



Department of Computer Science

Project Based Learning

Class: B.Tech. (CS)/Sem-V

Subject: Software Engineering

Topic: Project based Learning

Objective:

The objective of **Project-Based Learning (PBL)** in software engineering is to provide students with hands-on, real-world experience by engaging them in the development of a software product or system from start to finish.

Project based learning Approach:

1. Break the Project into Phases


- Students follow the typical **Software Development Life Cycle (SDLC)**, with well-defined stages such as planning, design, implementation, testing, and deployment.
- Stages of Project:
 - Project Planning and Requirements Gathering: Students define the project scope, gather user requirements, and create initial specifications.
 - System Design: Students design the software architecture, choose technologies, and plan the user interface and database structure.
 - Implementation: Students begin coding, utilizing version control, setting up a development environment, and writing documentation as they go.
 - Testing and Debugging: Students perform unit tests, integration tests, and system tests to ensure the software is functional, secure, and free from bugs.
 - Deployment and Maintenance: Students deploy the software, ensuring it works in a production environment, and continue maintenance as needed.

2. Encourage Teamwork and Collaboration

- **Roles in the Team:** Assign different roles (e.g., project manager, lead developer, tester, documentation writer) to ensure students gain experience in various aspects of software development.
- **Agile Practices:** Students can adopt **Agile methodologies** (Scrum, Kanban) to divide tasks into manageable sprints, hold regular stand-ups, and track progress.

3. Incorporate Industry Tools and Practices

- **Version Control:** Use **Git** or **GitHub** to track changes in code and manage collaboration.


Subject Teacher



Department of Computer Science


- **Automated Testing:** Introduce automated testing tools such as Selenium Testing Tool.
- **Software designing tool:** Introduce designing tools such as StarUML

4. Project Presentation and Reflection

- **Project Presentation:** Students present their final product to the class or stakeholders, demonstrating its features, architecture, and how they solved key problems.

Outcome of the Project Based Learning Approach in Software Engineering:

- **Real-World Skills:** Students gain practical, hands-on experience that mirrors the real-world software development process, making them more job-ready.
- **Team Collaboration:** Students develop strong communication and collaboration skills, learning how to work effectively in a team.
- **Problem-Solving:** Through iterative work on the project, students develop critical thinking and problem-solving skills, improving their ability to tackle complex software engineering challenges.
- **Exposure to Industry Practices:** Students become familiar with the tools, techniques, and methodologies used in the software industry, improving their employability and skillset.
- **Confidence and Ownership:** By creating and completing a software project, students gain a sense of accomplishment and ownership, building confidence in their abilities.

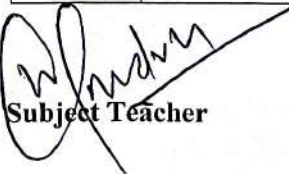


Subject Teacher

Department of Computer Science

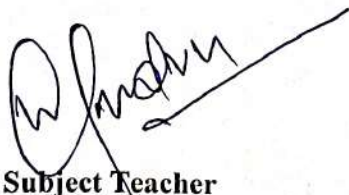
Attendance Sheet
Academic Session: 2022-23
B. Tech. CS Sem. V
Subject: Software Engineering

Sr. No.	Name of Student	Roll No.	Project Title	Signature
G-1	PATEL, JAYKUMAR	B203	Flight Reservation System	Jay
	TALAVIYA, KHUSHI	B204		Khushi
	DALAL, PARAM .	B205		Param
	SAXENA, SHAURYA	B206		Shaurya
	SHARMA, HRIDAYANK	B207		Hridayank
G-2	MODI, JAINIL	B208	College Admission Management System	Jainil
	SAHNI, JASLEEN	B209		Jasleen
	BAWASKER, ARYAN	B210		Aryan
	KAMBLE, RUSHI	B211		Rushi
	PAREKH, ADITYA	B213		Aditya
G-3	TOLIA, VEDANT	B214	Attendance Management System	Vedant
	THOMAS, JOEL	B215		Joel
	MAHESHWARI, AMAN	B216		Aman
	BAKSHI, JASJOT	B217		Jasjot
	PALIWAL, SHOBBIT	B218		Shobbhit
G-4	NANDI, ANKON	B219	Hotel Room Reservation System	Ankon
	SARAIYA, CHARVEE	B220		Charvee
	DHUMALE, SAHIL	B222		Sahil
	SHAH, HIRAK	B223		Hirak
	RAUT, TANMAY	B224		Tanmay
G-5	KAUSHAL, PRIYANSHU	B226	Shopping Mall Management System	Priyanshu
	NAYAK, SATVIK	B227		Satvik
	BANCHHOD, TANUSH	B228		Tanush
	TRIPATHI, SWASTI	B229		Swasti
	PATEL, BHAVYA	B230		Bhavya
G-6	THAKUR, SUMIT	B232	Online Course Registration System	Sumit
	RAWKA, TANISHK	B233		Tanishk
	KUMAR, PRAVEEN	B234		Praveen
	MANANI, HIREN	B235		Hiren
	DARAK, SIDDHESH	B236		Siddhesh


Subject Teacher

Department of Computer Science

G-7	INAMDAR, ARYAN	B237	Food Ordering System	A.
	TUTEJA, DEEPANSH	B238		Deepansh
	JAIN, DEVANSH	B239		Devansh
	PATIL, JAY	B240		Jay Patil
	BHATIA, SADGI	B241		Sadgi
G-8	KHANDELWAL, SPARSH	B242	Railway Reservation System	Spars
	JAIN, HARDIK	B243		Hardik
	AGRAWAL, TAPAN	B244		Tapan
	SHUKLA, LAXITA	B245		Laxita
	JAIN, NAITIK	B246		Naitik
G-9	DESAI, RAJAT	B247	E-Commerce Application	Rajat
	KHANDELWAL, ARIN	B248		Arin
	DEVARU, ADITHYA	B249		Aditya
	ARORA, ADVAIT	B250		Advait
	DUBEY, SANIDDHYA	B251		Sanidhya
G-10	GOLANI, SHIVAM	B252	Library Management System	Shivam
	WADHWANI, MITANSH	B253		Mitansh
	SINDHI, UMESH	B254		Umesh
	SINGH, RAHUL	B256		Rahul
	KANJARIYA, TEJ	B257		Tej
G-11	SAXENA, AYUSH	B258	Payroll Management System	Ayush Saxena
	PATIDAR, ADITYA	B259		Aditya
	KUMARI, SAROJ	B260		Saroj
	SINGH, SAURAV KUMAR	B261		Saurav
	JOSHI, ATHARVA	B265		Atharva
G-12	TAKKAR, MANAN	B266	Hospital Management System	Manan
	MANTRI, ADITYA	B267		Aditya
	CHOPRA, MUSKAN	B269		Muskan
	SINGH, SAHIL	B270		Sahil


Subject Teacher