PROJECT MANAGEMENT PLAN TEMPLATE

(Group-9)

PROJECT MANAGEMENT PLAN

Business Process Automation

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Project Title: Business Process Automation

1. INTRODUCTION:

Business Process Automation (BPA) is a comprehensive software solution designed to streamline and optimize business operations by automating repetitive tasks, improving efficiency, and enhancing productivity. Through seamless integration with various modules such as sales, inventory management, finance, HRM, CRM, procurement, production planning, project management, SCM, and reporting/analytics, BPA centralizes data and processes, providing a unified platform for seamless collaboration and decision-making. Leveraging customizable workflows, BPA automates routine tasks such as invoicing, inventory updates, payroll processing, and report generation, reducing manual errors and freeing up valuable resources. With a user-friendly interface and robust security features, BPA ensures ease of use, accessibility, and data protection. By empowering businesses to automate workflows, analyze performance metrics, and adapt to changing market demands, BPA enables organizations to achieve operational excellence and drive sustainable growth in today's competitive landscape.

2. PROJECT MANAGEMENT APPROACH

Figure: Organizational Hierarchy

The figure suggests the organizational hierarchy of our project where there are four departments for Manager under which are the Engineering Manager, Procurement Manager, Project Manager and Administration.

- **Engineering Manager:** An engineering manager's responsibilities also include managing finances, coordinating one or more engineering teams, and planning, developing, and

managing projects. The number of engineering teams and managers who report to an engineering manager increases as he or she climbs the technical management ladder.

- **Procurement Manager:** A procurement manager oversees and supervises the acquisition of all the products and services that a business need. They are in charge of locating suitable suppliers, conducting vendor interviews, negotiating advantageous supplier agreements, and administering vendor and supplier contracts.
- **Project Manager:** The project manager plans and oversees the project, assigns any delegation and makes use of project assurance roles within predetermined reporting structures, and creates and updates project, stage, and exception plans as necessary.

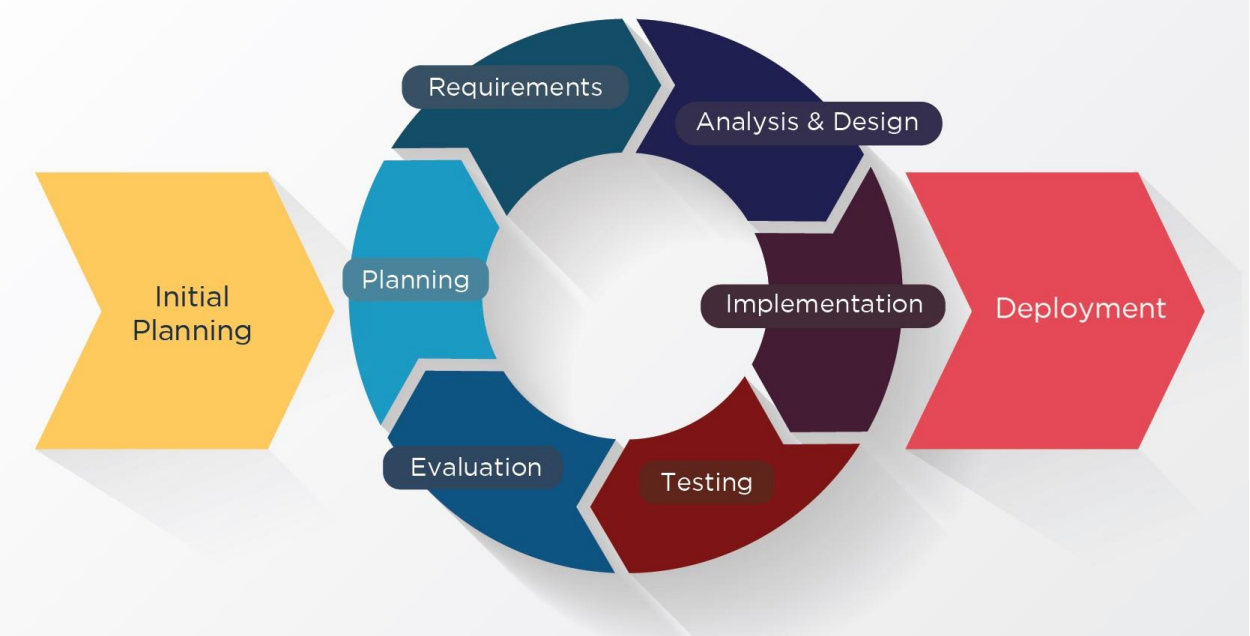

Figure: Project Management Approach

- **Administration:** An administrator is essential to the efficient operation of a firm and provides office support to either an individual or a team. They might be in charge of answering phones, welcoming and guiding guests, word processing, making spreadsheets and presentations, and filing.

