Form PM - 01

Project Management Plan/Charter

By: Muhammad Osama Hassan

PROJECT MANAGEMENT PLAN TEMPLATE

Release #: 3rd

Project Manager: Masood Arif

Approvals:

Masood Arif Project Manager	Prime Contractor Manager - (if applicable)
School Library State Organization Management	Osama & team User Management
Oversight Manager - (if applicable)	
Accounts	
Department of Finance	Other:

1. Project Summary

Information	in the	e project summary areas was started during the project	ect concept phas	se and should be include	ed here.		
Project Name:		Library Management System		Start Date:	25/3/202	1	
State Organization:: PAF-KIET				Submitted by:	Submitted by: Muhammad Os Hassan		
Prime Contractor:	rime Contractor: Dr. Umema hani Date Awarded: 2/March					arch/2007	
Current Stage of Project:		Software Development Life Cycle (SDLC) -	- SPIRAL Mod	el			
Project is On Schedule:	Det sch	es: No: Project is within Comments: The project has budget: Headule of completion of 4 months' duration the 25% average on per month.					budget.
Please answer th appropriate	e foll	owing questions by marking "Yes" or "No"	and provide a	brief response as		Yes	No
Is this an updated Pro	ject Pl	an? If so, reason for Update: Yes					
Budget for project by	fiscal	year and is project funded? If so, for what amount(s) an	d period(s):				
Budget Amount:		Ye	ar:2021		Funded?	<u>yes</u>	
Budget Amount: Year: 2022					Funded?	<u> </u>	<u>no</u>
Budget Amount: Total Budget:		Ye	ar: 2023		Funded?		<u>no</u>

Project Summary - Continued

Points of Contact

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	Masood arif	7898181480	Masood@gmail.com
Senior Management Sponsor	Sumair ul haq	47348734	sumairk198@gamil.com
Senior Technical Sponsor	Hassan Habib Khan	938939389	Hassanhabib356@hotmail.co m
Procurement Contact	Initial		
Customers:	Students, Member, Faculty		
Other Stakeholders (Top 3):			

Prime Contractor Information

Company: School Library

<u> </u>	<u> </u>		
Position	Name	Phone	E-mail
Project Manager	Masood arif	09393984908	Masood@gmail.com
Senior Technical Sponsor	Hassan Habib	08768734838	Hassan@hotmail.com
Contracts Contact	Muhammad Osama / M. Hassaan	982818738743	-

2. **Project Charter**

Business Problem.

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

Task handling low budget not active reponse, 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. User Authorization
- 3. Book Transaction Module
- 4. Member Maintenance Module
- 5. Publisher Maintenance Module
- 6. Report Module

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. effacingly error resolve

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

3. Project Tradeoff Matrix & Status Summary

Schedule/Time	Scope/Modules	Resources/Effort/People
CONSTRAINED	CONSTRAINED /	CONSTRAINED / Need to be IMPROVED
	ACCEPTED	(Cocomo effort = 10 not acceptable our constraint is max 5 members in 3 months)

Identify variable to be CONSTRAINED, IMPROVED, ACCEPTED

Comments:

Accepted

+/- Status (Review and Progress Meeting)

	Team	Tech	Schedule	Cost	Comment
RM 1	Requirement SRS and Modeling	<mark>-/+</mark>	-/+	-/+	SRS Submission
RM 2	PMP	Page 0 - / + Ch 3 half done	Next week (29/3) meeting Ch 1 and 2 done - /+	-/+	PMP Submission
RM 3	Modeling	-/+	-/+	-/+	Done already in SRS
RM 4	Coding and Testing	<mark>-/+</mark>	-/+	-/+	Testing Report Submission
RM 4	Demo / Deployment	<mark>-/+</mark>	-/+	-/+	Final Project Report Submission

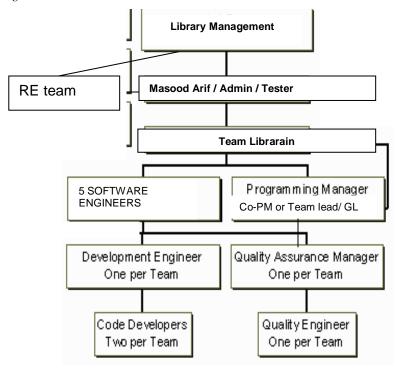
Discuss:

