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SE LAB

Experiment 06 - WBS and Gantt Chart

Aim: To make a WBS and Gantt Chart for the problem statement selected.

Requirements: StarUML/GanttPro Chart Graph Maker.

Problem Statement:

In the existing system people have to go to restaurants or cafes to have meals which consumes a lot of time while traveling, while in this system people can order food online from the comfort of their homes/offices/schools which will save their valuable time.
The idea of this platform should be to promote healthy eating habits and consuming time-to-time meals for an evolved lifestyle.

Theory:

1. WBS:

Work breakdown structure (WBS) in project management is a method for completing a complex, multi-step project. It's a way to divide and conquer large projects to get things done faster and more efficiently. The goal of a WBS is to make a large project more manageable. Breaking it down into smaller chunks means work can be done simultaneously by different team members, leading to better team productivity and easier project management.

The Project Management Institute (PMI) defines WBS as "a deliverable-oriented hierarchical decomposition of the work to be executed by the project team to accomplish the project objectives and create the required deliverables." Each WBS level represents a new and increasingly detailed definition of work needed to complete the project. PMI's definition adds that a WBS structure must be constructed in a way that each new level in the hierarchy includes all the work needed to complete its parent task. This means that every parent task element must have more than one child task within it to consider the parent task element complete.

A good Work Breakdown Structure is created using an iterative process by following these steps and meeting these guidelines:

1 GATHER CRITICAL DOCUMENTS

- **a.** Gather critical project documents.
- **b.** Identify content containing project deliverables, such as the Project Charter, Scope Statement and Project Management Plan (PMP) subsidiary plans.

2 IDENTIFY KEY TEAM MEMBERS

- **a.** Identify the appropriate project team members.
- **b.** Analyze the documents and identify the deliverables.

3 DEFINE LEVEL 1 ELEMENTS

- **a.** Define the Level 1 Elements. Level 1 Elements are summary deliverable descriptions that must capture 100% of the project scope.
- **b.** Verify 100% of scope is captured. This requirement is commonly referred to as the 100% Rule.

4 DECOMPOSE (BREAKDOWN) ELEMENTS

- **a.** Begin the process of breaking the Level 1 deliverables into unique lower Level deliverables. This "breaking down" technique is called Decomposition.
- **b.** Continue breaking down the work until the work covered in each Element is managed by a single individual or organization. Ensure that all Elements are mutually exclusive.
- **c.** Ask the question, would any additional decomposition make the project more manageable? If the answer is "no", the WBS is done.

5 CREATE WBS DICTIONARY

- **a.** Define the content of the WBS Dictionary. The WBS Dictionary is a narrative description of the work covered in each Element in the WBS. The lowest Level Elements in the WBS are called Work Packages.
- **b.** Create the WBS Dictionary descriptions at the Work Package Level with detail enough to ensure that 100% of the project scope is covered. The descriptions should include information such as, boundaries, milestones, risks, owner, costs, etc.

6 CREATE GANTT CHART SCHEDULE

- **a.** Decompose the Work Packages to activities as appropriate.
- **b.** Export or enter the Work Breakdown Structure into a Gantt chart for further scheduling and project tracking.

