Vidyavardhini's College of Engineering & Technology

Department of Computer Engineering

Academic Year : 2024-25

Experiment No. 6
Prepare WBS for a case study
Name: Krisha Chikka
Std/Div: TE/1   Roll no. : 30
Date of Performance: 12/08/2024
Date of Submission: 02/09/2024

Aim: To prepare work breakdown structure for a given case study

Objective: To apply Work Breakdown Structure for Currency Detector for the Visually Impaired for cost estimation.

Theory:

A Work Breakdown Structure includes dividing a large and complex project into simpler, manageable, and independent tasks. The root of this tree (structure) is labeled by the Project name itself. For constructing a work breakdown structure, each node is recursively decomposed into smaller sub-activities, until at the leaf level, the activities become undividable and independent. It follows a Top-Down approach.
Steps Work Breakdown Structure:

Step 1: Identify the major activities of the project.
Step 2: Identify the sub-activities of the major activities.
Step 3: Repeat till undividable, simple, and independent activities are created.

Construction of Work Breakdown Structure

Firstly, the project managers and top level management identifies the main deliverables of the project.

After this important step, these main deliverables are broke down into smaller higher-level tasks and this complete process is done recursively to produce much smaller independent tasks.

It depends on the project manager and team that upto which level of detail they want to break down their project.

Generally the lowest level tasks are the most simplest and independent tasks and takes less than two weeks' worth of work.

Hence, there is no rule for up to which level we may build the work breakdown structure of the project as it totally depends upon the type of project we are working on and the management of the company.

The efficiency and success of the whole project majorly depends on the quality of the Work Breakdown Structure of the project and hence, it implies its importance.

Types of WBS

The two types of work breakdown structures are process-oriented and deliverable-oriented. Each has its advantages and disadvantages.

1. Process-oriented WBS

A process-oriented WBS decomposes work into the processes needed to accomplish it, such as requirements, design, development, and testing. The advantage of this type of breakdown structure is that it clarifies what needs to be done and who will do it. It also makes it easy to assign resources and estimate time because they can be assigned at each level of the structure. Process, or phase-oriented WBS, is often preferred by clients as it provides clear milestones.

2. Deliverable-oriented WBS

A deliverable-oriented WBS decomposes work into tangible products or services, such as database schema and user manuals. The advantage of this type of breakdown structure is that it gives an overview of the deliverables required for a project. Project teams and management most appreciate this type of WBS.

Application of Work Breakdown Structure

1. Cost estimation: It allows doing a precise cost estimation of each activity.
2. Time estimation: It allows estimating the time that each activity will take more precisely.
3. Easy project management: It allows easy management of the project.
4. Helps in project organization: It helps in proper organization of the project by the top management.

WBS software tools

Many free and paid software tools can help you create WBS for your projects. Each has its strong points, and project managers often have a preference based on what they like, from function to the user interface. Here are some common WBS software tools:

EdrawMax

EdrawMax is a versatile and capable diagramming application. It covers all aspects of WBS, including flowcharts, floor planning and business process diagrams. It's best suited for people who need a feature-rich tool that covers a wide variety of use cases.

Lucidchart

Lucidchart is a cloud-based visual collaboration tool that allows teams to work together on the same diagram with real-time updates and live chat. Lucidchart provides a simple interface that enables you to create professional charts without prior experience.

SmartDraw

SmartDraw is a browser-based tool. It helps you draw flowcharts, organisation charts, mind maps, project charts, and more. It's useful for visualising projects and individual aspects of a project.

Visual Paradigm

Visual Paradigm is an extensive software suite that offers everything from project planning to source code management and test case design. This application best suits professional developers and managers working on large enterprise projects.

