

Project Management Plan/Charter

By: S.M FAEQ NADEEM

PROJECT MANAGEMENT PLAN TEMPLATE

Date: 05/April/ 2021

Release #: 1st

Project Manager: S.M FAEQ NADEEM

Approvals:

S.M FAEQ NADEEM

Project Manager

NAHEED Super Store

State Organization Management

Oversight Manager - (if applicable)

Department of Finance

Prime Contractor Manager - (if applicable)

User Management

Other:

Project Management Plan: Inventory Management System

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1. Project Summary

Information in the project summary areas was started during the project concept phase and should be included here.

Project Name:	Inventory Management System	Start Date:	05/April/20212
State Organization::	Imtiaz Super Store	Submitted by:	S.M FAEQ NADEEM
Prime Contractor:	Hasan Nazir	Date Awarded:	2/April/2021
Current Stage of Project:	Development Life Cycle (Concept Refinement) – SPIRAL		

Project is On Schedule:

Yes: ☺
Details:

No: ☹

Project is within Budget:

Yes: ☺
Comments:

No: ☹

Please answer the following questions by marking “Yes” or “No” and provide a brief response as appropriate

Yes No

Is this an updated Project Plan? If so, reason for Update: No 1.1.2_____				
Budget for project by fiscal year and is project funded? If so, for what amount(s) and period(s):				
Budget Amount: Cb	Year:	Funded?	_____	✓
Budget Amount:	Year:	Funded?	_____	✓
Budget Amount:	Year:	Funded?	_____	✓
Total Budget:				

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Note: Instructions for the Project Management Plan Template are provided in The Project Management Methodology Volume

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Project Summary - Continued

Points of Contact (Stake holder)

This should be the list of individuals that will be involved with the project during the execution phase.

Position	Name/Organization	Phone	E-mail
Project Manager	S.M FAEQ NADEEM	03042359198	faeqnadeem98@gmail.com
Senior Management Sponsor			
Senior Technical Sponsor			
Procurement Contact			
Customers:			
Other Stakeholders (Top 3):			

Prime Contractor Information

Company:

Position	Name	Phone	E-mail
Project Manager			faeqnadeem98@gmail.com
Senior Technical Sponsor			
Contracts Contact			

2. Project Charter

Business Problem.

All projects start with a business problem/issue to solve.

Conduction of business tasks manually, lack of efficiency, low performance time consuming activities.

Statement of Work (Goal).

The statement should be short and to the point. It should not contain language or terminology that might not be understood.

*This product aims to replace the current manual system with the automated solution. The main system will comprise of **6 major sub-systems or Modules** the integration of theses sub-system will form the main system. All the sub-systems will be tightly integrated so as to give unanimity to user. The current client setup does not have any automation. Therefore, every department and the section will be developed from scratch as all departments are currently working manually. In this document we are covering **“Human resource and payroll System”** only.*

- 1. Login**
- 2. Roles**
- 3. Product**
- 4. Category**
- 5. Staff**
- 6. Order**

2. *Project Charter, continued*

Project Objectives:

Provide a brief, concise list of what the project is to accomplish.

The software for General International is an ERP System, which enables automation of centralized system. This system will integrate all the departments of the company. The main divisions of the system are:

1. Authentication
2. General Ledger, Accounts Payable, Accounts Receivable, Inventory Management System, Human Resource and Payroll system
3. Allowance List
4. Employee Allowance
5. Contracted Payments etc.

This Project is specifically focused over Module 1 and 5

Success Factors:

List factors that will be used to determine the success of the project.

1. Complete deployment of all 4 modules
2. Smooth integration between all systems
3. Easy way to provide for users as compare to different systems.

Project Dependencies/Constraints:

Project completion is expected in less than 3.5 months duration

All requirements will be 100% available during requirement phase

Maximum team strength 5 Average loading = 5 , 15 (5+5+5) = E 10 (2+2+1) = E

3. Project Tradeoff Matrix & Status Summary

Schedule/Time	Scope/Modules	Resources/Effort/People
CONSTRAINED	CONSTRAINED / ACCEPTED	CONSTRAINED / Need to be IMPROVED (need reduction) / ACCEPTED (Cocoma Effort = 10 -15 not acceptable our constraint is max 5 members in 3 months) E = 16.07, S=7.182, per month 2 persons, 3 months 5 to 6 persons = est 7 person

Identify variable to be CONSTRAINED, IMPROVED, ACCEPTED

Comments:

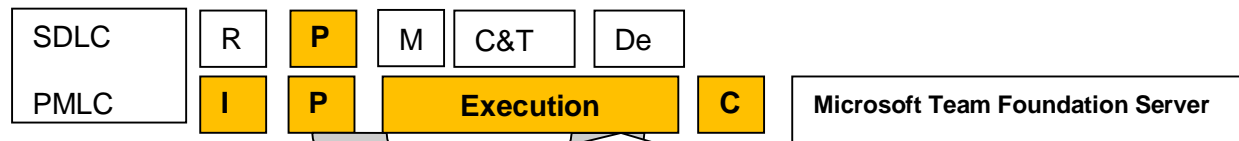
Accepted

+/- Status (Review and Progress Meeting Phase wise) – Monitoring & Tracking – 5 Commits – Baseline – Version 4 (excluding modeling)