3. JUSTIFICATION

The justification for our business automation processes is rooted in enhancing operational efficiency and facilitating seamless workflow management. By automating key business processes, we empower organizations to streamline their operations, minimize manual errors, and accelerate decision-making. One of the primary benefits is the optimization of resource utilization. Automation enables businesses to allocate their resources more effectively, leading to improved productivity and cost savings. Additionally, automation enhances data accuracy and consistency by reducing the reliance on manual data entry, mitigating the risk of errors and discrepancies. Moreover, automation fosters greater transparency and accountability within organizations. By digitizing processes and workflows, businesses can track activities in real time, monitor performance metrics, and ensure compliance with regulatory requirements.

4. OBJECTIVES AND PROJECT SCOPES

Objective: To implement business automation processes to enhance operational efficiency and productivity.

Sub-objectives:

1. Streamline Workflow Management: Develop automated systems to streamline workflow processes and reduce manual tasks.
2. Improve Resource Allocation: Implement tools for resource optimization, including personnel, time, and budget allocation.
3. Enhance Data Management: Establish automated data management systems to ensure data accuracy, consistency, and security.
4. Facilitate Decision-making: Develop automated reporting and analytics tools to provide actionable insights for informed decision-making.
5. Foster Collaboration: Implement collaborative platforms to enhance communication and collaboration among team members.
6. Ensure Regulatory Compliance: Develop automated compliance monitoring systems to ensure adherence to regulatory standards and mitigate risks.
7. Enhance Customer Experience: Implement automation to improve customer service processes and enhance the overall customer experience.

Scope:

1. Workflow Automation: Implement automated solutions for key business processes such as inventory management, invoicing, and order processing.
2. Data Management: Develop automated data entry and validation processes to improve data accuracy and consistency.
3. Communication Systems: Implement automated communication tools such as email automation and chatbots to enhance internal and external communication.
4. Task Management: Develop automated task management systems to assign, track, and prioritize tasks efficiently.
5. Reporting and Analytics: Implement automated reporting and analytics tools to generate insights and monitor business performance.
6. Integration with Existing Systems: Ensure seamless integration with existing software systems to maximize efficiency and minimize disruption.
7. Training and Support: Provide training and support for employees to effectively utilize automated systems and tools.
8. Continuous Improvement: Establish processes for continuous monitoring, evaluation, and optimization of automated systems to adapt to changing business needs.

5. OVERVIEW OF THE PROJECT

Introducing our cutting-edge business automation solution, designed to revolutionize operations across various industries. With seamless user registration and authentication processes, our advanced technology ensures secure access for administrators, drivers, and passengers alike. Experience the convenience of personalized features, efficient task management tools, and unique capabilities tailored to your specific business needs, giving you a competitive advantage in the market. Expand your business reach and establish a formidable market presence with our innovative solution. Whether you're a small startup or a large corporation, our automation platform offers scalability and flexibility to meet your evolving needs. Embrace the future of automation and propel your business forward with confidence. Discover how our solution can streamline your operations, enhance productivity, and drive growth. Join the ranks of successful businesses leveraging automation to stay ahead in today's fast-paced market landscape. Experience the transformative power of automation with us today

Objectives and sub-objectives:

