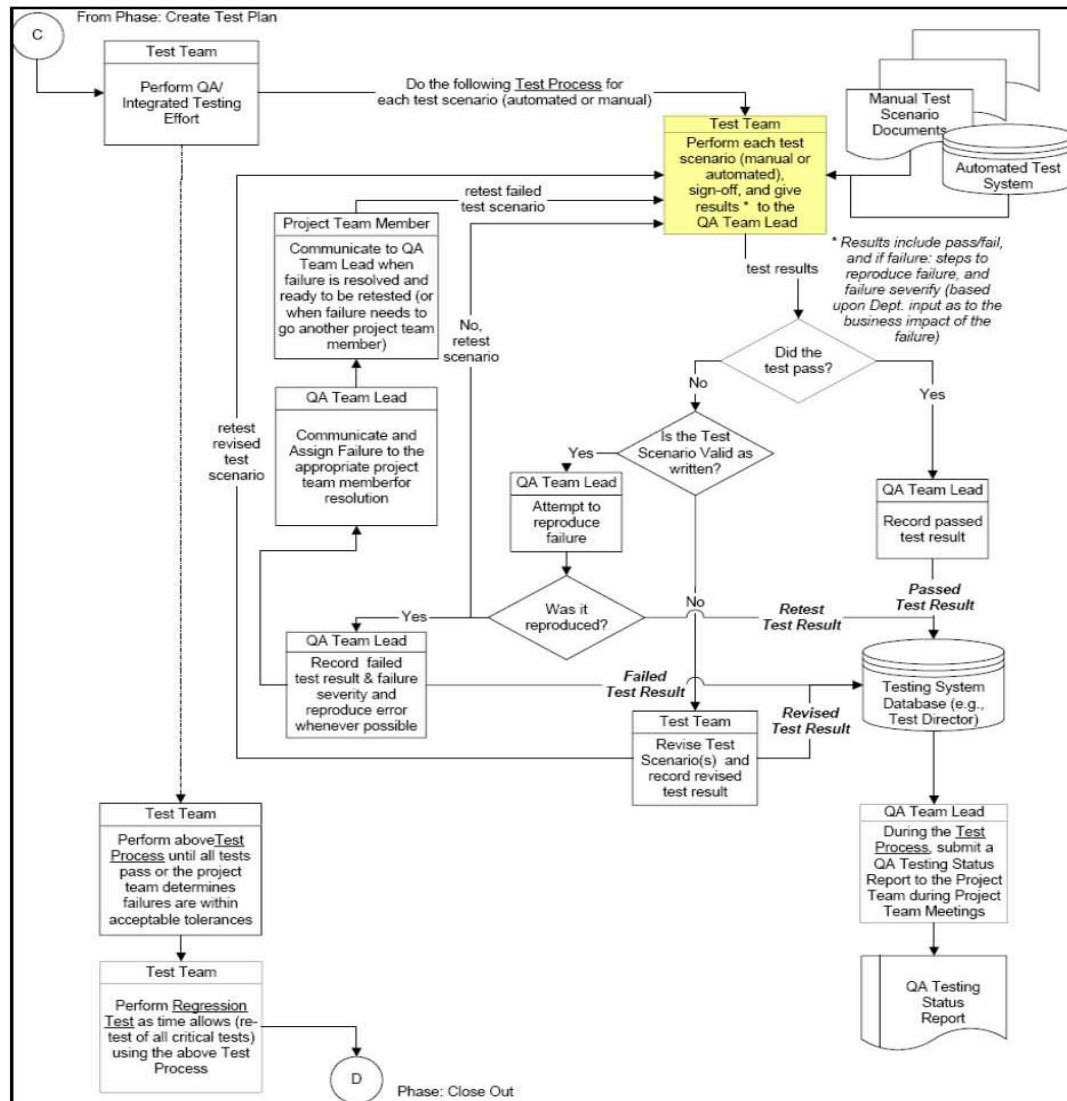


Fig: Test Execution Process

Release Planning:

This includes preparation for environment, conversion, installation and method of distribution of components.

Documentation Methodology Diagram

CODER DE DHAKA LTD. Standard documentation methodology for Automation of SACP PROJECT
System can be depicted with the following diagram:

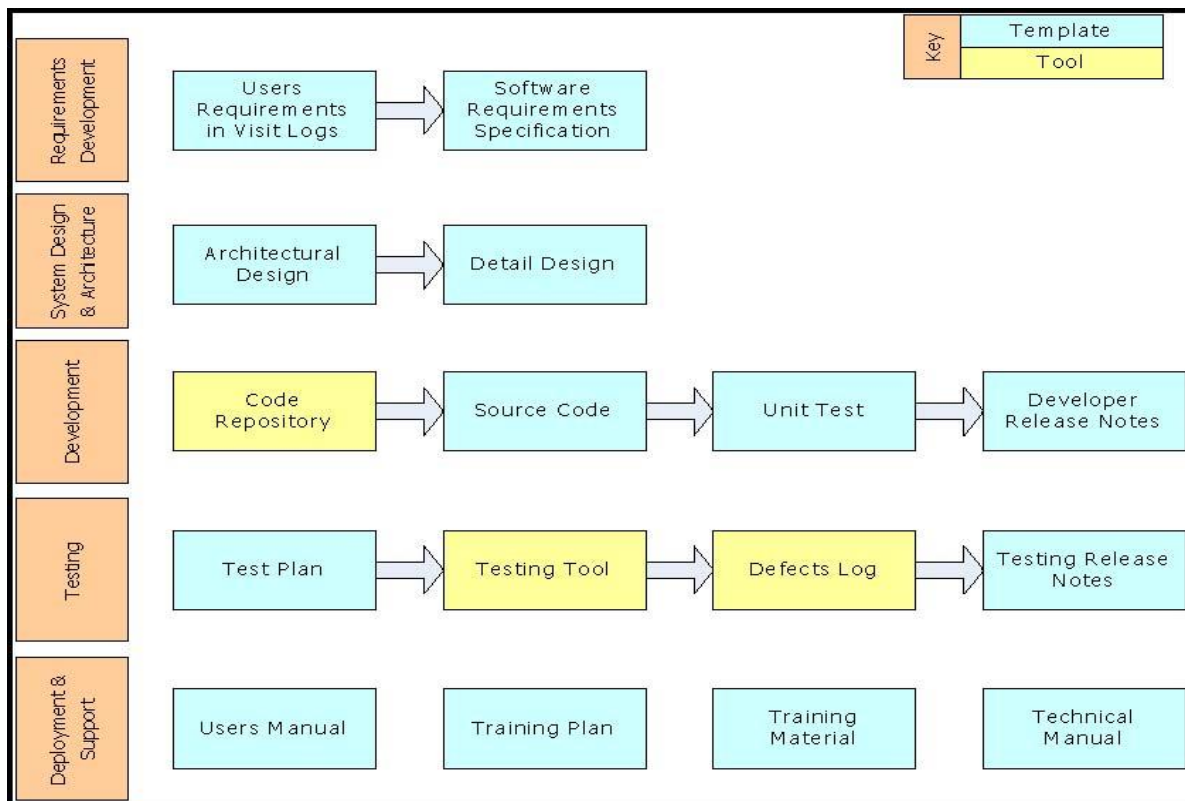


Figure: CODER DE DHAKA LTD. Documentation Methodology

Security Features and Access Control

Security is the ideal state where all information can be communicated across the internet secure from unauthorized persons being able to read it and/or manipulate it. Security deals with the techniques employed to maintain security within a computer system. Security is also the process of preventing and detecting unauthorized use of one's computer. Application security is the use of software, hardware, and procedural methods to protect applications from external threats. Security measures built into applications and a sound application security routine minimize the likelihood that hackers will be able to manipulate applications and access, steal, modify or delete sensitive data. Once an afterthought in software design; security is becoming an increasingly important concern during development as applications become more frequently accessible over networks and are, as a result, vulnerable to a wide variety of threats.

1. Security challenges:

- Protecting data from viruses and worms introduced into the network via downloaded files and e-mail Attachments.
- Controlling access to business-sensitive data by internal and potentially external users; unauthorized access to protected data can result in legal issues and the loss of trade secrets.
- Protecting corporate Web sites running on general-purpose operating systems from denial of service (DOS) attacks and service exploits-both of which can render them inaccessible and unusable.
- Preventing the exploitation of Internet access privileges by employees.

2. Threats:

The possible threats of the proposed e-Government solution can be posed as:

- Some technology-related threats might not be present
- The human-generated threats would be more prone to the proposed application.

3. Threats to Confidentiality

Confidentiality is the way of protecting the information from unauthorized persons, thus they cannot access to the system and perform any task, which might cause data loss or data damage. It is important to safeguard the valuable documents and records from such access. The confidentiality factor should be well defined and will be carefully implemented. We should consider the aspects of confidentiality as a crucial issue that includes user identification, authentication etc. In the proposed software application, confidentiality can be breached in the following security levels.

System-level Security: Unauthorized user activity at system level resources, lacks in the Local area networks (LAN) security.

Server/Machine Security: Unauthorized physical access to a machine, which may lead to creating hole in system level security.

User Group-level Security: Unauthorized user activity at the application resources.

File/Database Security: Unauthorized user activity at the database resources.

To eliminate the security threats, authentication and authorization along with password control to limit the user from the following activities should be incorporated with the system:

Limiting the user to retrieve any information Limiting the user to use module or generate report.

Authentication is the process in which the application verifies a user's identity and credentials.

Authorization will actually verify the authenticated user's permissions for a requested resource.

