Deliverable 1

Project Planning and Management

I. Core Process 1: Quantify Project Approval Factors

- The objective of this step is to provide sufficient justification so that funds will be released, and the project starts. It includes many phases such as varies estimations of schedule, costs, and risk identification.

Step 1: Estimated Time for Completion

Phase	Description	Estimated Duration
Requirements Gathering	System Vision Document & User Functional Requirements	2 Weeks
System Analysis	Use Cases & Domain Classes Identification	4 Weeks
System Design	Architectural, Classes and methods, UI/UX, and database Design	5 Weeks
Code Structure Generation	Set up modules and Structuring Code	2 Weeks
Implementation	Fully Functional System	5-6 Weeks
Testing	Unit, Integration, System, and User Acceptance Testing	4-5 weeks
Deployment	Deployment of System	2 Weeks
Final Documentation	Reporting and Presentation	1 Week

Total Estimated Time for Completion is around 25-27 weeks (around 6 months total)

Step 2: Estimated Cost for Development

Expense Category	**Amount in EGP**
Salaries/Wages **(1 project manager , 3 Software Engineers)**	3 Software Engineer – 20,000 EGP 1 Project Manager – 45,000 EGP Total = 105,000 EGP
Equipment/Installation **(Laptops, Software Licenses, Servers, Setup)**	500,000 EGP
Training	50,000 EGP
Facilities (Office Space Renting)	250,000 EGP
Utilities ***(Server Maintenance, API Costs)***	100,000 EGP
Travel/Miscellaneous	100,000 EGP
Licenses (Paid Libraries)	70,000 EGP
Total Estimated Cost	1,175,000 EGP

Step 3: Cost/Benefit Analysis

Category	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5
Value of Benefits		300,000 EGP	450,000 EGP	600,000 EGP	750,000 EGP	900,000 EGP
Development Costs	-1,175,000 EGP	-	-	-	-	-
Annual Expenses	-	-200,000 EGP	-200,000 EGP	-200,000 EGP	-200,000 EGP	-200,000 EGP
Net Benefit/Costs	-1,175,000 EGP	100,000 EGP	250,000 EGP	400,000 EGP	550,000 EGP	700,000 EGP
Discount Factor (6%)	1.0000	0.9434	0.8900	0.8396	0.7921	0.7473
Net Present Value (NPV)	-1,175,000 EGP	94,340 EGP	222,500 EGP	335,840 EGP	435,655 EGP	523,110 EGP
Cumulative NPV	-1,175,000 EGP	-1,080,660 EGP	-858,160 EGP	-522,320 EGP	-86,665 EGP	436,445 EGP
Payback Period	-	-	-	-	4 years + 2 months	-

Takeaways:

- **Break-even Point**: Between Year 4 and Year 5
- **Payback period**: 4 years and 2 months
- **Cumulative NPV**: 436,445

Step 4: List of Intangible Benefits:

Intangible Benefit	Description
High Accessibility to Education	EduCertify provides flexible learning for all students worldwide, thus removing any geographical and financial barriers.
Reputation & Credibility	This e-learning platform will build a credible resource for instructors and learners worldwide.
Scalability & Growth	Increased scalability throughout the progress of the system by augmenting the number of courses with little costs.
Competitive Advantage	EduCertify stands out in features like certifications, AI-assessments, and flexibility.
Institutional Recognition	Collaborations with universities and organizations will help the idea of future partnerships.

Step 5: Project Risks and Plan for each Risk

Type of Risk	Risk Identification	Action Plan
Organizational Risks	Lack of Leadership and Poor Communication	- Define roles within the team (project manager and team members) - Hold weekly meetings to address progress
Technological Risks	Failure in system security and performance	- Perform regular testing - Cyber Security team to secure the data in the system
Resource Risks	Budget limitations	- Ensure project funding is secured and periodically provided.
Schedule Risks	Missing deadlines	- Deliver small iterations

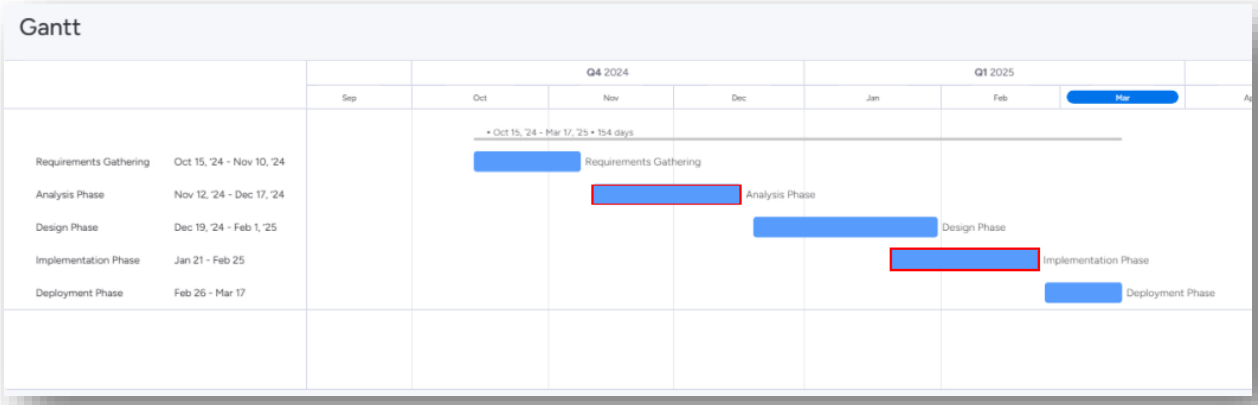
Core Process 2: Plan and Monitor the Project

