Name: Khushal Dhanuka
UID: 2020300007
Batch A

Experiment 6: Work Breakdown Structure

THEORY:

What is a Work Breakdown Structure?

A work breakdown structure (WBS) is a visual, hierarchical and deliverable oriented deconstruction of a project. It is a helpful diagram for project managers because it allows them to break down their project scope and visualise all the tasks required to complete their projects.

All the steps of project work are outlined in the work breakdown structure chart, which makes it an essential project planning tool. The final project deliverable, as well as the tasks and work packages associated with it rest on top of the WBS diagram, and the WBS levels below subdivide the project scope to indicate the tasks, deliverables and work packages that are needed to complete the project from start to finish.

Types of WBS:

 1. **Work Breakdown Structure List:** Also known as an outline view, this is a list of work packages, tasks and deliverables. It's probably the simplest method to make a WBS, which is sometimes all you need.

2. **Work Breakdown Structure Tree Diagram:** The most commonly seen version, the tree structure depiction of a WBS is an organisational chart that has all the same WBS elements of the list (phases, deliverables, tasks and work packages) but represents the workflow or progress as defined by a diagrammatic representation.

3. **Work Breakdown Structure Gantt Chart:** A Gantt chart is both a spreadsheet and a timeline. The Gantt chart is a WBS that can do more than a static task list or tree diagram. With a dynamic Gantt chart, you can link dependencies, set milestones, even set a baseline. This is the most common version in project management software.

Steps to make WBS

1. **Define the Project Scope, Goals and Objectives:** Your project goals and objectives set the rules for defining your project scope. Your project scope, team members, goals and objectives should be documented on your project charter.

2. **Identify Project Phases & Control Accounts:** The next level down is the project phases: break the larger project scope statement into a series of phases that will take it from

conception to completion. You can also create control accounts, which are task categories for different work areas you want to keep track of.

3. **List Your Project Deliverables:** What are your project deliverables? List them all and note the work needed for those project deliverables to be deemed successfully delivered (sub-deliverables, work packages, resources, participants, etc.)
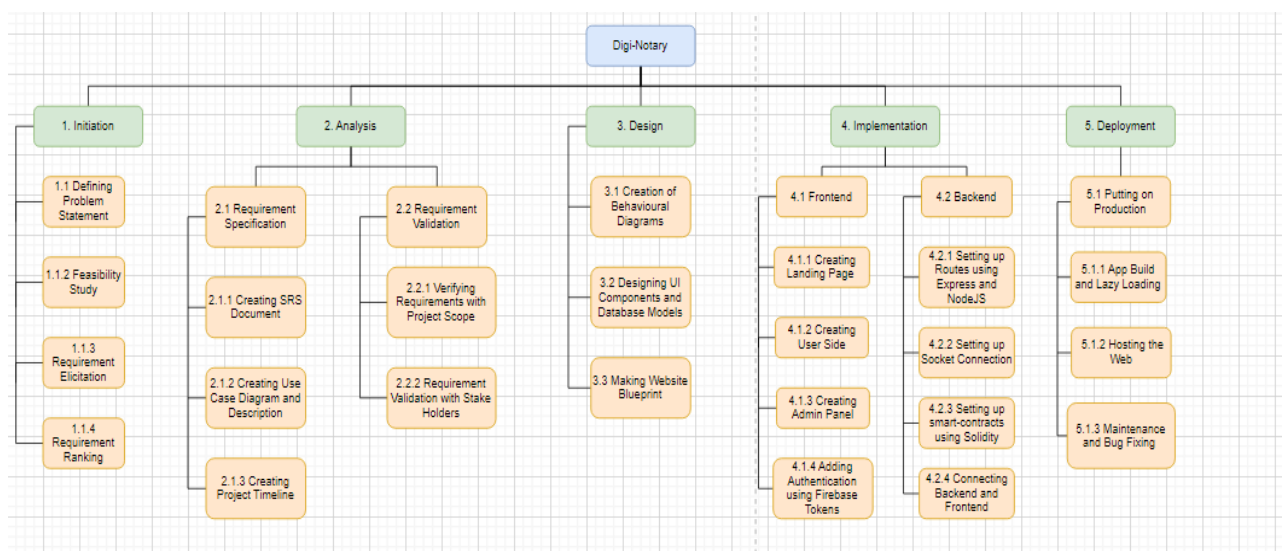
4. **Set WBS Levels:** The WBS levels are what make a work breakdown structure a "hierarchical deconstruction of your project scope", as defined by the project management institute in its project management body of knowledge book (PMBOK). You'll need to start at the final project deliverable and think about all the deliverables and work packages needed to get there from the start.

5. **Create Work Packages:** Take your deliverables from above and break them down into every single task and subtask that is necessary to deliver them. Group those into work packages.