6. STAKEHOLDERS ANALYSIS

6.1 PRIMARY STAKEHOLDER:

1. Business Owners:
- Interest: Focused on optimizing operational efficiency and maximizing returns on investment.
- Influence: High, as they drive the strategic direction and investment decisions of the automation project.
- Concerns: Return on investment, system reliability, scalability.
2. Employees:
- Interest: Seeking streamlined processes to enhance productivity and job satisfaction.
- Influence: Moderate, as their buy-in and adoption of automation tools are crucial for success.
- Concerns: Training, job security, workflow integration.
3. IT Department:
- Interest: Ensuring the successful implementation and maintenance of the automation solution.
- Influence: High, as they are responsible for system development, integration, and support.
- Concerns: System performance, integration with existing infrastructure, data security.
4. End Users:
- Interest: Expecting user-friendly interfaces and improved workflow processes.
- Influence: Moderate to high, as their feedback drives system improvements.
- Concerns: User experience, system reliability, responsiveness.
5. Regulatory Bodies:
- Interest: Ensuring compliance with legal and regulatory requirements.
- Influence: Moderate to high, as they can impact the deployment and operation of the automation solution.
- Concerns: Data privacy, security standards, regulatory compliance.

6.2 SECONDARY STAKEHOLDER:

1. Vendors/Suppliers:
- Interest: Providing support and services for the implementation and maintenance of the automation solution.
- Influence: Moderate, as their performance and reliability affect the overall success of the project.
- Concerns: Service quality, pricing, reliability.
2. Consultants:
- Interest: Providing expertise and guidance throughout the implementation process.
- Influence: Moderate, as their recommendations can impact decision-making.
- Concerns: Project scope, timeline, budget.
3. Business Analysts:
- Interest: Analyzing business processes and requirements to ensure alignment with automation goals.
- Influence: Moderate, as their insights drive system design and optimization.
- Concerns: Requirements gathering, stakeholder communication, project success metrics.

4. Human Resources:
- Interest: Managing workforce transitions and ensuring employee engagement with the new automation tools.
- Influence: Moderate, as they oversee training and change management initiatives.
- Concerns: Workforce readiness, employee morale, talent retention.

7. MILESTONE LIST

Milestone	Duration	Description	Date
Complete SRS	8 weeks	The document specifies the functions and performance standards for the software. Additionally, it outlines the functionality the product must have in order to satisfy the demands of all stakeholders.	6/09/22
Design	5 weeks	sufficient in detail so that anybody who already understands the problem might code the project without having to make any major decisions	14/10/22
Complete Coding	7 weeks	converting a system's design into a computer language format	1/12/22
Complete Testing and Debugging	1 month	Verifying that a software system or component satisfies its functional and nonfunctional criteria is called testing, whereas debugging is the process of finding and fixing problems with the software system.	4/01/23
Documents – User Guides and Installation	4 weeks	An instruction manual that helps users of your software install, remove, and update your program	14/02/23

8. PROCESS MODEL TO BE FOLLOWED

The proper process model must be selected by a company in order to create successful software and get the intended result. We have chosen to use the Agile Process Model, specifically the Dynamic product Development Method (DSDM), for our "Business Process Automation " software.

Figure: Agile Model

In order to focus on adaptability and customer happiness, the agile process model combines iterative and incremental procedures while providing functioning software solutions quickly. This approach divides the project into incremental, modest builds that are delivered over time.
The Agile Model is a good fit for our project because it is a medium-sized undertaking. A major consideration while selecting the Agile Process Model is adaptability because of the huge number of users that will be using the system and the potential for additional requirements. Our choice to embrace Agile was also influenced by our ability to interact directly with our clients. Furthermore, it is critical to finish our assignment as soon as feasible because it deals with a social issue.