Modification of sensitive data will automatically invoke the trigger to store the old data to audit.

4. Server/Machine Security

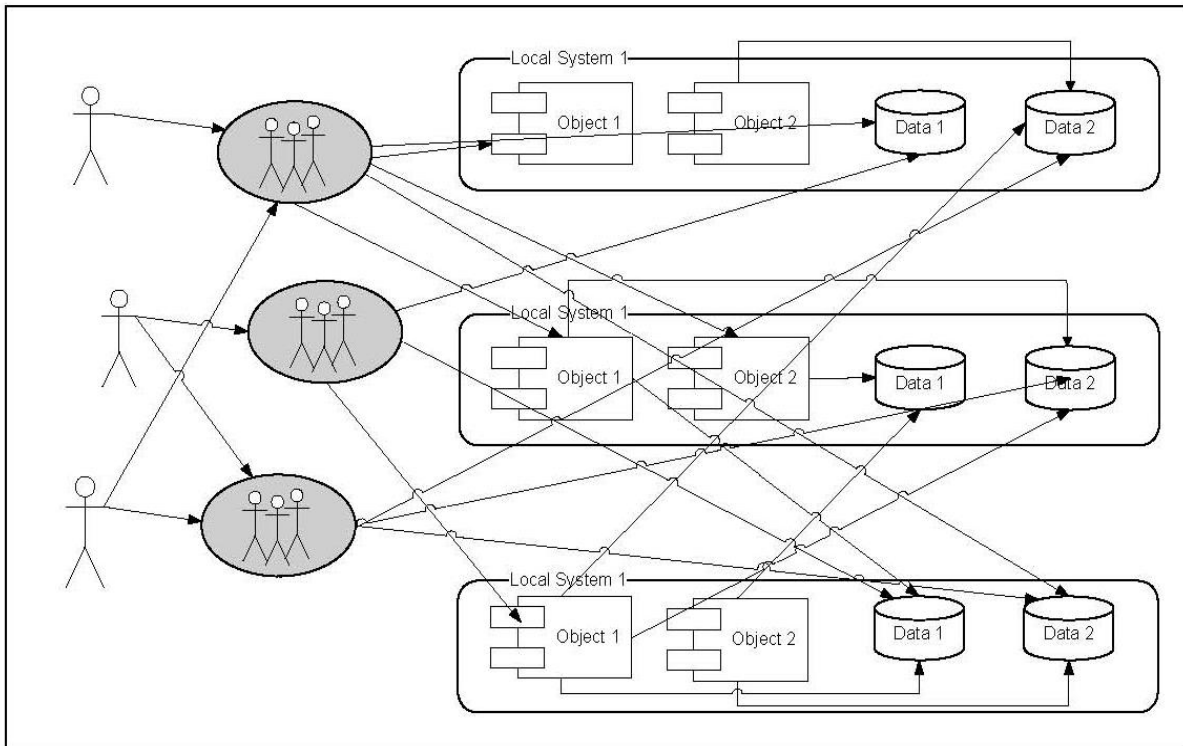
It means the limitation of physical access to a machine and generally would require an additional login in order to gain access. The operating system will restrict unauthorized users to log on or open the computer and database itself secure database to delete or to add any data from unauthorized user. This system is based on LAN therefore firewall or the protection from hacker is not needed.

5. User Group-level Security

Since the system is a web-based application, where separate managements at different locations manage users, a multi-layered user rights policy need to be applied. Block diagrams of such multi-layer user rights are shown below.

Users having common activities constitute a user group where all of them have common rights and common resources (objects and data). A user can be granted right to access (any combination of view, insert, update or delete, or executing processes) any object or data. The rights can be granted to the user group also, where all members of the group get the rights of the group.

Further, if any object of a system is granted access to data or other objects, then users or members of a user group that have right of execution of the object, get the right to access those object or data.



User, User Groups and Objects and Database Rights

This multi-layered security structure provides flexibility to the security management, and the security management policy can be implemented in a better way.

Database Backup and Recovery:

To maintain backup data and ensure data are not lost, we can use the standard backup procedure or replication between multiple servers. This utility is used to back up the System database from the Database to a file in **local** or **network directory** or in **remote** location. Alternative **DVD/Tap** (storage device) can be used to store the periodic data and keep in separate location/area. Later it can be retrieved from DVD if any hazard occurs. **Restore** This utility is used to restore a database that was previously backed up using the Database Backup Utility.

Threats to Integrity

The unawareness of the authorized users to the system is the primary threat to data integrity. The following causes can be defined as unawareness of the users:

- Errors
- Omissions
- Deletion –etc.

This sort of unawareness can cause valuable data to be lost, damaged, or altered. The employees will bring such causes to disaster unless they are trained reasonably in computers, security threats and vulnerabilities.

There could be another threat of intentional attempt of tempering or manipulation the stored images and data by the authorized users.