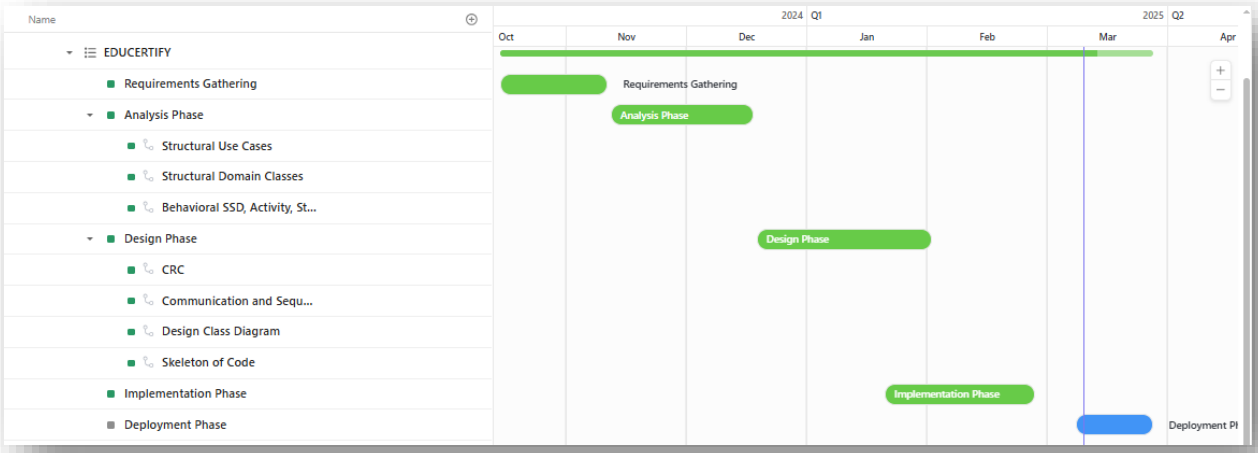
- Planning efforts occur immediately after project approval and last throughout the entire project lifetime.

Step 1: Describe Project Environment

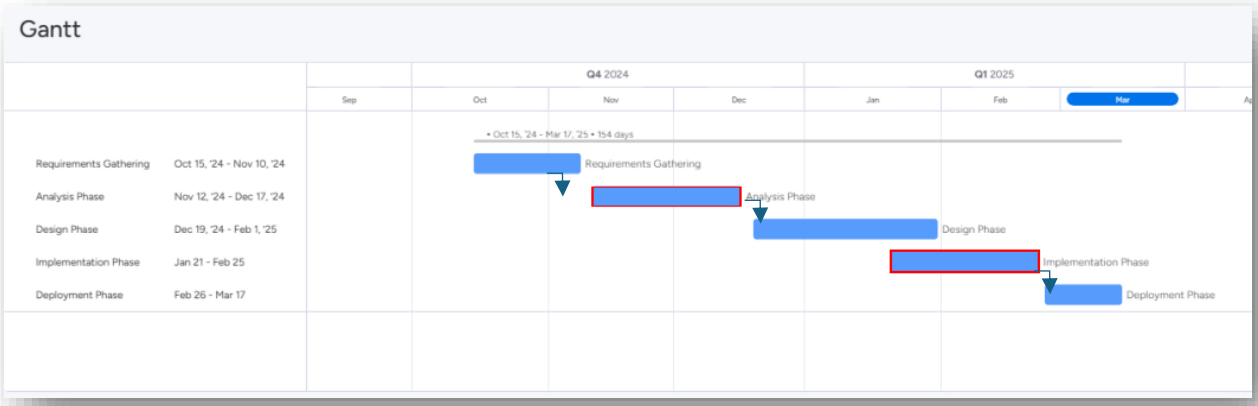
Information Type	Electronic Tool	View Accessibility
User Function Requirements and definitions	Google documents, Pdfs	Business Analysts, Project Manager, Developers
Screens and layouts	Figma, PowerPoint	UI/UX Designers, Project Managers
Design Diagrams	Draw.io, StarUML	Developers, Project Managers
Issues and Problems	Excel Sheet of Issues	Developers, Project Managers
Program Code	Visual Studio 2022, GitHub	Developers
Project Schedule	Jira, Monday	Project Manager
Team Meetings	Google Meet	Project Team
Team Communication	WhatsApp, Gmail	Project Team

Step 2: Gantt Chart





Step 3: Critical Path (Red Outlined) *Delay in them causes overall delay*



From the C-SW321 team project, discuss how would you have applied the activity:

Step 1: "Evaluate Work Processes" activity.

1. ***Are our communication procedures adequate? How can they be improved?***

- Communication procedures were effective and put into place as soon as the project started.
- The project team held regular meetings via Google meet to discuss the progress, timeline, and deadlines of the deliverables.
- Communication can be improved by hosting a daily meeting to be more up to date.

2. ***Are our working relationships with the user effective?***

- Yes, constant feedback from the user was provided and constant discussion sessions were held.

3. ***Did we meet our deadlines? Why or why not?***

- Deadlines were always met on time, since the task distribution among teammates was fairly distributed.

4. ***What things went especially well? How can we ensure it continues?***

- Team collaboration, good documentation quality, meeting deadlines constantly, and good project management.

5. ***What were the bottlenecks or problem areas? How can we eliminate them?***

- The database integration phase took longer than expected which caused some delays.

Step 2: "Monitor Project Progress and Make Corrections"

Tracking Project Progress

- **Gantt Charts**: Planned each phase duration and dependencies between phases.
- **Jira**: Update of the completion and assignment of each task and phase.
- **Weekly Progress Meetings**: meetings held between all members to discuss progress.
- **Code Reviews and Testing**: Log files to ensure code quality and testing.

Step 3: What are the lessons learned?

- Good teamwork communication
- Good documentation and reporting
- Optimization of Workload distribution among team members
- Regularly held progress meetings
- Good project management skills

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