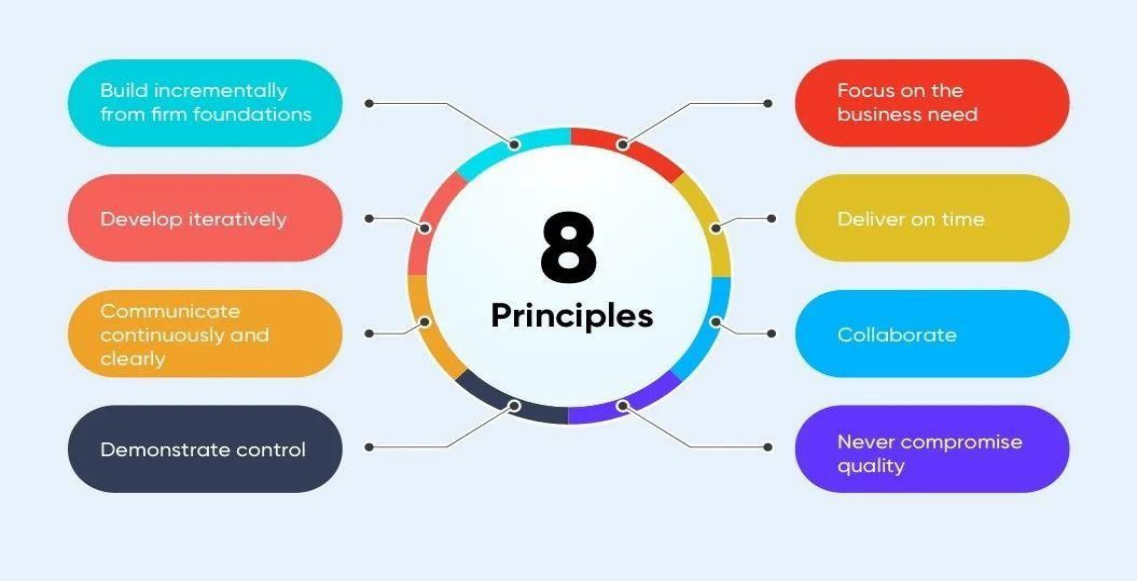

Figure: DSDM 8 Principles

The Dynamic Software Development Method (DSDM)'s rapid application development method, which offers an agile project distribution structure, is the main argument for picking it. Given that our users are always connected, this fits with the essential DSDM capabilities. For our project, the eight DSDM guiding principles are a perfect fit. We must, for instance, prioritize business requirements, produce on time, never cut corners on quality, use iterative development, and communicate honestly and frequently.

9. WORK BREAKDOWN STRUCTURE

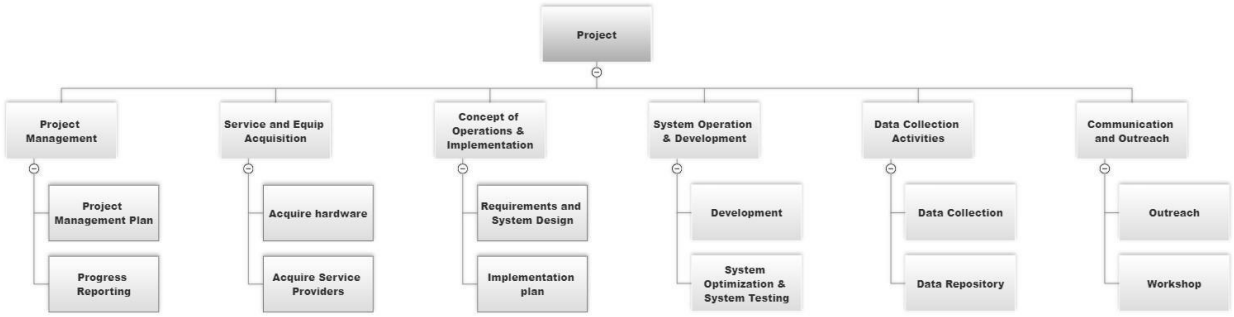

Figure: Work Break Down Structure (WBS)

10. ESTIMATION

Activity Table:

Activity Name	Activity Node	Duration(weeks)	Precedence
Requirement Analysis	A	4	-
Design	B	2	A
Development	C	12	A
Implementation	D	4	B
Testing	E	4	D
Training	F	4	E
Installation	G	4	F
Delivery	H	1	G
Support	I	12	H