Meeting Number	Team (Merged of 5 members)	Tech (Task assigned in Gantt Chart / WBS)	Schedule (because of tech reason or may be due to disaster)	Cost (behind schedule may impact Cost)	Comment
RPM 1	Requirement SRS and Modeling	-/+	-/+	-/+	SRS Submission
RPM 2	PMP	Page 0 (1,2) - / + Ch 3 half done	Next week (29/3) meeting Section 1 and 2 done - /+	-/+	PMP Submission
RPM 3	Modeling	-/+	-/+	-/+	Done already in SRS
RPM 4	Coding and Testing	-/+	-/+	-/+	Testing Report Submission
RPM 5	Demo / Deployment	-/+	-/+	-/+	Final Project Report Submission

Discuss:

Legend
+ = Ahead of Schedule
- = Behind Schedule
/ = On Schedule



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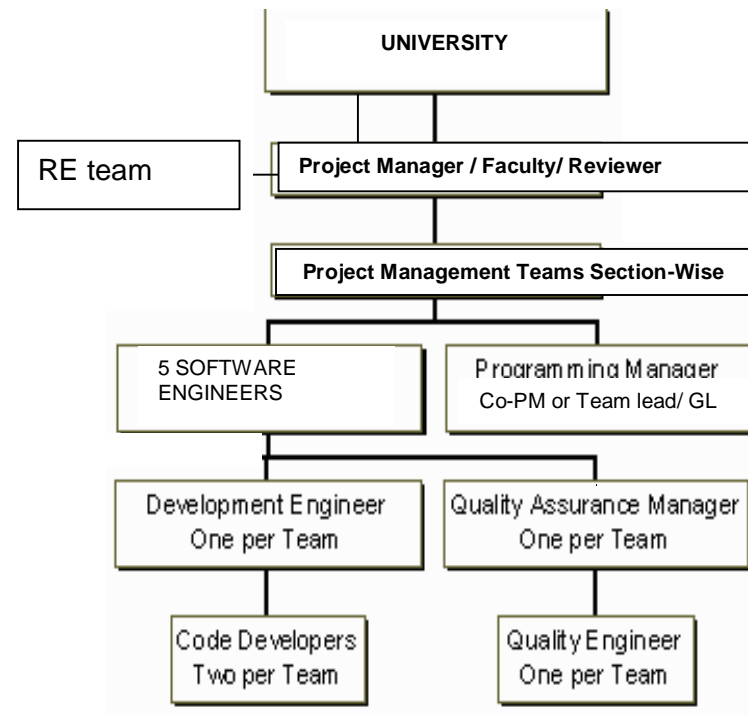
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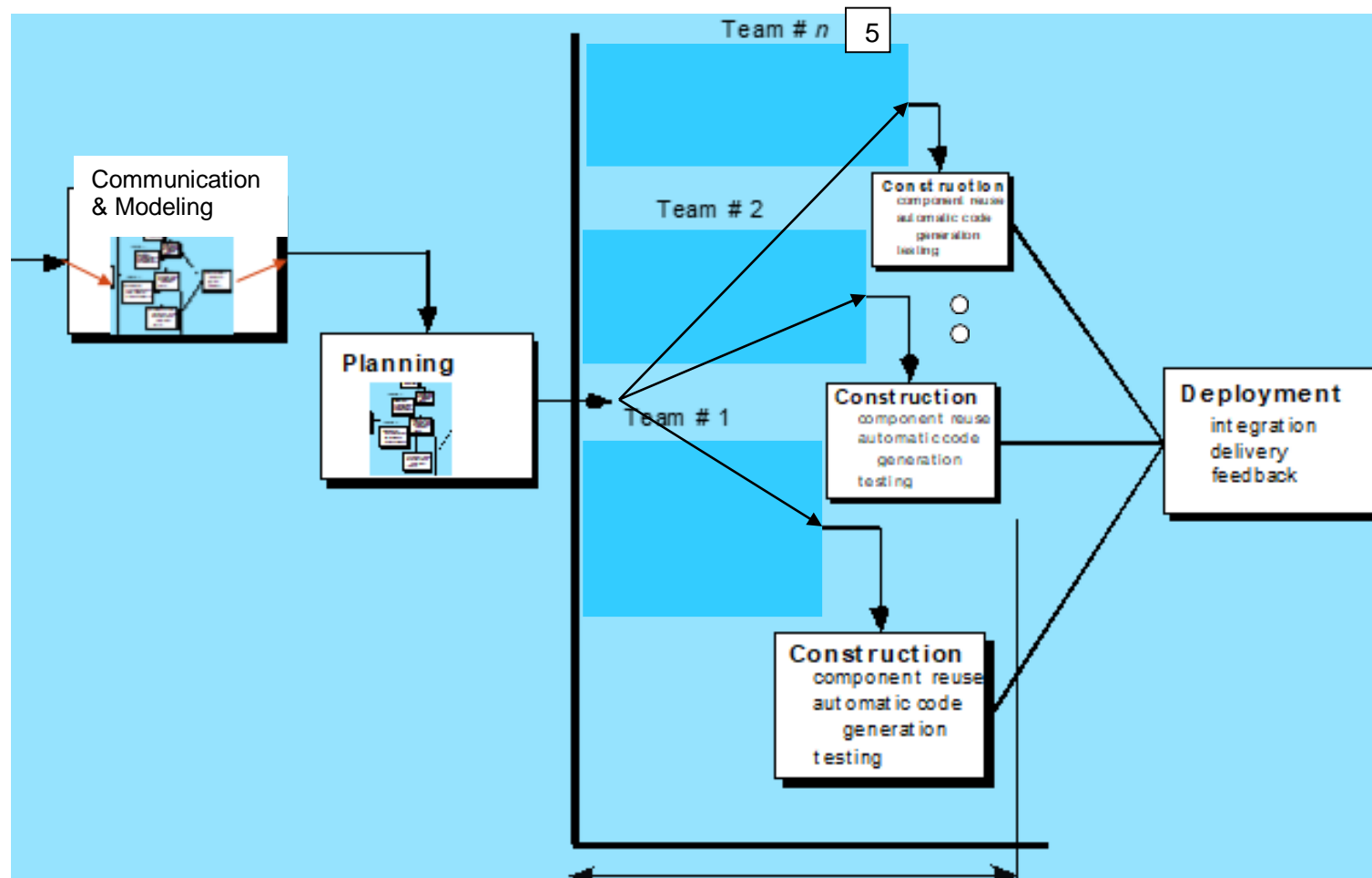
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4. Project Organization