Legend

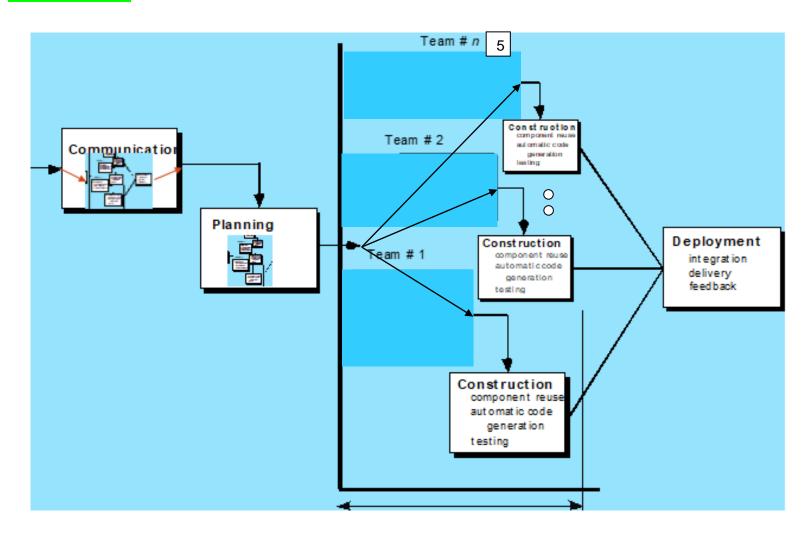
- + = Ahead of Schedule
- = Behind Schedule
- / = On Schedule

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:



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 Typ	pes, at most 5 u	under each category			
	Write down 6	exact Screen or For	rms names, or Tab	les, or Reports	name for each count value.			
EI	1. user	2. M2	3. M3	4 M4	5. M5			
ЕО	1. user	2. M2	3. M3	4 M4	5. M5			
EQ	1. user	2. M2	3. M3	4 M4	5. M5			
ILF	1. user	2. M2	3. M3	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.

	C . C	3.6.1.1.11	X 7 1	C	3.6 1.1 11	170	C	3.6 1.1 11	170	C .
	Count for	Multiplier	V1	Count for	Multiplier	V2	Count for	Multiplier	V3	Category
	screens of	Low level	=	screens of	Mid-level	=	screens of	High-level	=	wise sum
	Low level	complexity	C	Mid-level	complexity	C	High-level	complexity	C	V1+V2+V3
	complexity	(M)	*	complexity	(M)	*	complexity	(M)	*	
	(C)		M	(C)		M	(C)		M	
EI	3	3	9	1	4	4	1	6	6	19
EO	3	4	12	1	5	5	1	7	7	24
F.O.	2	2	0	1		7	1			22
EQ	3	3	9	1	/	/	1	6	6	22

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ILF	3	7	21	1	0	0	1	15	15	36
ELF	0	5	0	0	7	7	0	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		Quality Characteristic	Weight
	Characteristic	(0-5)		Characteristic	(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

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

```
Project Size in LOC = AFPV * LOC/FP
Project Size in LOC = 113.28 * 54 = 6117.12 \text{ 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 = 22702.65
        Schedule Estimation: Equation
         2.5 * E ^ 0.38 months = S
         113.04
         Productivity Estimation: Equation
         Loc/E =
         0.2694
        Average Loading Estimation: Equation
         E/S =
         200.83
    e) Average Salary of Technical Staff (AS): Equation
         Assume = 50,000 \text{ RS}
    f) Cost for Salary (Cs): Equation
         E * Avg salary =
         113513500
         Budgeted Cost of Project (Cb): Equation
         Cs + Cs * X\% = Cb
```