Threats to Availability

- **Crash or Virus Attack:** Failure or disruption of resources could cause the computer to crash. This will create denial of services in the proposed system. Denial-of-Service may also arise due to attacks by Trojan horses and viruses.
- **Lack of Fault Tolerance and Disaster:** Fault of the system and hardware may collapse the whole system if there is no fault tolerance measure. Such causes may halt providing valuable services to the public. Even, there could be major disasters due to flood, fire, earthquake or any other natural calamity causing complete loss of the valuable data archives.

Fault Tolerances

For the proposed system we strongly suggest fault tolerance implementation in both hardware and software of the application system. Our proposals for fault tolerances are as follows:

- **Hardware Fault Tolerance:** Hardware fault tolerance will be implemented by RAID configuration of Disk Mirroring with striping.
- **Software Fault Tolerance:** Software fault tolerance would be implemented using Oracle Server. This means, in the event of an error, all information can be restored to its prior state without restoring to backups or being required to know the previous information.

Disaster Management

There could be major disasters due to flood, fire, earthquake or any other natural calamity causing complete loss of the valuable data archives. This must be addressed by adopting the following measures: For ensuring database and image security, we propose to maintain at least two backups of the entire database in Tape and CDROM to be kept outside the premise of Project office in a remote location. Additionally, a backup server should be considered for ensuring an un-interrupted operation of the system in some disaster events.

Authentication:

Application authentication is built around the concept of role-based membership of the users. Few database tables namely User, User Group, User Log, Page, Field, Field User are designed to implement the application security. The Super user or Database Custodian or administrator can manage the security features like:

- Create a new user account
- Change password of a user
- Create User Group
- Assigning or changing a user's role membership
- Administer access rights for a user
- Administer access rights for a role
- Will have also access to track & view the **history log**, from where Super user can monitor last modified person information with date & time in which form/record, the person has changed or updated information.

- **Edit history** of last five/ten times/days will be maintained with user name, date & time.

User type	Add	Update/Edit	Delete
Level1	✓	✓	✓
Level 2	✓	✓	✗
Level 3	✓	✗	✗
Level 4	✗	✗	✗