6. **Choose Task Owners:** With the tasks now laid out, assign them to your project team. Give each team member the work management tools, resources and authority they need to get the job done
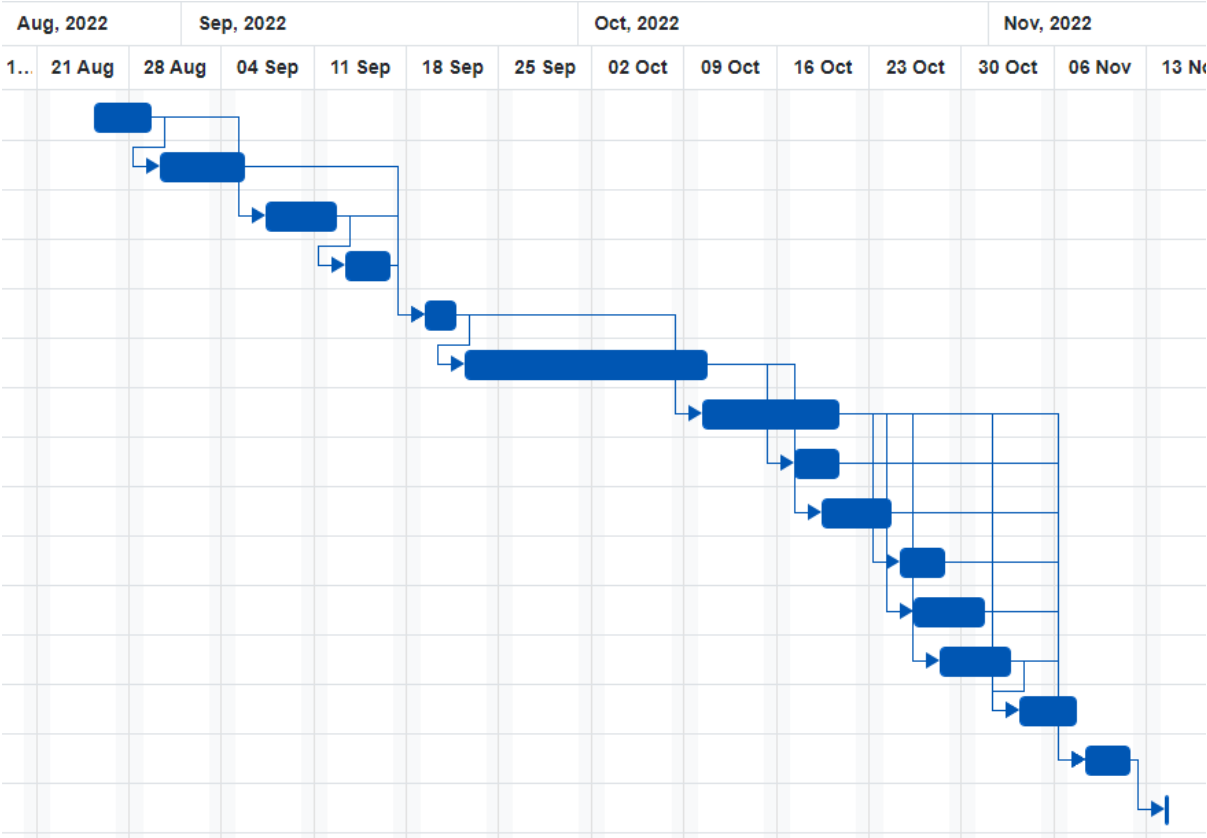
Work Breakdown Structure

Work Breakdown Structure Tree Flowchart

Work Breakdown Structure List

ID	Name	Start Date	End Date	Duration	Dependency
1	Gathering requirements and defining project St...	Aug 25, 2022	Aug 29, 2022	3 days	
2	Conducting Feasibility Study	Aug 30, 2022	Sep 05, 2022	5 days	1FS
3	Creating the SRS Document	Sep 07, 2022	Sep 12, 2022	4 days	1FS+6 days
4	Making the Use Case Diagram	Sep 13, 2022	Sep 16, 2022	4 days	3FS
5	Finalising Requirements in Accordance with Pr...	Sep 19, 2022	Sep 21, 2022	3 days	4FS,2FS,3FS
6	Designing Behavioural Diagrams	Sep 22, 2022	Oct 10, 2022	13 days	5FS
7	Creating Frontend Pages and UI components	Oct 10, 2022	Oct 20, 2022	9 days	5FS+12 days
8	Connecting Firebase with the Project	Oct 17, 2022	Oct 20, 2022	4 days	6FS+4 days
9	Creating routes for Users	Oct 19, 2022	Oct 24, 2022	4 days	6FS+6 days
10	Establishing Socket Connection	Oct 25, 2022	Oct 28, 2022	4 days	7FS+2 days
11	Setting up smart contracts	Oct 26, 2022	Oct 31, 2022	4 days	7FS+3 days
12	Integrating Frontend and Backend	Oct 28, 2022	Nov 02, 2022	4 days	7FS+5 days
13	Setting up authentication module	Nov 03, 2022	Nov 07, 2022	3 days	7FS+8 days,12FS
14	Testing and Debugging	Nov 08, 2022	Nov 11, 2022	4 days	7FS+12 days,8F...
15	Hosting the website	Nov 14, 2022	Nov 14, 2022	1 day	14FS

Gantt Chart

CONCLUSION:

Hence, from this experiment, we understood how to create a WBS and created the structure breakdown of our project and created a Gantt Table and Chart for the same.