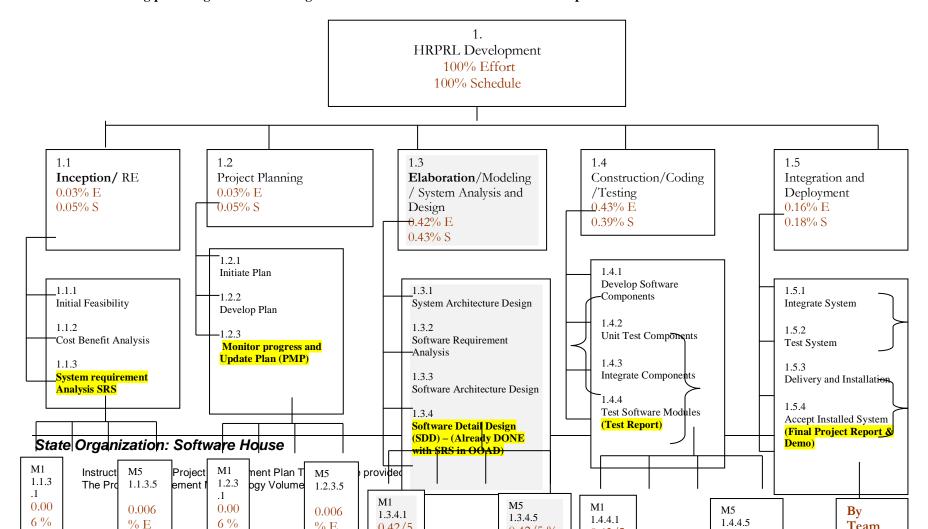
2. Calculate the phase-wise percentage distribution wise E and S values as given in detailed COCOMO detailed model.

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H) Distribution of Effort and Schedule among Different phases of SDLC							
E =22702.65 S =113.04							
Plan and Require	ement	Modeling / System Desig	n & Detailed Design	Module Coding	and Unit Testing	Integration & I	Deployment
0.06 * E =	0.10 * S =	(0.16+0.26) * E =	(0.19+0.24) S =	0.42 * E =	0.39 * S =	0.16 * E =	0.18 * S =
1362.156	11.34	9535.113	48.60	9535.113	44.0856	3632.424	20.3472

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



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	Defining model	2	24-26	None	
1.1.2	Cost Benefit Analysis	Hiring staff	1	26-27	None	
1.1.3	System requirement Analysis SRS	4 systems	1	27-28	None	
1.1.3.1	System requirement Analysis SRS for Module 1	Database design	2	28-30	None	
1.1.3.2	System requirement Analysis SRS for Module 2	Prototype	5	31-4	None	
1.1.3.3	System requirement Analysis SRS for Module 3	Authentication	6	5-11	None	
1.1.3.4	System requirement Analysis SRS for Module 4	Tools used	7	12-19	None	
1.1.3.5	System requirement Analysis SRS for Module 5	Working schedule	65	20-4/may	none	
1.2	Project Planning	Project Management Planning		15/3/2021	1.1	5/4/2021

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Note:

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.

Deliverable Name	Due Date	Date Delivered	Point of Contact
SRS by Member 1	21/2/2021	22/2/2021	
SRS by Member 2	21/2/2021	21/2/2021	Student ID
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	Student ID
PMP by Member 5	5/4/2021	5/4/2021	

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).

