Business Process Automation
(BPA)

CE416

(PRJ2018CE009)

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Software Project Management Plan

Document

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1. Introduction

This section gives a scope description and overview of everything included in this SRS document. Also, the purpose for this document is described and a list of abbreviations and definitions is provided.

1.1 Objective

The purpose of this document is to give a detailed description on project management and planning for the project titled "Business Process Automation (BPA)" portal. It will illustrate the purpose and complete declaration for the management of system. It will also explain work breakdown structure, team requirements and other documents relating to tracking and scheduling of the project in detail.

1.2 Major functions

Some of the major functions of the project are mentioned below:

- **New Entry** – for new project that arrives at company's doorsteps.
- **Daily Entry** – for employees to report their work on daily basis.
- **New Project Details** – complete details of the new project initiated.
- **Excel2DB** – as old format of process was offline excel files, so old project can be directly feed in the portal via this module.
- **Report Generation** – 21 different types of real time basis report can be generated and saved or shared as per the requirement.

1.3 Management & Technical constraints

Developers of the product should be aware that main feature of the intended product is portability. So they should use common libraries and tools that can work with all the well-known internet browser application with no problem. Reusabilty of the code be must while developing the application. Coding standards should strictly be followed.
Developers should also be careful about the privacy of users. Since product will be consisting sensitive data relating to the live projects running in the company, their legal documentations,their owners, and their net-worth, necessary precautions should be taken to protect user data.
Developers should also be careful about the E-mail sending protocols used in the application – SMTP connection and Internet availability for secure E-mail delivery. Developer should also be made aware about the functioning of SMS Portal within the company.

Memory Constraints: There is no specific memory constraint in order to run and integrate the web based portal. However, some features in database may need to be modified in order to perfectly match the configuration as per the requirement.

Assumption: One assumption about the product is that it will always be used on-premise device within the company's intranet network with enough system

configurations. If the device does not have enough hardware resources available for the application, for example the users might have allocated them with other applications, there may be scenarios where the application does not work as intended or even at all. Without permission to SMS portal the user might not be able to avail email forwarding services however they might be able to save the report generated to their device offline

1.3 Definitions, Acronyms, and Abbreviations.

Term	Definition
BPA	Business Process Automation
SMS Portal	System Management Server – Company's intranet site for communication purposes and e-mail integration.
SQL	Structured Query Language – for backend database purposes.
Azure B+	Azure B+ OS running on 64-bit system with 6GB RAM
BTR	Board Target Revenue
CPI	Consumer Price Index
CCPI	Client Consumer Price Index
PCPI	Partner Consumer Price Index
DESC	Description
RAT	Rational
DEP	Dependencies
PM	Project Manager

2. Project Estimation

2.1 Estimation technique used

The project size is a measure of the problem complexity in terms of the effort and time required to develop the product. Currently, two metrics are popularly being used to estimate size: Line of code (LOC) and function point (FP).

2.2 Efforts, Resources, Project Duration

Parameters	Count		Simple	Average	Complex		Total
No. of user Input	4	X	3	**4**	6	=	16
No. of user Output	1	X	4	**5**	7	=	05
No. of Inquires	2	X	3	**4**	6	=	08
No. of Files	2	X	7	**10**	15	=	20
external Interface	2	X	5	**7**	10	=	14

Complexity Weight Factor:

Sr. No.	Factors	Weights
1.	Does the system require reliable backup and recovery?	**2**
2.	Are data communication required?	**3**
3.	Are there distributed processing functions?	**0**
4.	Is performance critical?	**1**
5.	Will the system run in an existing, heavily utilized operational environment?	**2**
6.	Does the system require online data entry?	**4**
7.	Does the on-line data entry require the input transactions to be built over multiple screens or operation?	**0**
8.	Are the master file updated on-line	**3**
9.	Are the inputs, outputs, files, or inquiries complex?	**0**
10.	Is the internal processing complex?	**2**
11.	Is the code designed to be reusable?	**4**
12.	Are conversion and installation included in the design?	**1**
13.	Is the system designed for multiple installations in different organizations?	**2**
14.	Is the application designed to facilitate change and ease of use by the user?	**1**