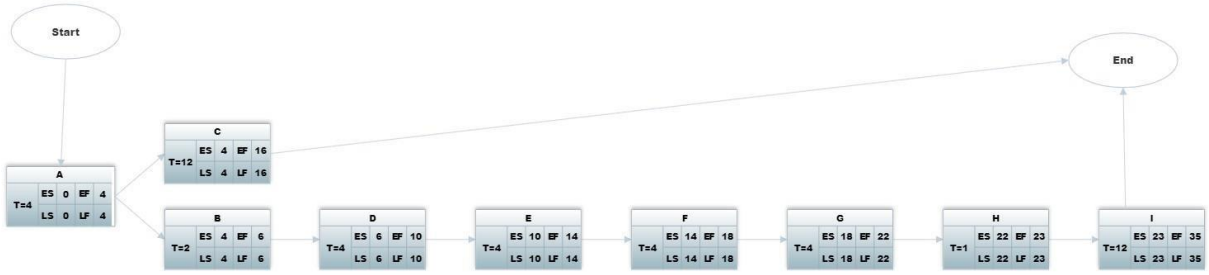

Figure: Activity Diagram

11. RESOURCE REQUIREMENTS

SOFTWARE REQUIREMENTS

- **Requirement gathering Tools:** The system developer needs JIRA tools to perform managing, gathering, documenting the requirements for this software.
- **Prototyping tool:** These tools help in creating quick mockups and prototypes of the software to get feedback from stakeholders. Examples of such tools include Balsamiq, Axure, and Sketch.
- **Project management Tools:** The system developer needs smartsheet, Microsoft project to managing the overall project, including scheduling, resource allocation etc.
- **Testing tools:** The system developer needs selenium tools in perform testing activities before delivering the final product.

HARDWARE REQUIREMENTS

- Router
- Monitor
- Processor
- Cables
- Keyboard/Mouse
- Database Server
- LAN
- Graphics and Display (GPU)
- Memory (RAM)
- I/O Devices

HUMAN RESOURCE REQUIREMENTS

- **Project Manager**: Responsible for overall project planning, coordination, and communication. They ensure that the project stays on track and manages risks effectively.
- **Business Analyst**: Works closely with stakeholders to gather and document project requirements, translating business needs into technical specifications.
- **Software Developers**: Responsible for writing code, implementing features, and ensuring the software functions as intended. The number of developers depends on the project's size and complexity.
- **Quality Assurance (QA) Engineers**: Test the software to identify bugs, issues, and ensure that it meets quality standards. They help maintain the software's reliability.
- **UI/UX Designers**: Create the user interface and experience design, ensuring the software is user-friendly and visually appealing.
- **Database Administrators (DBAs)**: If the project involves a database, DBAs manage database design, optimization, security, and maintenance.
- **DevOps Engineers**: Responsible for automating the deployment, scaling, and management of the software, ensuring smooth operations.
- **Technical Writers**: If the project requires documentation, technical writers create user manuals, guides, and other documentation.

- **Security Experts**: In projects dealing with sensitive data or security requirements, cybersecurity experts ensure that the software is developed with proper security measures in place.
- **Scrum Master / Agile Coach**: If following Agile methodologies, these roles facilitate the Agile process and ensure effective team collaboration.
- **Support and Maintenance Team**: After the project is launched, a team might be needed to provide ongoing support and maintenance, addressing issues and releasing updates.

12. PROJECT SCHEDULE

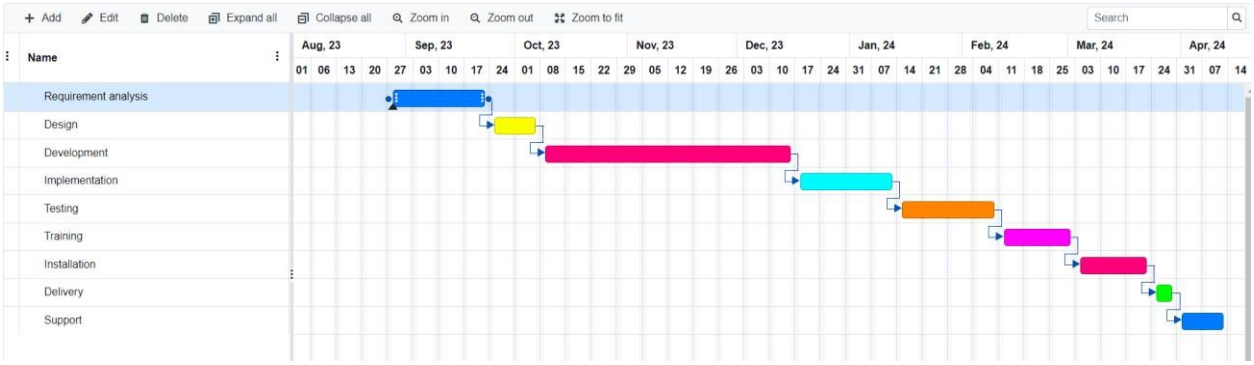

Figure: Gantt Chart

13. DELIVERY PLAN

For the Business Automation Process, adopting the Agile development model proves advantageous in crafting a sophisticated and tailored system. Agile's iterative and incremental approach aligns seamlessly with the dynamic nature of business automation, ensuring continuous improvement and adaptation to evolving requirements.