Provide an organization chart that defines the person responsible for at least the following functions: project manager, development manager, quality assurance, and configuration management.



SDLC Process Model:



5. Activity List (Work Breakdown Structure)

Provide an activity list (work breakdown structure) that describes each task required by the project, with a reference to the statement of work. For large projects, work packages might be included that describe in detail how specific tasks will be completed by specific project teams. These work packages describe required schedule, identify requirements to be completed and describe specific work to be performed

1. First Estimating FP then from it E and S.

Software Size Estimation using Function Point Method										
A) Detail of 5 Transaction Types, at most 5 under each category										
	Write down exact Screen or Forms names, or Tables, or Reports name for each count value.									
EI	1. user	2. User details	3. User form	4 M4	5. M5					
EO	1. product	2. Product details	3. View product	4 M4	5. M5					
EQ	1. ordere	2. Order details	3. View order	4 M4	5. M5					
ILF	1. Category	2. Category details	3. View category	4 M4	5. M5					
ELF	1. _____ - _____	2. _____ - _____	3. _____ - _____	4. _____ - _____	5. _____ - _____					
B) Unadjusted Function Point Value calculation										
Definition of Complexities: Your Transactions which are derived from only from 1 Table are to be categorized as Low and if they are derive from 2 tables they can be categorized in Mid-level complexity, and in case of >= 3 they will be placed under High level of complexity.										
	Count for screens of Low level complexity (C)	Multiplier Low level complexity (M)	V1 = C * M	Count for screens of Mid-level complexity (C)	Multiplier Mid-level complexity (M)	V2 = C * M	Count for screens of High-level complexity (C)	Multiplier High-level complexity (M)	V3 = C * M	Category wise sum V1+V2+V3
EI	3	3	9	1	4	4	1	6	6	19
EO	3	4	12	1	5	5	1	7	7	24
EQ	3	3	9	1	7	7	1	6	6	22

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ILF	3	7	21	1	0	0	1	15	15	36
ELF	0	5	0	1	7	7	1	10	10	17
Unadjusted Function Point Value =										118

C) Value Adjustment Factor (VAF) calculation					
Note: Calculate Value Adjustment Factor, where any 5 "General System Characteristics (GSC) must have a value above 2. Also show respect Quality Characteristic mapping of these 5 factors.					
	Quality Characteristic	Weight (0-5)		Quality Characteristic	Weight (0-5)
1.		3	8.		3
2.		2	9.		2
3.		1	10.		4
4.		4	11.		1
5.		5	12.		3
6.		0	13.		2
7.		1	14.		0
Value Adjustment Factor (VAF) = 31					

D) Technology Complexity Factor calculation

TCF = 0.65 + (VAF * 0.01)
 = 0.65 +(31*0.01)
 = 0.96

E) Adjusted Function Point Value (AFPV) or Function Point Value (FP) Calculation

AFPV = _ Unadjusted Function Point * TCF
 = 118 * 0.96
 = 113.28

F) Conversion of AFPV in to LOC Size metric

the number of LOCs per FP for C# language 54 and check other languages from <https://www.qsm.com/resources/function-point-languages-table>, ASP 51 and VB.net 52, python 48