Weight	Degree Of Influence
0	No Influence
1	Incidental
2	Moderate
3	Average
4	Significant
5	Essential

FP Count:

FP = count total*[0.65+0.01 *∑(Di)]

FP = 25* [0.65+0.01*63]

FP = 56.70

Function Point is: 56.70

Line of code (LOC) = FP*30 = 56.70*30 = 1701.00

KLOC = 1.70100

Software Project Type

Type	**a_b**	**b_b**	**c_b**	**d_b**
Organic	2.4	1.05	2.5	0.38
Semi-detached	**3.0**	**1.12**	**2.5**	**0.35**
Embedded	3.6	1.20	2.5	0.32

Effort = a_b*(KLOC) ^b_b

= 3.0*(1.70100) ^1.12

= 5.44 PM

Tdev = c_b * (Effort) ^d_b

= 2.5*(5.44) ^0.35

= 4.52 Months

3. Risk Management Plan

Miscommunication

Probability: High

Impact: High misinterpretations of what other team members say and write might stand in the way of a common understanding of what to do and how to do it. This might lead to delays, unwanted results and double work.

Prevention: Throughout the project, and especially during weekly meetings, the PM has to make sure every team member understands the task given to him, by having frequent talks with each group member about their task. It is important that the minutes of the meeting are correct and complete, and they should be read by everyone with care.

Correction: When a problem occurs, the QAM arranges a meeting with all involved people to come to a common understanding of the situation. After this meeting, its results are briefed to all team members.

Too many planned features lead to infeasible design

Probability: High

Impact: high

Prevention: The Technical Advisor should be consulted on whether the delivery of the planned product can be done within the time budget. Every item should have a priority.

Correction: By closelymonitoring progress the decision to drop certain requirements can be made in time.

Illness or absence of team members or the PM

Probability: Medium

Impact: High

Prevention: Team members should warn their team leader or the PM timely before a planned period of absence. The PM should make planned absence a point on the first meeting to make sure that absence that is known at that time is taken into account in the schedule.

Correction: Every role has a person to replace him. Communication between these two people is very important. The "vice" person should be actively involved in all work in order to be able to replace his counterpart. All important information and design decision should be in documents or in the meeting notes, to make sure that as little information is lost as possible.

Loss of critical information, documents or code

Probability:Medium

Impact: High

Prevention: The SCMP should be written and used with care. The base assumption should be that there is a backup of every single piece of information at any single time.

Correction: Use the latest backups to recover the most recent version. If the missing parts are necessary, replace these as soon as possible.

The client changes his mind about the requirements, or there is disagreement about the requirements interpretation.