1. Project Initiation:
    - Define the project's vision, objectives, and scope, outlining the desired outcomes of automation implementation.
    - Identify stakeholders and their roles, understanding their involvement and expectations.
    - Develop the initial product backlog, capturing high-level automation requirements and business processes to be streamlined.
2. Release Planning:
    - Identify critical features and functionalities necessary for the initial automation deployment.
    - Prioritize backlog items based on business value, impact, and complexity.
    - Estimate effort for each item using techniques like story points or relative sizing.
    - Define the first iteration (sprint) duration, ensuring a balance between time constraints and achievable goals.
3. Iteration 1 - Sprint Planning:
    - Select backlog items for the initial automation iteration, focusing on high-priority tasks.
    - Break down selected items into manageable user stories with clear acceptance criteria.
    - Define tasks required for implementation, estimating effort and assigning responsibilities.
    - Commit to delivering a functional automation solution increment by the sprint's end.
4. Iteration 1 - Sprint Execution:
    - Conduct daily stand-up meetings to track progress, address challenges, and

coordinate tasks.
    - Collaboratively develop automation functionalities, with developers, testers, and designers working in tandem.
    - Execute tests based on user stories to ensure functionality and reliability.
    - Update the sprint backlog and task status regularly to maintain transparency and accountability.
5. Iteration 1 - Sprint Review:
    - Showcase completed automation features to stakeholders, gathering feedback for refinement.
    - Collect insights on successes and areas for improvement, ensuring alignment with business goals.
6. Iteration 1 - Sprint Retrospective:
    - Reflect on team performance and collaboration during the sprint, identifying process improvements.
    - Address any communication or workflow bottlenecks, fostering a culture of continuous improvement.
7. Iteration 2+ - Repeat:
    - Iterate through subsequent sprints, incorporating feedback and refining automation functionalities.
    - Regularly review and reprioritize the automation backlog to align with evolving business needs.
    - Incrementally enhance the automation system based on stakeholder input and market dynamics.
8. Release and Beyond:
    - Conduct comprehensive testing and quality assurance to ensure the reliability and efficacy of the automation solution.
    - Prepare for the official deployment of the automation system, monitoring performance and user feedback post-release.
    - Continuously monitor and optimize the automation process, adapting to changing business landscapes and technological advancements.

Remember that Agile projects are highly adaptable, and the delivery plan may evolve over time as you gain more insights and information during each iteration. Flexibility and regular communication with stakeholders are key components of a successful Agile delivery plan.

14. RISK ANALYSIS

Risk analysis is a crucial aspect of developing any software system, including the Business Process Automation system. The project may encounter various risks that could potentially impact its success. These risks encompass technical challenges such as system glitches, performance bottlenecks, and development delays, security vulnerabilities such as unauthorized access and data breaches, resource constraints like a shortage of skilled personnel or loss of key team members, regulatory hurdles such as non-compliance with industry standards and data privacy regulations, adoption challenges like low user acceptance, and infrastructure vulnerabilities such as network instability and power outages.
To effectively mitigate these risks, the development team should adopt proactive measures. These may include conducting comprehensive testing and research to identify and rectify technical issues, implementing stringent security measures to safeguard sensitive data and prevent unauthorized access, establishing robust contingency plans to address resource constraints and mitigate potential disruptions, ensuring compliance with regulatory requirements through continuous monitoring and adherence to industry standards, fostering user engagement through effective communication and user-centric design, and implementing redundancy measures to minimize the impact of infrastructure failures.