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Project Size in LOC = AFPV * LOC/FP Project Size in LOC = 113.28 * 54 = 6117.12 LOC
G) Software Size: 6117.12 Software Size for COCOMO: 6.117 KLOC Software Type: Business/ Utility/Embedded Model Mode: Cocomo I – Basic – ORGANIC (0 – 50 KLOC) / Semi detached/ Embedded
a) Effort Estimation: Equation $2.4 * 6.117 ^ 1.05 = E = 16 \text{ persons month}$
b) Schedule Estimation: Equation $2.5 * E ^ 0.38 \text{ months} = S = 7 \text{ months}$
c) Productivity Estimation: Equation $Loc/E =$
d) Average Loading Estimation: Equation $E/S =$
e) Average Salary of Technical Staff (AS): Equation Assume = 50,000 RS
f) Cost for Salary (Cs): Equation $E * \text{Avg salary} =$
g) Budgeted Cost of Project (Cb): Equation $Cs + Cs * X\% = Cb$

2. Calculate the phase-wise percentage distribution wise E and S values as given in detailed COCOMO detailed model.

H) Distribution of Effort and Schedule among Different phases of SDLC							
E = <u>16</u>							
S = <u>7.1</u>							
Plan and Requirement	Modeling / System Design & Detailed Design		Module Coding and Unit Testing		Integration & Deployment		
$0.06 * E =$ 0.96	$0.10 * S = 0.71$	$(0.16+0.26) * E =$	$(0.19+0.24) S =$	$0.42 * E =$	$0.39 * S =$	$0.16 * E =$	$0.18 * S =$

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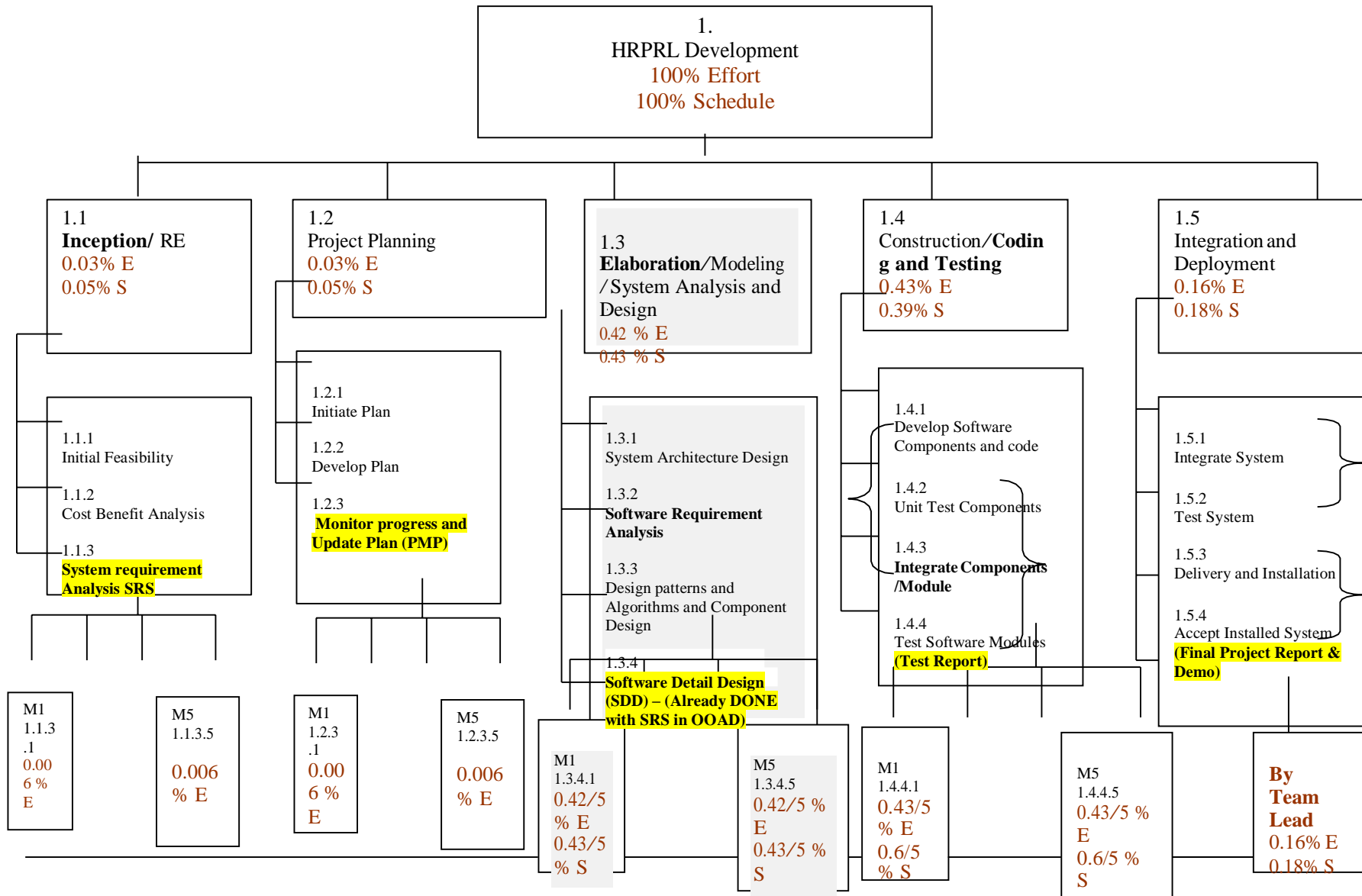
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3. Now adding percentage distribution as given in detailed COCOMO model in the WBS phase-wise.