	Task Name	Work	Duration	Start	Finish	Details	S
18	⊡ Design	120 hrs	14.5 days	Mon 1/26/04	Fri 2/13/04 🐷	Work	
19	☐ Review preliminary software specifications	16 hrs	2 days	Mon 1/26/04	VVed 1/28/04	Work	
	Analyst	16 hrs		Mon 1/26/04	Wed 1/28/04	Work	
20	☐ Develop functional specifications	40 hrs	5 days	VVed 1/28/04	Wed 2/4/04	Work	
	Analyst	40 hrs		Wed 1/28/04	Wed 2/4/04	Work	
21	☐ Develop prototype based on functional specifications	32 hrs	4 days	VVed 2/4/04	Tue 2/10/04	Work	
	Analyst	32 hrs		Wed 2/4/04	Tue 2/10/04	Work	
22	⊟ Review functional specifications	16 hrs	2 days	Tue 2/10/04	Thu 2/12/04	Work	
	Management	16 hrs		Tue 2/10/04	Thu 2/12/04	Work	
23	☐ Incorporate feedback into functional specifications	8 hrs	1 day	Thu 2/12/04	Fri 2/13/04	Work	
	Management	8 hrs		Thu 2/12/04	Fri 2/13/04	Work	
24	⊡ Obtain approval to proceed	8 hrs	4 hrs	Fri 2/13/04	Fri 2/13/04	Work	
	Management	4 hrs		Fri 2/13/04	Fri 2/13/04	Work	
	Project manager	4 hrs		Fri 2/13/04	Fri 2/13/04	Work	
25	Design complete	0 hrs	0 days	Fri 2/13/04	Fri 2/13/04	Work	
26	☐ Development	264 hrs	21.75 days	Mon 2/16/04	Tue 3/16/04	Work	
27	☐ Review functional specifications	8 hrs	1 day	Mon 2/16/04	Mon 2/16/04	Work	
	Developer	8 hrs		Man 2/16/04	Mon 2/16/04	Work	
28	⊟ Identify modular/tiered design parameters	8 hrs	1 day	Tue 2/17/04	Tue 2/17/04	Work	
	Developer	8 hrs		Tue 2/17/04	Tue 2/17/04	Work	
29	⊟ Assign development staff	8 hrs	1 day	Wed 2/18/04	Wed 2/18/04	Work	
	Developer	8 hrs		Wed 2/18/04	Wed 2/18/04	Work	
30	⊟ Develop code	120 hrs	15 days	Thu 2/19/04	VVed 3/10/04	Work	
	Developer	120 hrs		Thu 2/19/04	Wed 3/10/04	Work	
31	⊟ Developer testing (primary debugging)	120 hrs	15 days	Tue 2/24/04	Tue 3/16/04	Work	
	Developer	120 hrs		Tue 2/24/04	Tue 3/16/04	Work	
32	Development complete	0 hrs	0 days	Tue 3/16/04	Tue 3/16/04	Work	
33	⊡ Testing	280 hrs	48.75 days	Mon 2/16/04	Thu 4/22/04	Work	
34	☐ Develop unit test plans using product specifications	32 hrs	4 days	Mon 2/16/04	Thu 2/19/04	Work	
	Testers	32 hrs		Mon 2/16/04	Thu 2/19/04	Work	
35 	☐ Develop integration test plans using product specifics	32 hrs	4 days	Mon 2/16/04	Thu 2/19/04	\A/ork	

Work Pack	ages, Tasks &						W	/eek					
Ac	tivities	1	2	3	4	5	6	7	8	9	10	11	12
Concept Exploration	Internal Case Study												
	Communicate with CRM												
Initial Project	SPMP Pass #1												
Plan	Review by CRM												
	SPMP Pass #2												
Travel & Orientation	Meeting with CRM Representatives												
	Meeting with 26 programmers												
	Recruiting into Organizational Chart												
	OOP Training												
Initial SRS	SRS Pass #1												
	Prototype 1 (Screens)												
	SRS Review by Team												
Final SPMP	Pass #3												
Final SRS	SRS Review as per SPMP												
	SRS Submission to CRM												
Design	High level Design												
	High Level Review												
	Prototype 2												

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	Detail Level						
	Design						
	Detail Level						
	Review						
	Prototype 3						
System	Source Code &						
Construction	Executable						
	Program						
	Review by CRM						
System	Testing						
Verification &	Summary Report						
Validation	Review by CRM						
	Customer						
	Acceptance						
	Feedback						
System	System Delivery						
Delivery	& Maintenance						

8. Estimated Cost at Completion

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

Analysis in Hours Analysis in Dollars

	11111117,000 111 12101111				11.000,505 00 2 0000 5						
WBS No.	Activity Description	Budget Hours	Actual Hours	Est. to Complete remaining work	Complete	Variance (+ = More)	Budget \$	Actual \$	Est. to Complete	Est. @ Complete	Variance (+ = More)
				A + @	@ = B-A	a-b/a					

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.