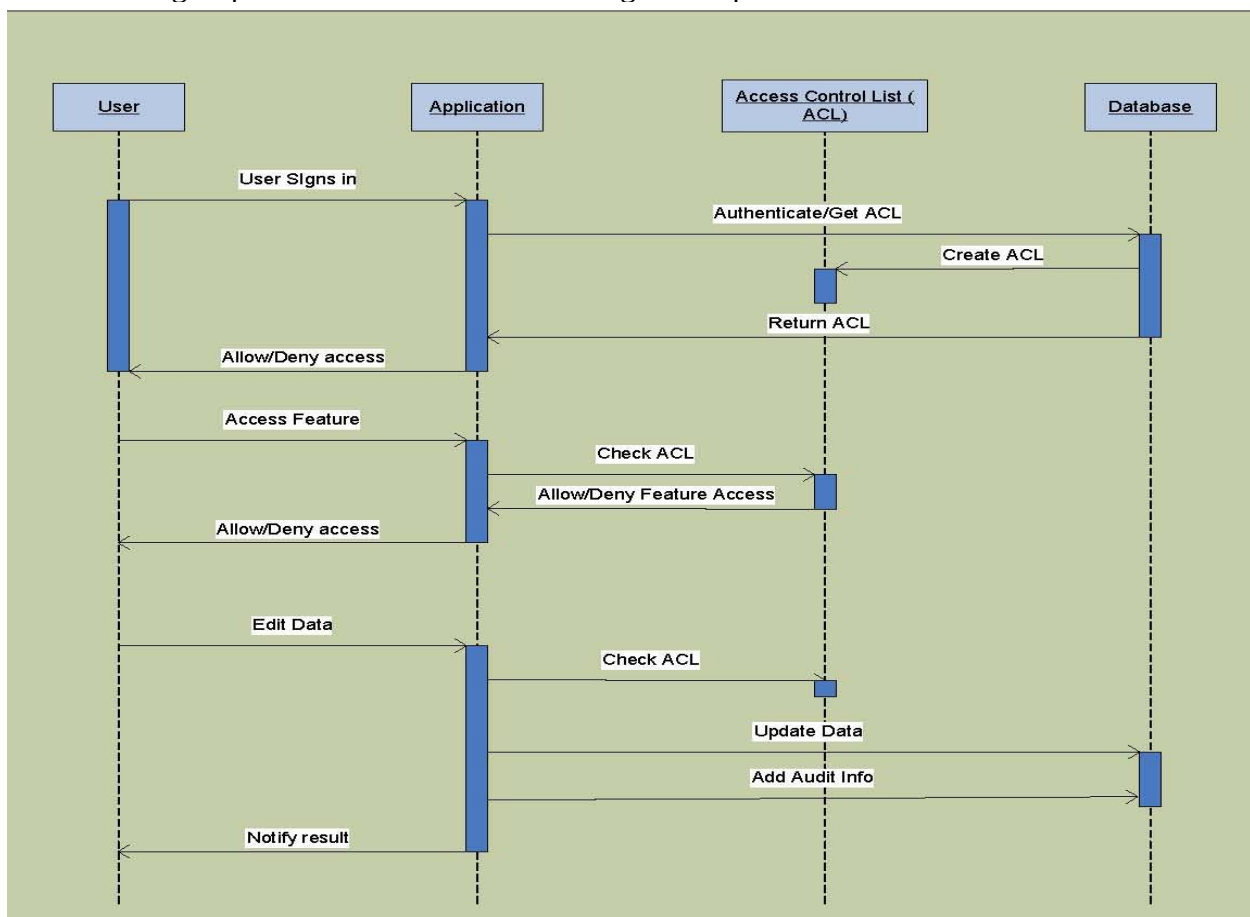
Authorization

A user must be assigned a role. All the features are defined in the Application table with unique feature ID. To verify if a user has rights on a feature, the steps followed are:

1. The user is the administrator or a member of admin role or a member of guest role, then allows or goes to next step.

2. The user has rights same as role then collect roles' rights or collect user's rights and check for rights.

The following sequence describes how access right is implemented.



Access Control Sequence Diagram

Data Migration Plan

Data Migration is the relocation of data from existing sources data in both digital and paper-based format into a new solution. It is performed as part of the implementation of the new solution. The purpose of data migration is to preserve core business knowledge and make it accessible from the new application. Through the use of best practices, technology-driven focus and domain experience, the process of migrating data has been broken down into a series of well-defined atomic level tasks, control metrics and procedures that reduce both cost and time to completion.

1. Normalization

By building a fully normalized relational model based on and fully supported by the consolidation of all the data, so that the data model will not fail.

2 Installation media:

Software installation media also needs to be protected in the event of a disaster, though it should be easily accessible to support staff as well. To ensure safety in the event of a disaster, we recommend our valued client to locate copies of all installation media in a protected, offsite location. To provide support staff with needed access we will also keep a central library of installation media available for use. The offsite repository should be updated as regularly as possible.

One original of the installation media for each software title should be set aside and taken to the offsite repository. This media (CD, user manuals, etc.) should always be an original so that it can provide additional proof of ownership if needed. The offsite repository should be updated as often as is feasible, quarterly at a minimum. No more than one copy of media for each version of each software title should be stored offsite in order to minimize the size of the repository.

If the manufacturer permits making backup copies, at least one copy of the software installation media should be filed in the central installation media library for use by technicians. If copies are not allowed, additional original media will be needed. If the client does not own several copies of the software package, and hence several copies of the media, additional copies of the installation media can usually be obtained by us for a small fee. Any additional copies of the media should also be stored in the onsite library, to give as much flexibility to our support staff as possible.