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4. Now convert WBS contents in a Tabular format in order to make a GANTT CHART.

Activity #	Activity Name	Activity Name Description	# of Days	Start Date	Dependency on previous tasks	Milestone
1.1	RE	Requirement Engineering	28	24/1/2021	none	21/2/2021
1.1.1	Initial Feasibility					
1.1.2	Cost Benefit Analysis					
1.1.3	System requirement Analysis SRS		28			
1.1.3.1	Svstem requirement Analysis SRS for Module 1		28	RAD		
1.1.3.2	System requirement Analysis SRS for Module 2		28	RAD		
1.1.3.3	System requirement Analysis SRS for Module 3		28	RAD		
1.1.3.4	System requirement Analysis SRS for Module 4		28+28	Sprint, prototype,s piral		
1.1.3.5	System requirement Analysis SRS for Module 5		28+28+28	Sprint, prototype,s piral		
1.1.4	Milestone (SRS) and Review meeting		0 Days			
1.2	Project Planning	Project Management Planning		15/3/2021	1.1	5/4/2021

6. Work Product Identification

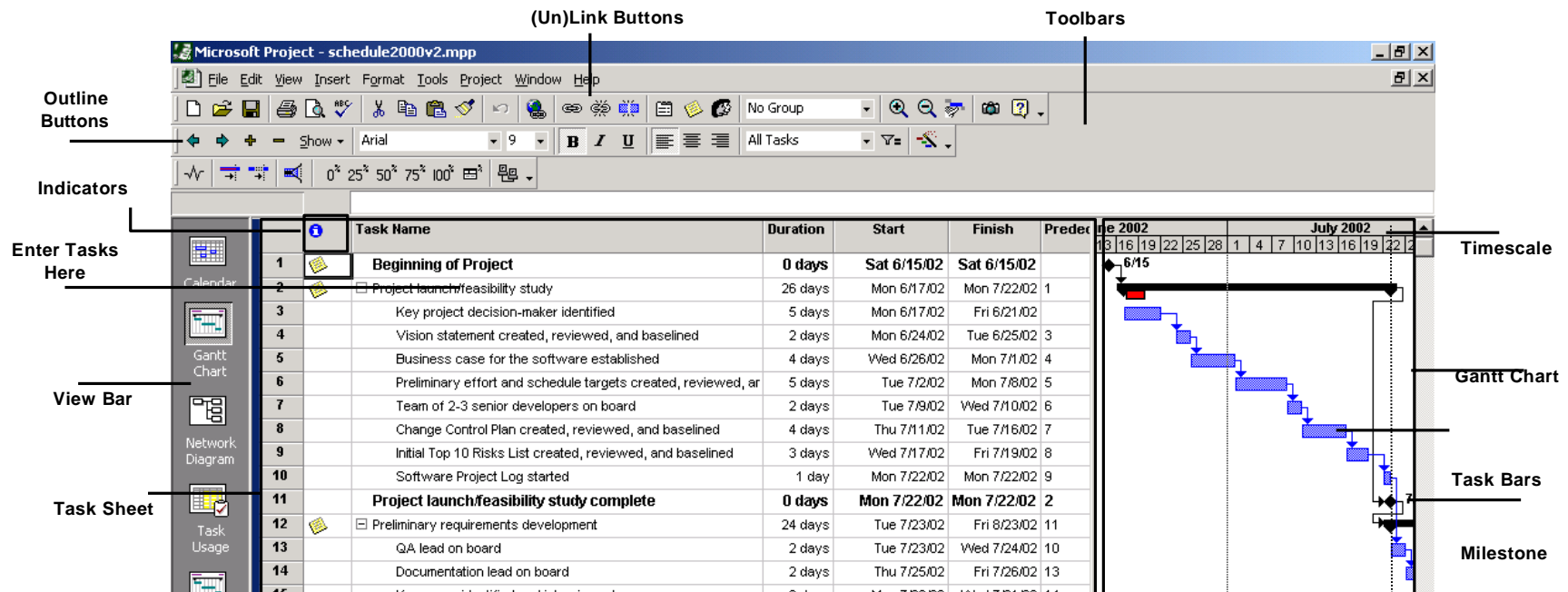
Provide a list of all deliverables required by the project, the date due and the person responsible for the deliverable. Pick Last activities from each phase they are deliverables.

