BAXI3533 – AI Project Management

Week 05 Lab Manual – Project Cost and Resource Management

🎯 Learning Objectives

By the end of this lab, you will be able to:

- Identify and classify **resources** (people, equipment, software, materials) required for your project.

- Estimate and document **task costs** based on resource usage.

- Prepare a **basic project budget** linked with your WBS and timeline.

- Reflect on how **cost management** integrates with project scope and schedule.

🧭 Background / Context

In previous labs, you created a project plan, work breakdown structure, and refined your deliverables.
This week, you will extend that work by estimating **costs and resources** for each task in your WBS.
Understanding cost and resource management ensures your project remains realistic and aligned with your goals.

You may use **Microsoft Planner** or **Excel** for calculations and tracking, and **GitHub** for storing your cost documentation.

🗂 Part 1 – Setup

Step	Action	Tool
1	Open your project's existing Planner board or Excel schedule.	Planner / Excel
2	Add a new section or sheet titled **"Week 05 – Cost & Resources."**	Planner / Excel
3	In your GitHub repository, create a new folder named /budget/.	GitHub

Step	Action	Tool
4	Inside that folder, add a Markdown file named Cost_Resource_Plan_Week05.md.	GitHub
5	Use Microsoft Teams to coordinate and confirm that each team member is assigned specific tasks.	Teams

⚙️ Part 2 – Identify Resources

For each task in your WBS, list the required resources and details.

WBS ID	Task	Resource Type	Resource Name	Quantity / Hours	Description
1.1	Gather dataset sources	Human	Research Assistant	6 hrs	Online data collection
1.2	Clean and label data	Software	Python, Excel	—	Data preparation tools
2.2	Train predictive model	Hardware	GPU Instance	10 hrs	Cloud computing resource
4.1	Prepare final report	Human	Team Members	8 hrs	Editing and formatting

Record this table in your Excel sheet or Markdown document.

💰 Part 3 – Estimate Task Costs

1. Assign a **rate** for each resource (e.g., hourly or per-use rate).

   o Example rates:

      ▪ Research Assistant: RM 30/hour

      ▪ GPU Instance: RM 10/hour

      ▪ Team Member: RM 25/hour

      ▪ Software License (if applicable): RM 100 flat

2. Multiply **Rate × Hours/Quantity** to find **Total Cost per task**.

3. Summarize costs for each phase or category.

Task	Hours	Rate (RM/hr)	Total Cost (RM)
Gather dataset sources	6	30	180
Train predictive model	10	10	100
Prepare final report	8	25	200
Total	—	—	**480**

Include this table in your Cost_Resource_Plan_Week05.md file.

📊 Part 4 – Build a Simple Project Budget

Group similar costs to get your total estimated budget:

Cost Category	Example Items	Subtotal (RM)
Human Resources	Team members, assistants	1,200
Hardware / Cloud	GPU, storage	400
Software / Licenses	Tools or subscriptions	300
Communication	Online meetings	100
Total Estimated Budget		**2,000**

Update your Excel file with this summary or include it below your cost table in Markdown.

🔄 Part 5 – Link Costs to Schedule

1. Revisit your Week 03/04 schedule in Excel or Planner.

2. Add a column titled **"Estimated Cost (RM)"** beside each task.

3. Identify tasks or phases that have high cost impact.

4. Note how these costs align with your project milestones.

Document your observations at the end of your Markdown file under a heading:
Integration Notes.

💬 Part 6 – Reflect on Cost Management

Answer these questions in your individual reflection log:

1. Which project phase has the highest cost and why?

   Looking at our budget, it's clear that the Frontend and Dashboard Development stage is where most of our money is going. The main reason is that building a user-friendly interface and making sure it talks smoothly to the backend and AI models is just really time-consuming. It requires a lot of back-and-forth work from several of us to get it right, and all those hours really add up.

2. How could you reduce costs without affecting quality?

   - Use open-source tools instead of paid licenses.
   - Optimize cloud resources with spot instances.
   - Reuse existing code components.
   - Implement peer reviews to prevent rework.

3. How does resource allocation influence your schedule and overall success?

   Good resource matching ensures tasks are done efficiently by the right people, preventing delays and budget overruns. It helps spot bottlenecks early and keeps the project on track for success.

Save your reflection as:
/individual_logs/Reflection_Week05_<YourName>.md

✅ Submission Checklist

Deliverable	Format	Location
Resource List & Cost Plan	.md	/budget/Cost_Resource_Plan_Week05.md
Cost Sheet	.xlsx	/budget/
Updated Schedule	Excel / Planner	/planning/
Reflection Log	.md	/individual_logs/Reflection_Week05_<YourName>.md

🔗 Reference Links

- Microsoft Planner Overview: https://support.microsoft.com/office/microsoft-planner-overview-6274f0de-4e3b-46e6-8e79-13f792b4eacd

- Excel Cost & Budget Templates: https://templates.office.com/

- GitHub Basics: https://docs.github.com/en

- Microsoft Teams Collaboration: https://learn.microsoft.com/en-us/microsoftteams/