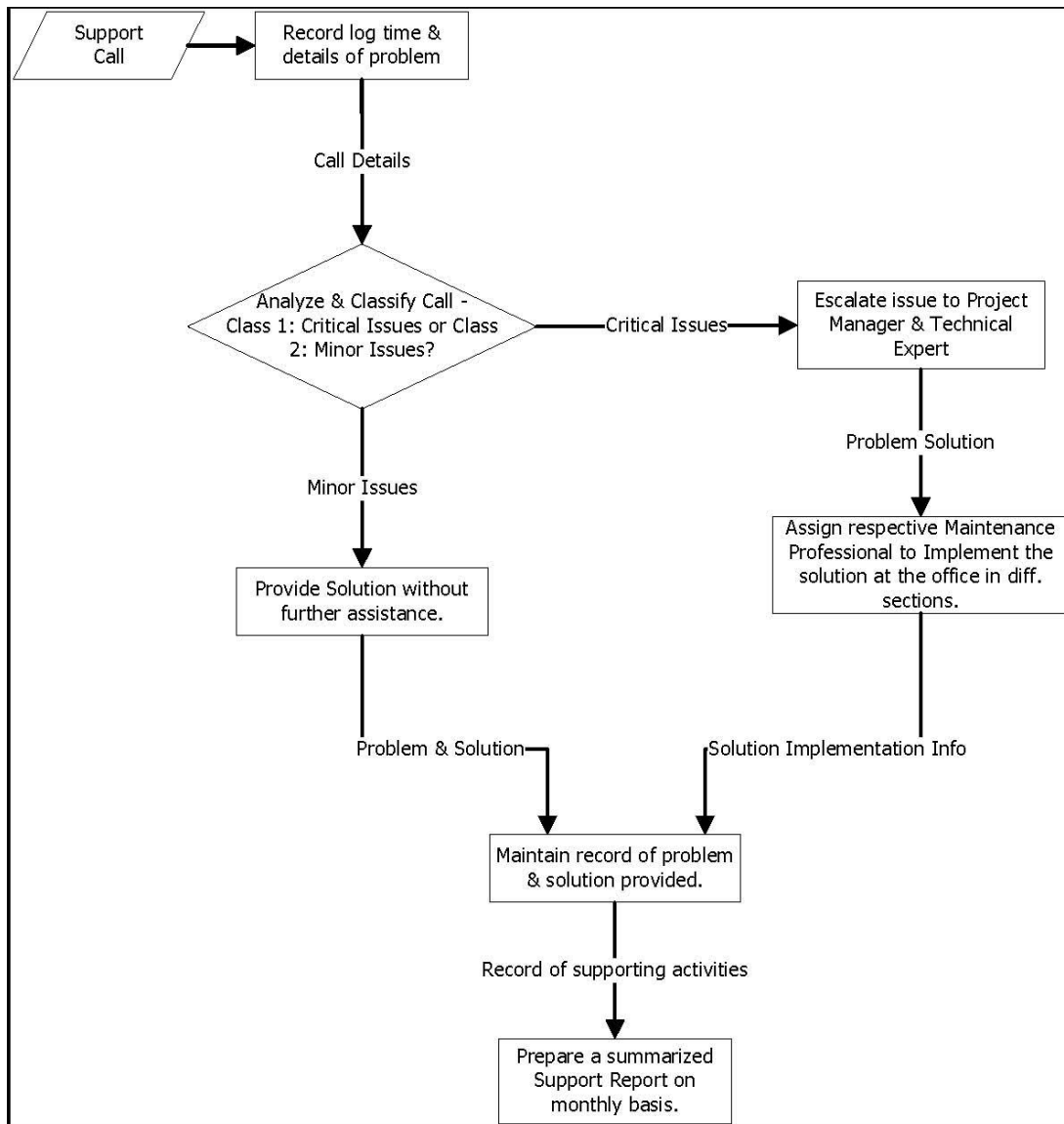


Figure: System Administration & Maintenance

Support Services for the Software

Support services for the software consist of technical support and assistance by e-mail or telephone to the user. These services include receiving, classifying, and logging support requests, and the assignments thereof to the technical experts and project managers who are responsible for troubleshooting the problem until it is resolved.

A problem is considered resolved when:

- The software conforms substantially to its specifications; or
- The user has been advised on how to correct or bypass the error through telephone; or
- Security issues or any other software problem/defect is fixed by the Maintenance Professionals within the specified time frame.

The Support Team will support the user by call handling and problem resolution as well as call classification and escalation. Any sort of software problem is fixed within 3 days; and in case of security issues (including virus attacks and other security problems) are fixed within 36 hours.

Call Classification

The following classification will be used to identify the call based on its severity:

- **Class 1 – Critical Issues** include any sort of bugs/problems identified in the software and new requirements provided by the users of offices.
- **Class 2 – Minor Issues** consist of any sort of problems which can be solved immediately or at most within 3-4 hours by the **Maintenance Professionals** without further assistance. **Call Escalation**

Technical issues that cannot be solved by the **Support Engineers** are escalated (based on the above specified Call Classification) to the Technical Expert and Project Manager via e-mail. These professionals involve other required resources such as analyst, programmer, tester, etc. to resolve the problem. After determining the solution to the problem, it is reported back to the **Project Manager/Team Leader**, who then assigns the Support Engineers to implement the solution at the respective office.

Project Handover Schedule

Description	Duration
Phase 1 Requirement Finding (R&D)	4Weeks
Phase 2 Software Development	10Weeks
Phase 4 Deployment, Testing and Training	6Weeks

All these days indicate the working days and the Day 1 stands from the day of acceptance of this proposal. These Dates are inter overlapping so all Phases will be working simultaneously.

❖ Server Specification

Motherboard	PowerEdge R740/R740XD Motherboard
Chassis Configuration	Chassis with up to 16 x 2.5" SAS/SATA Hard Drives for 2CPU Configuration
Processor	2 x Intel® Xeon® Gold 5218 2.3G, 16C/32T, 10.4GT/s, 22M Cache, Turbo, HT (125W) DDR4-2666
Memory Capacity	256GB (4 x 64GB) RDIMM, 3200MT/s, Dual Rank
RAID Configuration	C7, Unconfigured RAID for HDDs or SSDs (Mixed Drive Types Allowed)
RAID/Internal Storage Controllers	PERC H730P+ RAID Controller, 2GB NV Cache, Adapter, Low Profile
Hard Drives	7 x DELL 2.4TB 2.5 INCH 10K SAS 12GBPS HARD DISK DRIVE 2 x 1.92TB SSD SAS 12Gpbs RI 2.5in Hot-Plug Hard Drive
Embedded Systems Management	iDRAC9, Enterprise
Network Daughter Card	Broadcom 5720 Quad Port 1GbE BASE-T, rNDC
Power Supply	Dual, Hot-plug, Redundant Power Supply (1+1), 750W
Power Cords	Jumper Cord - C13/C14, 4M, 250V, 10A (US, EU, TW, APCC countries except ANZ)
Bezel	Power Edge 2U Standard Bezel (Dell EMC)
Fans	6 Standard Fans for R740/740XD
Rack Rails	Ready Rails™ Sliding Rails with Cable Management Arm