<i>Deliverable Name</i>	<i>Due Date</i>	<i>Date Delivered</i>	<i>Point of Contact</i>
SRS by Member 1	21/2/2021	22/2/2021	8673
SRS by Member 2	21/2/2021	21/2/2021	8666
SRS by Member 3	21/2/2021	21/2/2021	
SRS by Member 4	21/2/2021	21/2/2021	
SRS by Member 5	21/2/2021	21/2/2021	
PMP by Member 1	5/4/2021	5/4/2021	
PMP by Member 2	5/4/2021	5/4/2021	
PMP by Member 3	5/4/2021	5/4/2021	
PMP by Member 4	5/4/2021	6/4/2021	8661
PMP by Member 5	5/4/2021	5/4/2021	
PMP by Member 1	21/2/2021	22/2/2021	
PMP by Member 2	21/2/2021	21/2/2021	
PMP by Member 3	21/2/2021	21/2/2021	
PMP by Member 4	21/2/2021	21/2/2021	8699
PMP by Member 5	21/2/2021	21/2/2021	

7. SCHEDULE

Provide the project schedule, using a Gantt chart. The schedule must include milestones, task dependencies, task duration, work product delivery dates, quality milestones (reviews/audits/inspections), configuration management milestones, and action items (with deadlines and responsibilities), (in order to keep the project (T | C | S) in CONTROLL.

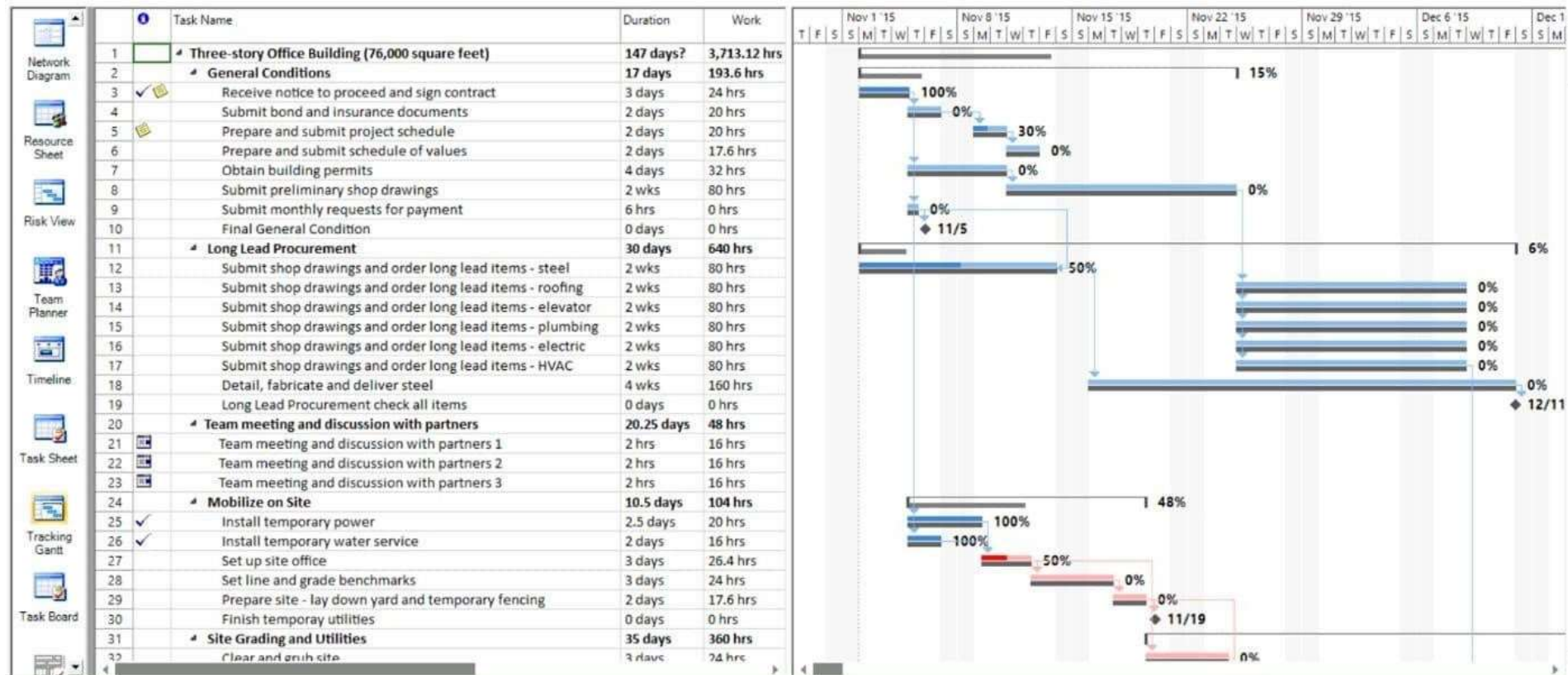
<MUST IMPLEMENT GANTT CHART ON ANY SOFTWARE OR WEBAPPLICATION>



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<Add % completion in it after submission of PMP, and also paste screen capture of Tracking Gantt Chart view>



8. Estimated Cost at Completion

Provide an estimated cost at completion, which is an assessment of the total effort at completion of the contract.