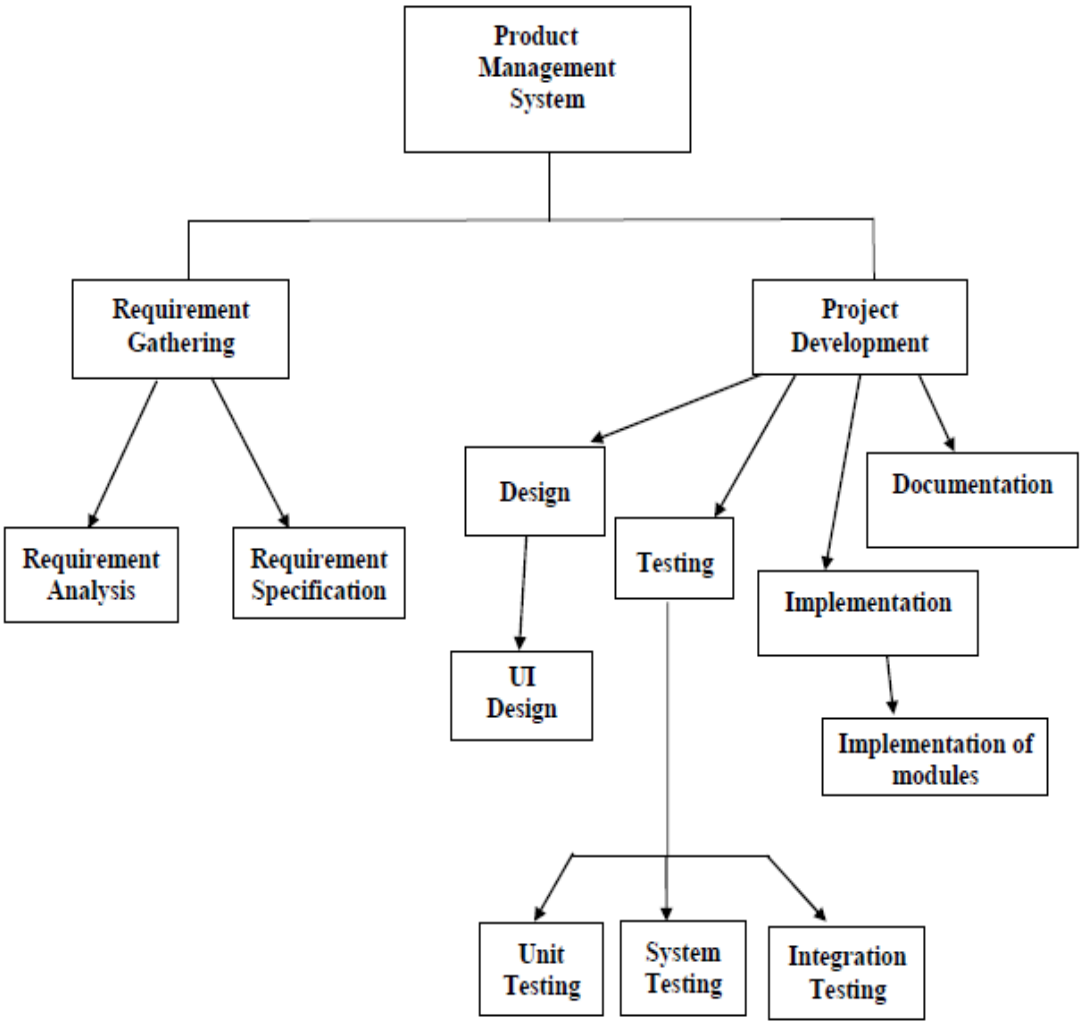
Probability: High
Impact: Medium
Prevention:It should be made very clear to the client that after a certain date the requirements can't change anymore
Correction: If the customer changes his mind during the UR phase his new requirements can be incorporated in the URD. Procedures in SQAP [8] detail if the URD may be changed after approval, and (if so) how to implement changes.

The client is not available when needed

Probability: Medium
Impact: Medium
Prevention: Meetings with the client should be planned well in advance. The client has been given room in his schedule for his Software Engineering related work.
Correction: When the client is not available, meetings may have to be rescheduled.