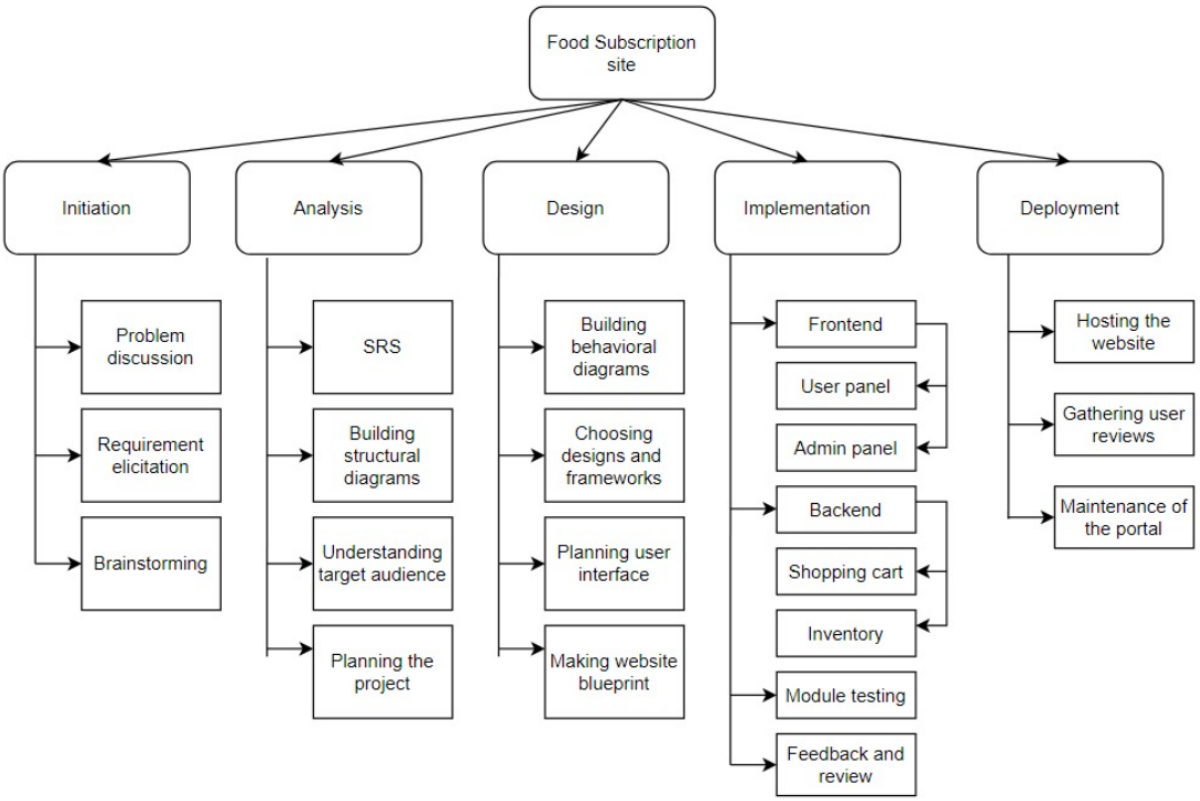
2. Gantt Chart:

A Gantt chart, commonly used in project management, is one of the most popular and useful ways of showing activities (tasks or events) displayed against time. On the left of the chart is a list of the activities and along the top is a suitable time scale. Each activity is represented by a bar; the position and length of the bar reflect the start date, duration, and end date of the activity. This allows you to see at a glance:

1. What the various activities are
2. When each activity begins and ends
3. How long each activity is scheduled to last

Implementation:

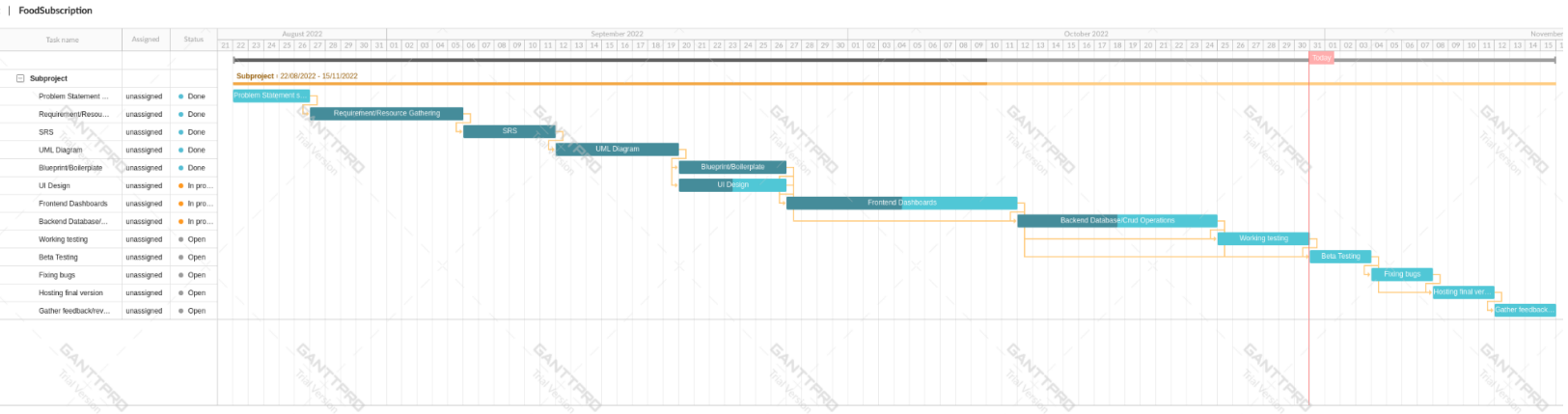
1. WBS



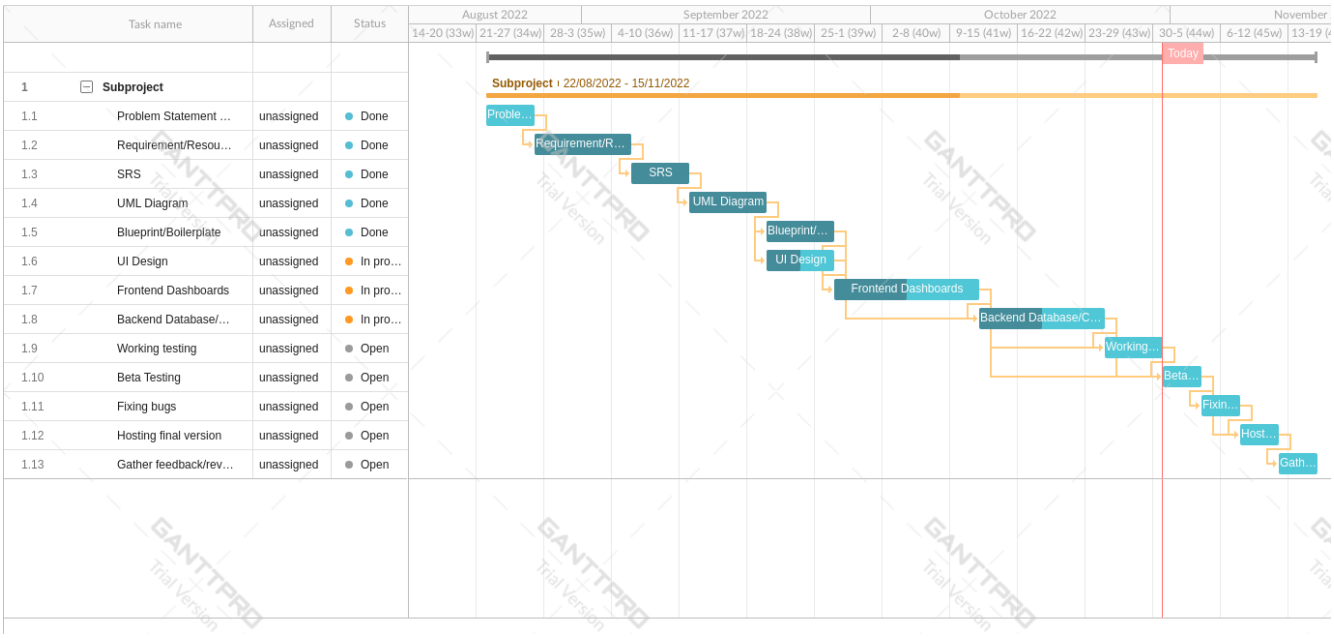
2. Gantt Chart Table

Activity	Descprition	Predecessors	Start Time	End Time	Duration
A	Select and discuss problem statement	-	22-08-2022	25-08-2022	1 week
B	Gather resources related to restaurants, vendors, etc.	A	29-08-2022	05-09-2022	1 week
C	Create the requirement documentaion	B	05-09-2022	12-09-2022	1 week
D	Prepare UML diagrams	C	12-09-2022	19-09-2022	1 weeks
E	Create the blueprint of the project website	D	19-09-2022	26-09-2022	1 week
F	Create user interface(UI)	D	26-09-2022	03-10-2022	1 week
G	Frontend	E, F	26-09-2022	17-10-2022	3 weeks
H	Backend database setup/CRUD functionalities	E, G	03-10-2022	24-10-2022	3 weeks
I	Work on the testing	G, H	24-10-2022	31-10-2022	1 week
J	Evaluate Beta version	G, H, I	31-10-2022	03-11-2022	3 days
K	Fix bugs	J	03-11-2022	06-11-2022	3 days
L	Host final version	J, K	06-11-2022	08-11-2022	2 days
M	Improvise according to the Feedback and reviews	L	08-11-2022	15-11-2022	1 week

3. Gantt Chart



Spit | FoodSubscription



	Task name	Assigned	Status
1	Subproject		
1.1	Problem Statement …	unassigned	Done
1.2	Requirement/Resou…	unassigned	Done
1.3	SRS	unassigned	Done
1.4	UML Diagram	unassigned	Done
1.5	Blueprint/Boilerplate	unassigned	Done
1.6	UI Design	unassigned	In pro…
1.7	Frontend Dashboards	unassigned	In pro…
1.8	Backend Database/…	unassigned	In pro…
1.9	Working testing	unassigned	Open
1.10	Beta Testing	unassigned	Open
1.11	Fixing bugs	unassigned	Open
1.12	Hosting final version	unassigned	Open
1.13	Gather feedback/rev…	unassigned	Open

Conclusion:

From the above experiment, I have learned the following:

1. Theory of WBS and Gantt Chart.
2. Creating the WBS and Gantt Chart for the given problem statement.

References:

1. https://www.workbreakdownstructure.com/
2. https://www.gantt.com