Risks	Category	Likelihood	Impact	Risk Exposure

System bugs	TE	3	3	9
Unauthorized access	BU	5	2	10
Data breaches	BU	4	1	4
Shortage of resources	DE	2	3	6
Higher rate of user management	PS	6	2	12
Network Failures	TE	2	1	2
Lack of training tools	DE	8	2	16
Change in requirements by customers	PS	8	2	16
Improper maintenance	ST	3	1	3

Figure: Risk Table for Business Process Automation

N.B: Impact Values

1. Catastrophic
2. Critical
3. Marginal
4. Negligible

Risk Probability = 80% (Most Likely)

15. QUALITY CONTROL PLAN

Quality Control Plan (QCP) for this software project outlines the processes, activities, and methodologies that will be followed to ensure the quality of the software being developed. It is a structured approach to identify, monitor, and rectify issues throughout the software development lifecycle. The QCP helps to deliver a reliable, functional, and high-quality software product. Here are the key components typically included in a software project's Quality Control Plan:

- **Roles and Responsibilities**: Clearly define the roles and responsibilities of each team member involved in quality control activities. This includes roles such as Quality Assurance (QA) testers, developers, project managers, and stakeholders.
- **Testing Strategy**: Outline the testing approaches that will be used, such as unit testing, integration testing, system testing, user acceptance testing, and regression testing. Specify the tools, techniques, and environments to be used for testing.
- **Test Case Design**: Describe how test cases will be designed, documented, and organized. This involves outlining the process of deriving test cases from requirements, user stories, and design specifications.
- **Change Control**: Detail how changes to the software will be managed and controlled. Describe the process for documenting and assessing the impact of changes, and how they will be tested and validated before implementation.
- **Configuration Management**: Define how the software's configuration will be managed to ensure that changes are properly tracked and controlled. This includes version control, release management, and ensuring consistency across environments.
- **Metrics and Reporting**: Define the metrics that will be used to measure the quality of the software. This could include metrics related to defect density, test coverage, code complexity, and more. Outline how these metrics will be collected and reported.

- **Continuous Improvement**: Describe how the QCP will be reviewed and improved over time based on lessons learned from the project. This ensures that best practices are continually integrated into the process.

16. BUDGET

CONSTRUCTIVE COST MODEL

Project type : Organic
Coefficient<effort factor> : 2.40 [P=1.05, T=0.38]
SLOC : 7700 Lines
Person Months : (2.40* 7.71.05) = 20.47
Dev. time, DM : (2.50* 20.470.38)=7.87=8Months=1408WH
Required People, ST : PM/DM = 20.47/7.87 = 2.60 = 3

BUDGETING

Developer Salary in 8 months:

Per Developer salary per working hour = 550 Tk Total
Developer salary= 550*1408 = 774,400 Tk. PM's
Salary in 8 months: 1,00,000 Tk.

Requirement Analysis:

Time-Needed: 1 month (22 working days= 176 working Hour)
Req Analysis Person's Hourly wage =300 Tk.
Total Req Analysis expense = 300*176= 52,800 Tk.

Transportation Cost Estimation: 8,500 Tk.
Training & Hardware Expense Estimation: 92,000 Tk.
Rent Expense:

Room per Month = 10,500 Tk.
Total in 8 Months = 84,000 Tk.
Total Utilities in 8 Months (including miscellaneous):12,000 Tk. Maintenance (Till 6 Months after Delivery):

Expense per Hour: 1000 Tk.
Total Estimated Time needed for Maintenance 60 Hours Total
Estimated Maintenance Expense = 60*1000 = 60,000 Tk. Total Estimated Expense:
774,400 + 52,800 + 8,500 + 92,000 +84,000 + 12,000 + 60,000 + 1,00,000= 1,183,700 Tk.

Profit:
20% of Total Estimated Expense = 1,183,700 *20% = 236,740Tk. Project Budget: 1,183,700 + 236,740 = 1,420,440 Tk.

17. CONCLUSION

In conclusion, the landscape of business process automation offers ample opportunities for enhancement and innovation. Moving forward, it is essential to direct research efforts toward refining existing automation services and devising effective new solutions. Future studies should prioritize investigating the specific purposes driving the adoption of automation tools across various industries, delving into factors influencing adoption both pre- and post-implementation. Cross-case studies between different regions and nations can provide valuable insights for comparative analysis and informed decision-making. A critical aspect demanding attention is the formulation of automation policies, taking into account regional and local variations. Understanding the intricate relationship between users and automation services, both current and prospective, requires further exploration. Future research should focus on identifying user-centric factors influencing engagement with automation tools. Exploring additional system aspects will shed light on their impact on user adoption and utilization of automation services. In essence, ongoing research and development efforts are essential for unlocking the full potential of business process automation, driving efficiency, and fostering innovation across industries.