❖ **Application System Requirement**

SL#	Name of the component	Details Description
1	Server Device Type	RAC Mounted Server
2	Processor	2x Intel® Xeon® Gold 6244 3.6G, 8C/16T, 10.4GT/s, 24.75M Cache, Turbo, HT (150W) DDR4-2933
3	RAM	128GB RDIMM, 2400MT/s
4	Hard Drive	960GB X6-5.7 TB SSD SATA Read Intensive 6Gbps 512 2.5in Hot-plug AG Drive, 1 DWPD, 1752 TBW
5	Server Access Card	Hot-plug AG Drive, 1 DWPD, 1752 TBW Different Server call this device in different name like DELL call it iDrac HP call it ilo etc. But the device must have visual control capability with enterprise license
6	Ethernet Adapter	10 GbE or more.
7	Power Supply	Must have Redundant Power supplies

Technologies to be used

If awarded, Coder De Dhaka Ltd. Will develop, customize and maintenance the systems in the following technology platform:

SL	Tools/Technology	Features
1.	Software Development Mythology	Agile Scrum
2.	Operating System	Windows/Linux
3.	Architecture	Three Tier Base/ Micro service
4.	Backend Technology	Java (Spring Boot), Oracle
5.	Frontend Technology	Oracle Apex 21.2
6.	Database	Oracle 19c
7.	Web Server	Apache Tomcat or Jetty
8.	API	REST
9.	Load Balancer	Nginx
10.	Microservice Registration Discover Server	Eureka
11.	Deployment Process	Docker/Kubernetes
12.	In Memory Caching	Redis

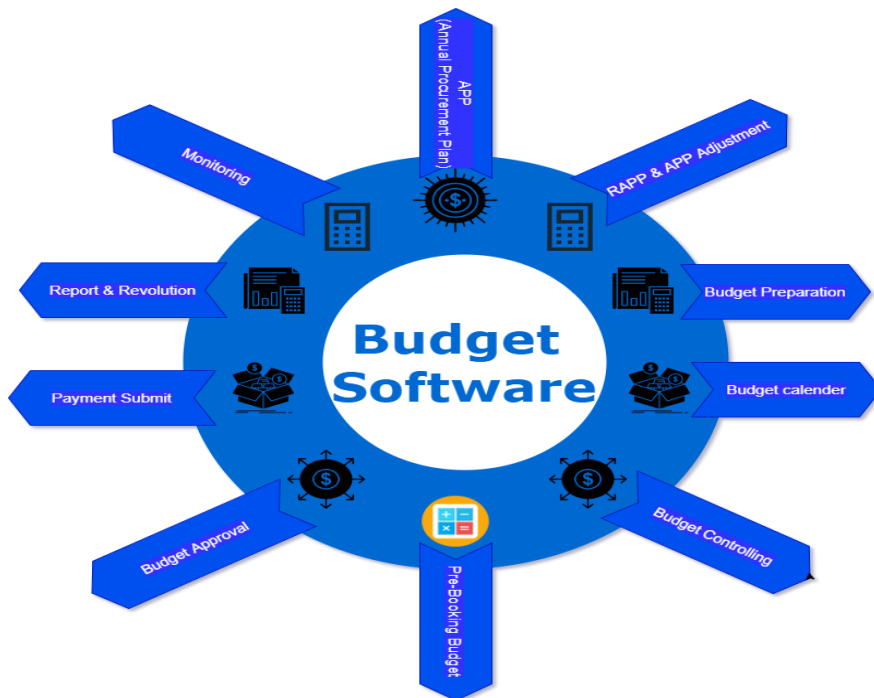
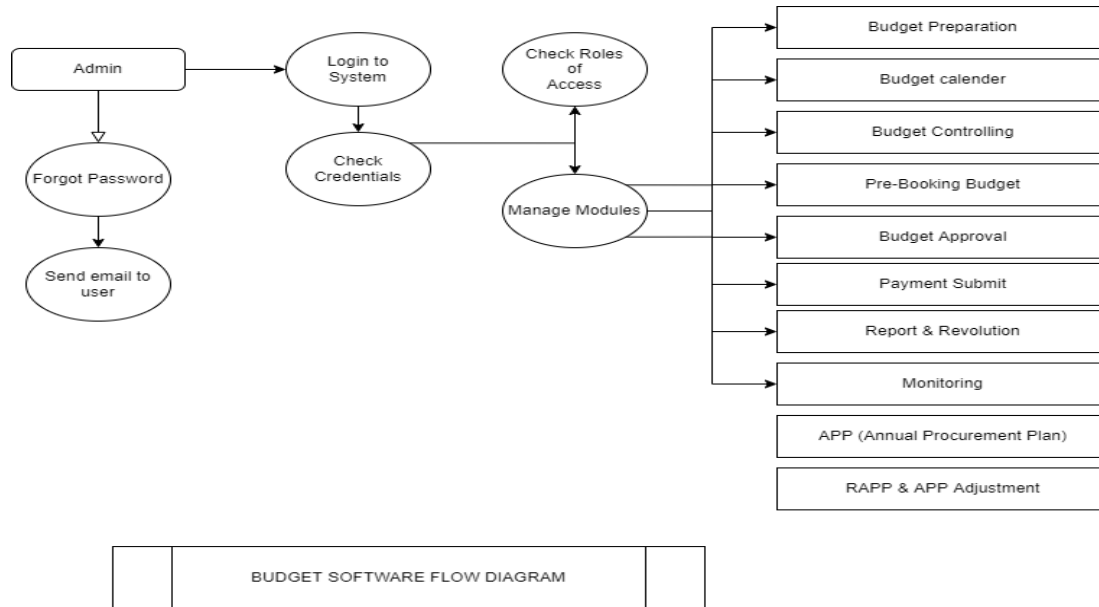