Organization	Liaison- interfaces	Contact Information		
Customer: APMM	Masood	872874287		
Subcontractor: None	Hasssa Habib	87287427887		
Software Quality Assurance: CRM	Sumair ul haq	873873879838		
Software Configuration Management: Team 2	Muhammad Hassaan	8234874387837		
Change Control: Team 2	M . Osama	7367439743889		

Role	Role Description				
Project Leader	Leads project team; responsible for project deliverables	Masood Arif			
Project Management Team/Analysts	Assisting in building SPMP, SRS and prototype, as well as doing the necessary requirement and risk analysis for the project	Hasssa Habib Sumair ul haq			
Project Development Manager	Leads Chinese software developers; responsible for project deliverables	Muhammad Hassaan M .Osama			
Programming Manager	Responsible for the communication between the Management Team and the rest of the software development team; the Programming Manager is also responsible for reallocating the human resources and equipment of the project.	Masood Arif			

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Software Managers	Responsible for managing the team of 7 people; does the design of the software; after reviewing reports from Test Engineer decides whether code needs to be sent back to Development Engineer for improvement or to be send to Quality Assurance Manager for quality assurance phase	Hassan Habib
Development Engineers	Responsible for designing of software and distributing work among Code Developers	Sumair ul haq
Code Developers	Responsible for writing programming code	Masood Arif
Test Engineer	Responsible for testing and validation process in his/her team; leads Test Technician in the testing process and reports the results of the testing process to the software manager	Masood Arif
Test Technician	Performs the testing and validation procedure; reports found errors to Test Engineer	Muhmmad Osama
Quality Assurance Manager	Responsible for quality assurance; reports to Software Manager and Project Development Manager	Sumair ul haq
Quality Engineer	Performs quality assurance procedure; reports the results to Quality Assurance Manager	Muhammad Hassaan

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10. Project Requirements

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

No.	Requirement	RFP	SOW	WBS Task	Specification	Date	Comments/Clarification
		Reference	Reference	Reference	Reference	Completed	
		Not					
		submitted					
		by the					
		client in					
		Adv.					
1.	3.1.1 Login	N/A	1	1.1.3.1	3.1.1	5/4/2021	Good
2.	3.1.2 Module 1 CRUDS	N/A	2	1.1.3.2	3.1.2	5/4/2021	Improvement
3.	3.1.3 Module 2 CRUDS	N/A	3	1.1.3.3	3.1.3	5/4/2021	Nice
4.	3.1.4 Module 3 CRUDS	N/A	4	1.1.3.4	3.1.4	5/4/2021	Well performed
5.	3.1.5 Module 4 CRUDS	N/A	5	1.1.3.5	3.1.5	5/4/2021	Improvement
6.	3.1.6 Module 5 CRUDS	N/A	6	1.1.3.6	3.1.6	5/4/2021	Good

SOW = Statement of Work

Note:

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:

Risk Category/ Event	Loss Hours	Probability	Risk Hours	Previous Risk Hours	Preventive Measures	Contingency Measures	Comments

General Risk Analysis Comments:

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			

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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:

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
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:			
Additional Staff for CM:			

Procedure Reference:

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

No.	Item	Comments
1.	analysis	prototyping; early users' manuals
2.	risk item	Present a plan for resolving
3.	ranking status	Highlight risk-item status in monthly project reviews

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

responsible for project configuration management, the procedures that will be used, the planned configuration items, planned release dates for configuration items, and resources required

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:

Additional Staff for QA:

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.	Gold Plating	Initiate appropriate corrective actions		
2.	Stream	change threshold; information hiding		
3.	Shortfalls	cost-benefit analysis; prototyping; reference		

 $\label{thm:configuration} \textit{Ensure that project has a repository for storing configuration items and associated QA records. \textit{Briefly describe}.$

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

14. Top Five Issues

Provide a list of known issues associated with the project, with proposed or recommended solutions.

Issue Description	Responsible Individual	Open Date	Closure Date	Status
Complete Requirement	Masood Arif			Held by the complete RE procedure
Development Life Cycle	Hassan habib			The modeling procedure of defining sustainability
Views	Muhammad Osama			The user friendly view should be appropriate defining.
Error On uploading	Sumair ul haq			The hosting file size nor enough
Issue Description	Responsible Individual	Open Date	Closure Date	Status

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15. Action Item Status

Maintain a list of action items, including a description of the item, a point of contact a date by which action should be taken and a description of the action taken to close items.

Action Item #	Action Item Description	Responsible Individual	Open Date	Closure Date	Status
	The Input model	Sumair ul			Resolve
		haq			
	Contract	Muhammad			Sustain
		Hassan			