Scrum management system

Project description

Scrum management system is a software project that aims to build a web application to handle the internal processes of a scrum system.

The project is considered a simple low risk system due the availability of time and resources.

Problem description

The system consist of:

Actors

Members
Scrum master

Backlogs

Product backlog

Sprint backlog

Scenarios : it includes:

1. Authorities and capabilities of different actors on different parts of the projects
2. Modifications made on data
3. Flow of data

Our aim is to successfully implement the cross relation between those entities in a way that meet the customer needs(User stories)

Goal / Objectives / Strategy

Build a Scrum Management System software that meets the user's needs within available time

1. Requirement Analysis

1. Analyze the given user stories
2. Build the needed illustration diagrams
3. Assume the missing critical parts of the software

2. Project the activities on time plan

1. Understand the different available resources
2. Estimate each activity time duration and their dependencies on each other
3. Build the needed illustration diagrams (pert and gantt chart)
4. Use github to facilitate communication
5. Build the minimum viable production

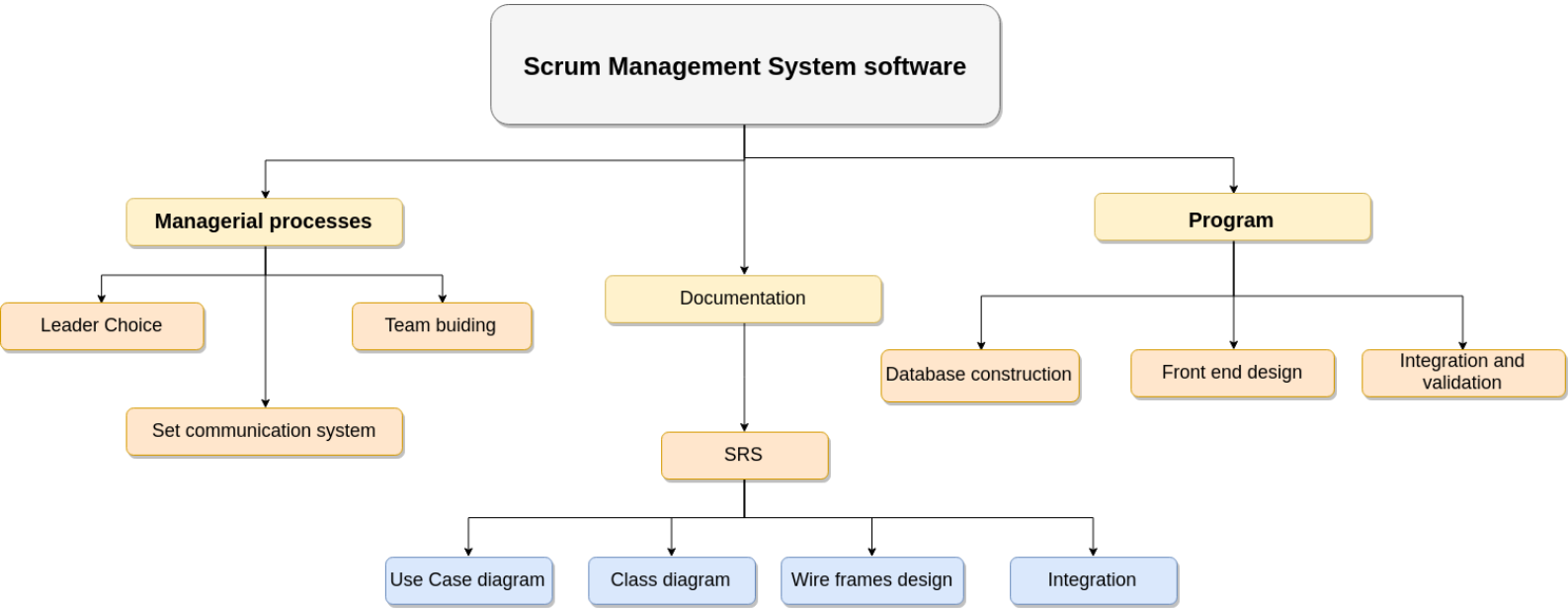
Risk Analysis

High Risk Moderate Risk

Risk	Impact	Prevention	If happened solution
Miscommunication		Choose leader Set up meetings with clear goal Time box each person presentation in the meetings Listen well Share personal goals Choose communication platform	Open up with problems Leaders should act
Add extra features		Validate each new feature(state its importance and difficulty) Think of the minimum viable product	Drop the extra feature if you can concentrate on the task of the highest priority
Competence		Start early consult and expert from the team Share knowledge	Use status updating reports Ask for help

Work Breakdown Structure

This section aims to represent the **critical** phases and deliverables that should be implemented both on managerial level and technical level in order to carry out a software with the required quality within the available time.



The operations is divided into 3 main groups:

Managerial processes : it includes the preparation for technical work and team building, Mainly it's a preparation for human resources and team structure in order to facilitate the upcoming actions.