4. Scheduling

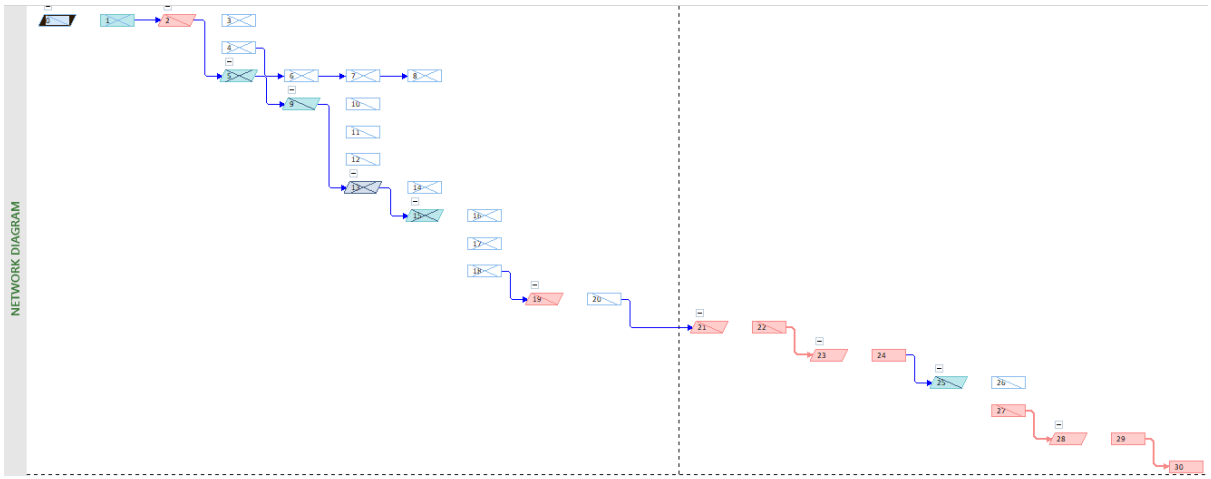
4.1 Work Breakdown structure



4.2 Task Network Representation

	Task Mode	Task Name	Duration	Start	Finish	Predecessors	Resource Names
0		**Business Process Automation**	**88 days**	**Mon 18-12-17**	**Fri 13-04-18**		
1		**Feasibility Study**	2 days	Mon 18-12-17	Tue 19-12-17		**Deployment Team**
2		**Requirement Gathering**	**5 days**	**Mon 25-12-17**	**Fri 29-12-17**	**1**	**Analyst**
3		Questionnaire	2 days	Mon 25-12-17	Tue 26-12-17		Current Employees
4		Survey	3 days	Wed 27-12-17	Fri 29-12-17		Current System
5		**Planning and Analysis**	**3 days**	**Mon 01-01-18**	**Wed 03-01-18**	**2**	**Deployment Team**
6		Hrs. Distribution	1 day	Mon 01-01-18	Mon 01-01-18	4	Analyst
7		Work Distribution	1 day	Tue 02-01-18	Tue 02-01-18	6	Analyst
8		Resource Allocation	1 day	Wed 03-01-18	Wed 03-01-18	7	Analyst
9		**Designing Phase 1**	**4 days**	**Thu 04-01-18**	**Tue 09-01-18**	**5**	**Deployment Team**
10		Models	4 days	Thu 04-01-18	Tue 09-01-18		
11		Understanding Current Scenario	2 days	Fri 05-01-18	Mon 08-01-18		
12		SQL Server Management	2 days	Sat 06-01-18	Tue 09-01-18		
13		**Implementation and Coding Phase 1**	**15 days**	**Tue 09-01-18**	**Sat 27-01-18**	**9**	
14		Module #1 New Entry	15 days	Tue 09-01-18	Sat 27-01-18		
15		**Designing Phase 2**	**6 days**	**Mon 29-01-18**	**Mon 05-02-18**	**13**	**Deployment Team**
16		Models	4 days	Mon 29-01-18	Thu 01-02-18		
17		Understanding Current Scenario	2 days	Wed 31-01-18	Thu 01-02-18		
18		SQL Server Management	3 days	Thu 01-02-18	Mon 05-02-18		
19		**Implementation and Coding Phase 2**	**16 days**	**Tue 06-02-18**	**Tue 27-02-18**	**18**	**Deployment Team**
20		Module #2 Daily Entry	15 days	Tue 06-02-18	Mon 26-02-18		
21		**Designing Phase 3**	**2 days**	**Wed 28-02-18**	**Thu 01-03-18**	**20**	**Deployment Team**
22		Models	2 days	Wed 28-02-18	Thu 01-03-18		
23		**Implementation and Coding Phase 3**	**5 days**	**Tue 27-02-18**	**Sat 03-03-18**	**22**	**Deployment Team**
24		Module #3 Excel2DB	4 days	Wed 28-02-18	Sat 03-03-18		
25		**Designing Phase 4**	**6 days**	**Mon 05-03-18**	**Mon 12-03-18**	**24**	**Deployment Team**
26		Models	5 days	Mon 05-03-18	Fri 09-03-18		
27		SQL Server Management	4 days	Wed 07-03-18	Mon 12-03-18		
28		**Implementation and Coding Phase 4**	**16 days**	**Mon 12-03-18**	**Sat 31-03-18**	**27**	**Deployment Team**
29		Module #4 Report Generation	15 days	Tue 13-03-18	Sat 31-03-18		
30		**Documentation**	10 days	Mon 02-04-18	Fri 13-04-18	29	

