Important Guidelines – Capstone Project

A Capstone Project involves solving a real-time business problem where the learner will have to apply all the knowledge and skills acquired throughout the training by developing applications using various technologies in the industry. The focus here is not only on the project outcome but also ensuring to have a meaningful experience throughout the journey. Keeping that in mind, these are the expectations from the learner.

- Learn practical implementation of various technologies to address a business problem.
- To understand the trade-offs that need to be made when solving a problem in real life.
- To develop a better presentation and report writing skills.
- To demonstrate mastery of the program's learning outcomes and competencies.
- To synthesize knowledge and skills acquired throughout the program.
- To apply theoretical concepts to real-world problems or challenges.
- To develop critical thinking, problem-solving, and analytical skills.
- To enhance communication, collaboration, and project management skills.
- To contribute in developing innovative solutions to existing problems.

Presentation -

The presentation is for explaining your project - both the problem and the solution. You will have to create a presentation based on the work you have done and present it to the panel in the presentation template. The presentation complements the project documentation and the product demo. It gives evaluators a chance to clear up doubts by asking questions on the spot.

The presentation is intended to concisely **summarize the outcomes of a project** and to document the recommendations & findings around the problem statement, lessons learned and performance in order to signal improvement in project delivery for the future. Kindly follow the guidelines provided further in the Capstone journey.

The development process for a full-stack capstone project typically involves the following steps:

Project Ideation and Planning: This involves selecting a project idea and defining the scope of the project. You should also create a project plan that includes the timeline, deliverables, and resources required to complete the project. Follow methods like Agile

Database Design: Design the database schema and the relationships between different tables/entities in the database. Decide on the database management system (DBMS) you will use and plan for data migrations and backups or as specified in the case study.

Backend Development: Build the backend of your application by creating RESTful APIs using a server-side language like Node.js, Python, Ruby, or PHP. You can use a framework like Express, Flask, Ruby on Rails, or Laravel to simplify the development process or as specified in the case study.

Frontend Development: Develop the frontend of your application using HTML, CSS, and JavaScript. You can use a frontend framework like React, Angular, Vue.js or as specified in the case study to build the user interface and make it responsive.

Integration and Testing: Integrate the frontend and backend of your application and test it thoroughly. You can use automated testing frameworks like Jest, Mocha, Cypress, or as specified in the case study to ensure that your application works as expected.

Deployment: Deploy your application to a cloud platform like AWS, Heroku, Azure, local or or as specified in the case study.. You will need to configure your application, set up a production database, and ensure that your application is secure.

Maintenance and Iteration: Maintain and improve your application by fixing bugs, adding new features, and incorporating user feedback. You may also need to scale your application to handle more users or optimize its performance.

Throughout the development process, it's important to follow best practices for code quality, security, and scalability. You should also use version control tools like Git to manage your code and collaborate with your team members.

Project Evaluation Metrics

Total Project Score	**100**
Demo	30
Implementation	30
Presentation Skills	20
Project Report	20

Project work evaluation table

	Viewpoints	**Key elements in evaluation**
Demo	Product/Application Features	Functionality, Relevance
	Flow	User Experience, Performance
	Creativity	Innovation, Presentation and Communication
Project Implementation	End result outcome	Usability, case diagrams, documentation, implementation, functionality, etc.
	Quality of work	SW development process, planning, work split, effort estimation, reports
	Schedule	Keeping deadlines; project plans, delivery model, reports, execution
Presentation	Engagement	How well the audience are engaged
	Articulation	Did the presenter communicate the key features and benefits of the product effectively
	Adherence to the guidelines	Formats and timelines
Project Report (PPT)	Project Report	Content Relevance, Adherence to the guidelines
Client feedback for project results	End product itself	Features, requirements, layout, capability develop further, transformability
	End result quality	Functionality, logicality, easy to maintain, documentation
	Co-operation with team	work handling, developing, processing, reporting, resource availability, team communication

Some Do's and Don'ts for Project Presentation

The objective of any presentation is to draw your audience's attention to the key points of your project. You will be taking them through the explanations.

1) You will be given 20 minutes to present. There will be a hard stop after 20 minutes

2) Use the capstone Template ppt for presentation.

2) This will be followed by 10 minutes of Q&A session.

3) The date & time will not change once finalized.

4) Final ppt should be submitted before the session.

5) Other pointers to be kept in mind :

- Do not copy and paste long textual portion from project report on the slides.
- Matter on the slides should be short and to the point. Highlight key points and reinforce.
- Fonts must be large enough so that the text is readable from the last rows.
- Tables, charts and images should be placed in such a way so that audience can read them. Do not put too many tables on a single slide.
- It is a good idea to have the raw data handy so that you can refer to them quickly. If the file is huge and will take time to open, have a small subset for ready reference.
- Take your audience through the logical steps of your project work. Link the steps and come to a logical conclusion.
- Be prepared to answer critical questions.
- Ensure all feedback given by the faculty and the Mentors are incorporated.
- Practice by rehearsing and do a self-assessment.

A guide on Presentation

- https://www.slideshare.net/kharth/powerpoint-guidelines