Documentation : One of the two shares of software it initiates the basic work needed for the program tasks to start and then both work parallel together.

It includes all types of documentations needed.

Program : technical implementation of the project which depend on basic designs made and documented.

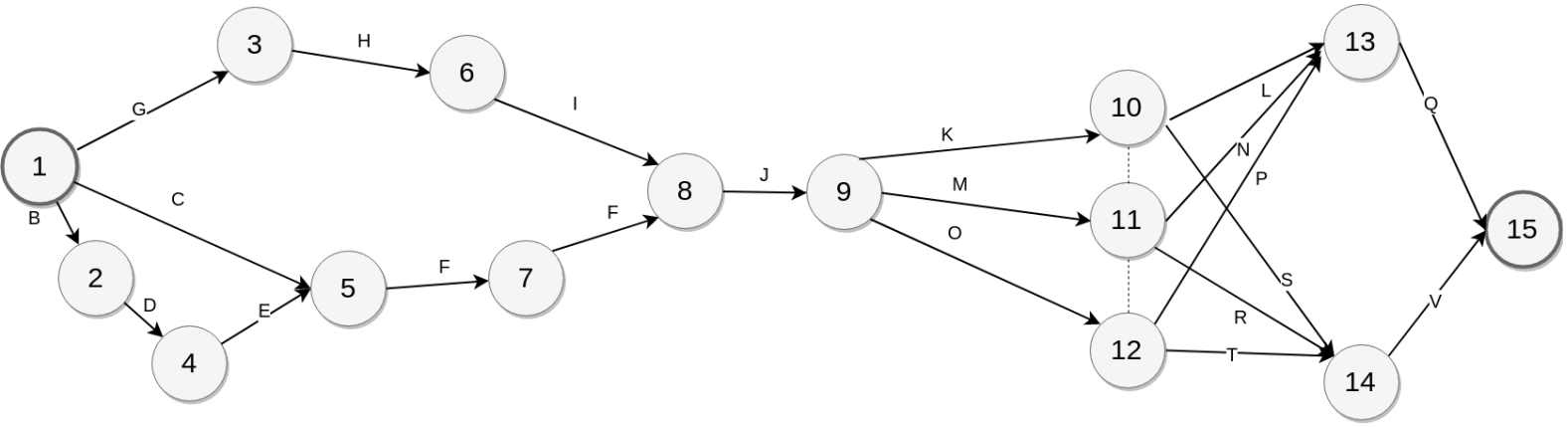
It includes database construction, design of interface and gathering all parts together.

Action plan

Group of tasks that are carried out from breaking down the most critical deliverables to tasks that one or two can do.

Phase	Tasks	Dependability	Time /hour
Initiate	A) Start	--	--
Set up the first meeting	B) Set up time and goals	0	3
Team building	C) Share backgrounds and visions around the project	A	1.5
	D) Ice breaking activities	B	1
Leader choice	E) Short presentations	D	1
	F) Voting	E,C	0.25
Set communication System	G) Discuss various methods (Whatsapp , Telegram,github, ….)	A	0.5
	H) Choose a method and install it	G	8
Review the user stories	I) View User stories	H	1
	J) Break down User stories to set of simple features	I,F	2
Use Case diagram	K) Brainstorming and simple designing	J	1.5
	L) Display using CAD	K	2
Class diagram	M) Brainstorming and simple designing	J	5
	N) Display using CAD	M	2
Wire frames design	O) Brainstorming and simple designing	J	3
	P) Display using CAD	O	1
Documentation integration	Q) 0	0	8
Database construction	R) Construct database	K,M,O	5
	S) Implement Classes fields and methods	M	5
Front-end design	T) Implement the front-end	O	8
	U) Enhance if needed	T	--
Integration and validation	V) Put all of the implemented components together	R,S,T	2
	W) Check if generally the software achieves the user stories	V	1
Closure	X) 0	0	0

Pert Chart



Gantt Chart

A diagram that shows the tasks Vs. time clarifying their dependencies, critical path and the available extra time on other tracks.

Task	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Set up time and goals	B																															
Share backgrounds and visions around the project	C																															
Icebreaking activities				D																												
Short presentations					E																											
Voting						F																										
Discuss various methods	G																															
Choose a method and install it		H																														
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Enhance if needed																																
Put all of the implemented components together																							V									
Check if the software achieves the user stories																									W							

Critical path **Expected time needed**	**G H I J M N Q** 26.5 hours
Notes	The phase 8 is considered a very important phase as there is no progress could occur in the second part without completing it, It should take extra attention during implementation

HR Plan

This section aims to determine the human resources available in the team.

The available team is diverse from both the point of view of personality and backgrounds, In way that could enhance the quality of the project.

Integration is a key player in the project.

Name	Background	Personality type
Ahmed Hesham	Django Python Game development	Interaction-Oriented
Hosam Hasan	Java	Self-Oriented
Remon	Software	Task-oriented
Ahmed	Web development	Self-Oriented
Amr	Documentation	Interaction-Oriented