MindView

MindView is explicitly designed for project managers and business professionals who create mind maps to plan projects, brainstorm solutions, and present ideas visually. Mindview's collaborative tools allow team members to work together on project planning.
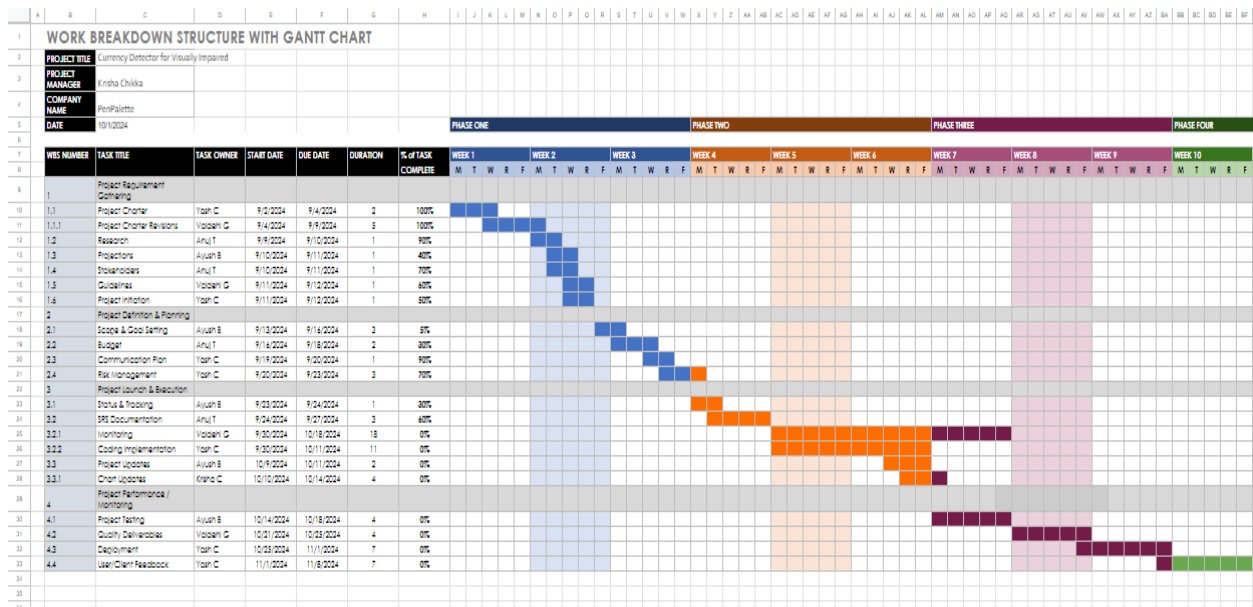
Creately

Creately is an online diagramming application that makes it easy to draw flowcharts, organisational charts, mind maps, and other diagrams online. Creately comes with features such as intelligent drawing aids that automatically align shapes whilst drawing flowcharts or other diagrams. You can also use it to collaborate with your colleagues in real time while working on a project together.

Solution:

WORK BREAKDOWN STRUCTURE WITH GANTT CHART

PROJECT TITLE	Currency Detector for Visually Impaired
PROJECT MANAGER	Krisha Chikka
COMPANY NAME	PenPalette
DATE	10/1/2024

WBS NUMBER	TASK TITLE	TASK OWNER	START DATE	DUE DATE	DURATION	% of TASK COMPLETE
1	Project Requirement Gathering					
1.1	Project Charter	Yash C	9/2/2024	9/4/2024	2	100%
1.1.1	Project Charter Revisions	Valdeh G	9/4/2024	9/9/2024	5	100%
1.2	Research	Anuj T	9/9/2024	9/10/2024	1	90%
1.3	Projections	Ayush B	9/10/2024	9/11/2024	1	40%
1.4	Stakeholders	Anuj T	9/10/2024	9/11/2024	1	70%
1.5	Guidelines	Valdeh G	9/11/2024	9/12/2024	1	60%
1.6	Project Initiation	Yash C	9/11/2024	9/12/2024	1	50%
2	Project Definition & Planning					
2.1	Scope & Goal Setting	Ayush B	9/13/2024	9/16/2024	3	5%
2.2	Budget	Anuj T	9/16/2024	9/18/2024	2	30%
2.3	Communication Plan	Yash C	9/19/2024	9/20/2024	1	90%
2.4	Risk Management	Yash C	9/20/2024	9/23/2024	3	70%
3	Project Launch & Execution					
3.1	Status & Tracking	Ayush B	9/23/2024	9/24/2024	1	30%
3.2	SRS Documentation	Anuj T	9/24/2024	9/27/2024	3	60%
3.2.1	Monitoring	Valdeh G	9/30/2024	10/18/2024	18	0%
3.2.2	Coding Implementation	Yash C	9/30/2024	12/11/2024	11	0%
3.3	Project Updates	Ayush B	10/9/2024	12/11/2024	2	0%
3.3.1	Chart Updates	Krisha C	10/10/2024	10/14/2024	4	0%
4	Project Performance / Monitoring					
4.1	Project Testing	Ayush B	10/14/2024	10/18/2024	4	0%
4.2	Quality Deliverables	Valdeh G	10/21/2024	10/23/2024	4	0%
4.3	Deployment	Yash C	10/23/2024	11/1/2024	7	0%
4.4	User/Client Feedback	Yash C	11/1/2024	11/8/2024	7	0%

Conclusion: In conclusion, we have successfully developed a Work Breakdown Structure (WBS) for the Currency Detector for the Visually Impaired project. This structured approach allowed us to break down the project into manageable components, facilitating more accurate cost and time estimations. By identifying major activities and their sub-activities, we ensured that each task is clear and independent, promoting better organization and resource allocation. The WBS not only enhances project management efficiency but also clarifies deliverables and milestones for stakeholders. Overall, this foundational tool is essential for guiding the project towards successful completion.

Krisha Chikka TE-1_30

Vidyavardhini's College of Engineering & Technology

Department of Computer Engineering

Academic Year : 2024-25

Krisha Chikka TE-1_30