<i>Analysis in Hours / Cost</i>						
WBS No.	Activity Description	Budget Hours B	Actual Hours A	Est. to Complete the remaining work ETC $B - A$ $EAC - A$	Est. @ Completion EAC $A + ETC$	Variance (+ = More) $V = (A-B)/A$
		<i>60</i>	<i>40</i>	$60 - 40 = 20$	$40 + 20 = 60$	$(40-60)/40 = -0.5$ <i>Under the budget 50</i> $60-60 / 60 = 0/60 = 0$ <i>100% completion</i> $(70 - 60)/70 = +.14$ <i>Ahead of budget 14</i>
					<i>%remaining</i>	

ETC is the expected cost to finish the remaining work of the project,

EAC is the expected total cost of completing all work for the project

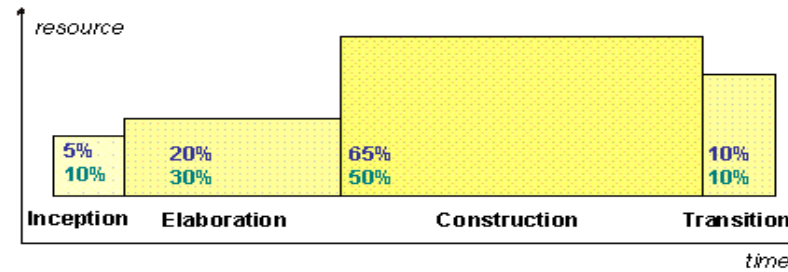
9. Resource Loading Profiles - Staffing

Provide a staffing plan that shows the number of personnel, by type, that will be required on the project on a **monthly basis**.

Resource Loading Profiles							
E = <u>16</u> S = <u>7.1</u>							
Plan and Requirement		Modeling / System Design & Detailed Design		Module Coding and Unit Testing		Integration & Deployment	
0.06 * E = 0.96	0.10 * S = 0.71	(0.16+0.26) * E = 7	(0.19+0.24) S = 3	0.42 * E =	0.39 * S = 2.76	0.16 * E = 2.56	0.18 * S = 1.2
PM , BA, Domain Expert = 0.96 1 person		BA, Analyst, Domain Expert = 7 names		Coders and Testers 7 names		Senior Tester, TL 2.5	

E = <u>16</u> S = <u>7.1</u>				
Loading = 2 person per month				
Since loading gives same value of effort for all months, therefore, we have used Detailed COCOMO's Effort distribution as already done in part 5.2				
SDLC PHASE	EFFORT per MONTH = LOADING	DESIGNATIONS JOB ROLES	DESCRIPTION OF JOB ROLE	CONTACT INFORMATION
I / p	1 person/M	PM	Assisting in building SPMP, SRS and prototype, as well as doing the necessary requirement and risk analysis for the project	Faculty @ 021
E/R and M	7 person/M	BA, RA, PCord, Analyst		
C	7 persons/M	Programmers and Testers		
T	2 person	PM, TL		

<map GRAPH for you Calculated Effort and Schedule values>



Legend:
 Actual Effort (% of project total)
 Schedule (% of project total)

<Update for your own Project, Give fake name of Team leader's name>

Organization	Liaison- interfaces	Contact Information
Customer: APMM	Don Shafer	86-1-5128931
Subcontractor: None	Don Shafer	
Software Quality Assurance: CRM	Don Shafer	86-1-5128931
Software Configuration Management: Team 2	Don Shafer	cs5391@yahoo.com
Change Control: Team 2	Don Shafer	cs5391@yahoo.com

10. Project Requirements (Tracking)

Provide a detailed listing of **project requirements, with references, to** the statement of work, **work breakdown structure**, and specifications.

No.	Requirement	RFP Reference Not submitted by the client in Adv.	SOW Reference	WBS Task Reference	Specification Reference SRS	Date Completed	Comments/Clarification
1.	3.1.1 Login	N/A	1	1.1.3.1 1.2.3.1 1.3.4.1 1.4.4.1 	3.1.1	5/4/2021	
2.	3.1.2 Module 1 CRUDS	N/A	2	1.1.3.2	3.1.2	5/4/2021	Successfully desire goal
3.	3.1.3 Module 2 CRUDS	N/A	3	1.1.3.3	3.1.3	5/4/2021	Facing some problems
4.	3.1.4 Module 3 CRUDS	N/A	4	1.1.3.4	3.1.4	5/4/2021	Good experience
5.	3.1.5 Module 4 CRUDS	N/A	5	1.1.3.5	3.1.5	5/4/2021	In this module im learn more
6.	3.1.6 Module 5 CRUDS	N/A	6	1.1.3.6	3.1.6	5/4/2021	Finally done with in a time.

SOW = Statement of Work

11. Risk Identification

Provide a description of all risks identified for the project. A risk is anything that might detrimentally affect the successful completion of the project if left unaddressed. The contractual, management, and technical risks associated should be **identified** and **assessed** as to the **probability of the risk occurring**, **the cost to correct** if the risk occurs, **the impact of the risk on the project**, and **the suggested mitigation activities and cost of mitigation**.