Fig. Zero Level Data Flow

Approval process and workflow

- Regain control over the budget process by enforcing users to submit data for approval
- Ideal for expense control as well
- Audit log for all submissions for approval and pending approvals
- View data by Submitted, Pending or Approved
- Track conversations around approvals or disapprovals



Estimated Budget

Total development time duration =3 (Three) months, Test operation, integration and implementation time duration =2 (Two) months.

Serial	Description	Amount
1	Budget Calendar	300000
2	Budget Preparation	500000
3	Budget Approval	200000
4	Budget Controlling	300000
5	Pre-Booking Budget	300000
6	Payment Submit	200000
7	Report & Revolution	350000
8	Budget Monitoring	300000
9	APP (Annual Procurement Plan)	250000
10	RAPP (Reverse Annual Procurement Plan)	250000
11	RAPP & APP Adjustment Plan	300000
12	Software Integration Budget Software Integration with Paperless Payment Software.	200000
13	Software Deployment and 1 (one) month Test operation	Free
14	One (1) Month Implementation	Free
15	4 (Four) months support service after implementation	Free
Total		3450000

In word: Thirty-Four Lac Fifty Thousand Taka Only.

Note: All prices are VAT & TAX included

Maintenance Budget

After completion of free support service period (4 months), SLA will start and continue for 4(four) years,

Serial	Description	Amount
1.	Yearly software maintenance cost DWASA Budget Software	80000
2	Change request management (Per man-day) (Upgradation, Feature addition or Functional modification)	4500
3	Data Entry (Applicable only once)	250000

Note: All prices are VAT & TAX included

Why Coder De Dhaka best from others?

We Provide Quality Business & Smart Solutions.

Coder De Dhaka is the promising digital agency of Bangladesh consisting of 25+ people. The Coder De Dhaka Ltd. has dealt with the largest clients of Bangladesh and solve problem by combining and creative strategies with data and technology. We believe that, we will drive the sustainable growth of technology & innovation. In this series we have made Dhaka WASA outsource Payment software. With this software, around 30,000+ employees' salary is automatically generated every year without any hassle. At present Dhaka WASA needs Budget software divided into different modules. DWASA felt the need for Budget software to simplify and digitalization WASA's work. We have already built some complete modules keeping in mind the requirements of the companies and there are several modules in the pipeline. If DWASA wants, we can transfer the software much faster. Coder De Dhaka has integrated functionality for Outsource Software, financial management, Sales, customer service, distribution, inventory, manufacturing and business intelligence. Coder De Dhaka Ltd. has been working in Dhaka WASA with a huge reputation. Respective departments of Dhaka WASA are highly satisfied with our support and maintenance. For the complete Budget ERP solution, we have developed some core modules successfully and we are working with few others, that's why Coder De Dhaka Ltd. Understands the necessity of DWASA's digitalization dreams. We hope we shall be the best digitalization partner of Dhaka WASA and thereby prove ourselves the best software solution provider in Bangladesh.

Conclusion:

Digital Bangladesh is being targeted by government and private organizations to build this system. Automation will certainly bring dynamism and efficiency to government organizations and facilitate the ease of doing business leading to better government services and development. Digitized systems promote more effective monitoring of systems, allowing governments to take quick and timely action.

Thanking You

Ashraful Alam
Director
Coder de Dhaka ltd.