4.3 Pert Chart Representation



5. Project Resources

5.1 People

Name	Email	Role
Nilesh Shah	nilesh.shah@azureknowledge.com	PM
Varsh Patel	hacvarsh11@gmail.com	Team Lead
Dinesh Patel	dinesh.patel@azureknowledge.com	Asst. Team Lead

5.2 Hardware & Software Resources

- Software Requirements:
    - Visual Studios 2013 Ultimate.
    - .NET Framework 2.5
    - MYSQL Workbench.
    - SMS Portal(Company's intranet portal).
- Hardware Specification:
    - Windows OS 64-bit system, 8GB RAM, 1TB HDD.
    - Azure B+ OS(Linux Based), 64-bit system, 6GB RAM, 1TB HDD.

5.3 Special Resources

Special resources that were used in building this SPMP document were,

- Microsoft Word 2013
- Microsoft Visio 2013
- Microsoft Project 2016

6. Staff Organization

6.1 Team Structure

Name	Email	Role
Varsh Patel	hacvarsh11@gmail.com	Developer
Dinesh Patel	dinesh.patel@azureknowledge.com	System Testing

6.2 Management Reporter

We need to show our task regularly to the mentors under whom we are making the project after completion of each and every task given by them.

Every week we need to submit our report of completion to our internal faculty at college. Also appropriate feedback was given by them using which we can make system more efficient.

We took some help from these supervisors to define our project requirements and learn all details.

Name	Task	Email
Mr. Aniruddhkumar Fataniya	Project Supervisor	aniruddhfataniya.ce@charusat.ac.in
Ms. Dipsi Dave	Project Supervisor	dipsidave.ce@charusat.ac.in
Mr. Nilesh Shah	Project Manager	nilesh.shah@azureknowledge.com

7. Project Tracking & Control Plan

7.1 Schedule control plan

We consider the schedule plan according to requirement of client. We have meeting with client every 15 days. We also have weekly meeting with our project manager. Reporting to internal guide at the college is done on weekly basis.

7.2 Requirements control plan

When changes are to be made in the requirements after the SRS has been released, the changes shall be brought to the attention of the committee and discussed. Any changes that are to be made will be with the prior approval of the committee and only if feasible and permissible within the resources in terms of knowledge and skill of the developer required. Once the changes have been made to the SRS document, an updated version of the SRS shall be released and circulated to the committee. However, no changes shall be made to the requirements once the SDD is completed.

7.3 Quality control plan

Quality control check will be made at regular intervals. We write the codes using coding standards and make sure that the code we write is easy to understand so that in future if any developer needs to modify the code, they can do so easily.

7.4 Reporting plan

We will prepare our all project report by considering IEEE standards. All the reports are verified by project manager and get submitted to my internal guides.

8. Miscellaneous Plan

8.1 Process Tailoring

Process tailoring is when a project team takes the organization's standard process definition and tailors it to the specific needs of their development project, thus creating the "projects defined software process". In our project whole process tailoring is given by the project manager or the mentor of the project.

8.2 Quality Assurance

In order to achieve a high quality in the project, deliverables should be fully compatible with the IEEE standards. Moreover, meetings with the team members and our supervisor will take place very often to be able to control the versions and to have a useful feedback. We follow all the standards and capability maturity model for process improvements.

8.3 Validation & Verification

Verification and validation plans are essential for the project in order to develop it correctly. Both of these processes will be made by a committee of instructors. The next versions of the documents will be generated after the approval of this committee. All module are validated and verified using validation code. In each module both input and output were validated and verified.

8.4 System Testing

During project development only several testing were done by members. Also core module were tested several times. This project will be going through alpha testing and beta testing both. Also it was frequently tested by project mentor at the office. System testing is done at the end of the project according to the testing plan carried out in the test cases of the project.

8.5 Delivery Installation & management

There is no such installation of any software is needed as this is a website. The only thing you need for this is an internet connection.