Risk Worksheet

Last Risk Assessment Date:

Prepared by:

<i>Risk Category/ Event</i>	<i>Loss Hours or Cost</i>	<i>Probability</i>	<i>Risk Hours Risk Exposure</i>	<i>Previous Risk Hours</i>	<i>Preventive Measures</i>	<i>Contingency Measures (Reactive and fire-fighting) Proactive Active</i>	<i>Comments</i>
Meeting held 21/2 for SRS							
1.	12hr, 24 \$	50 = 0.5	12		M1		
2.		50	12		M2		
3.		50	12		M3		
4.		50	12		Bad measures		
5.		50	2				
6.		50	2				
7.		50	2				
8.		50	2				
9.		50	2				
10.		50	2				
Meeting to be held 5/4 for PMP							
1.	24hr, 48\$	50 = 0.5 100% = 1	24\$ increase 48\$	12		Failure happened / Risk Occur Survival and first aid	
2.		100%	4	2		Marketing strategy change, partially code change for	

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						different client domain FR SOP	
3.		70	4	2			
4.		70	4	2			
5.		70	4	2			
6.		70	4	2			
7.		70	4	2			
8.		70	4	2			
9.		70	4	2			
10.		70	4	2			

	Potential Risk	Risk Monitoring Preventive measures	Risk Management and mitigation	Risk Exposure = Probability of Risk Occurrence * Cost of Risk	Prioritize Till next Review
1.	Size of the software being very large and larger number of users than planned (Fp→Loc→Effort)	Reviewing constant feedbacks from the customers in project meetings	Being flexible in the software design to accommodate the necessary changes	Cost * Probability of Risk Occurrence = Salary for 2 programmer for 1 month * 0.8 = 60000 *0.8 0.4 =48000 24000	
2.	The software not being accepted by the CRM	Response from the CRM , reviewed on every project meeting	Early and intensive interaction with the customer for the success of project.		
3.	Cost factor involved in this project	Reviewing reports on expenditure and other cost related to the estimated cost in the SPMP	Have additional funding allocated for it in advance and using it in case of emergencies.		
4.	Customer requirements may change	CRM participation in design process and reviewing feedback information in group meetings	A new prototype will replace the previous one to accommodate the change		
5.	Technology will not meet expectation	Constantly reviewing project progress reports by Project Development Manager and software managers	Exploring alternatives for the outdated technologies		
6.	Lack of training on tools	Reviewing progress report by	Providing adequate training that		

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	and staff being inexperienced	software managers to determine the status of the project	is necessary for the completion of the project		
7.	The prototype not being delivered on time	Constant reviews among team members to ensure continuous progress on the prototype	Setting deadline before the actual time for submission of the project		

Risk Items	Risk Management Techniques
Personnel Shortfalls	Staffing with top talent, job matching; team building; morale building; cross training; pre-scheduling key people
Unrealistic schedules and budgets	Detailed, multi-source cost and schedule estimation; design to cost; incremental development; software reuse; requirement scrubbing
Developing the wrong software functions	Organizational analysis; mission analysis; ops-concept formulation; user surveys; prototyping; early users' manuals
Developing the wrong user interface	Task analysis; prototyping; scenarios; user characterization (functionality, style, workload)
Gold Plating	Requirement scrubbing; prototyping; cost-benefit analysis; design to cost
Continuing stream of requirement changes	High change threshold; information hiding; incremental development (defer changes to later increments)
Shortfalls in externally furnished components	Benchmarking; inspections; reference checking; compatibility analysis
Shortfalls in externally performed tasks	Reference checking; pre-award audits; award-fee contracts; competitive design or prototyping team building
Real-time performance shortfalls	Simulation; benchmarking; modeling; prototyping; instrumentation; tuning
Straining computer-science capabilities	Technical analysis; cost-benefit analysis; prototyping; reference checking

Risk Management steps:

1	Identify the project's top10 risk items
2	Present a plan for resolving each risk item
3	Update list of top risk items, plan, and results monthly

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4	Highlight risk-item status in monthly project reviews. Compare with previous month's ranking status
5	Initiate appropriate corrective actions

12. Configuration Management Plan

Provide a configuration management plan that defines the person responsible for project configuration management, the procedures that will be used, the planned configuration items, planned release dates for configuration items, and resources required to conduct CM.

CM Responsibility

Manager: Abbas

Additional Staff for CM: Hasan Nazir

Procedure Reference:

Configuration Items:. Ensure that CM is implemented throughout the project's life cycle.

No.	Item	Comments
1.	Barcode reader	Complete with in a days
2.	Crystal reports	Must download crystal report before finalizaing project
3.	SQL comfiguration	Checking all connections configurations

Ensure that project has a repository for storing configuration items and associated CM records. Briefly describe.

Complete with in a days now Must download crystal report before finalizaing project then Checking all connections configurations...

13. Quality Plan

Provide a quality plan that defines the person responsible for project quality assurance, the procedures that will be used and resources required to conduct quality assurance.

QA Responsibility

Manager: Hamza

Additional Staff for QA: Aizaz

Procedure Reference:

Planned Quality Event: Ensure that QA is implemented throughout the project's life cycle. Dates include QA audits and reviews, design walkthroughs and other project activities that QA staff will participate in.

No.	Item	Comments
1.	Low weightage	Low memory Space
2.	Data protected	High security algo.
3.		

Ensure that project has a repository for storing configuration items and associated QA records. Briefly describe.

Ensure that QA audits the baselines and CM activities on a regular basis. Briefly describe