Experiment -7

AIM: To prepare the Software Design Document(SDD) of the Online Course Reservation System

What is Software Design Document (SDD)?

A Software Design Document (SDD) outlines the architecture and detailed design of a software system. It acts as a reference point for developers, designers, project managers, QA testers, and other stakeholders throughout the software development lifecycle. The SDD promotes clarity, minimizes misunderstandings, and ensures all stakeholders share a common understanding of the system. It also serves as a tool for decision-making, documentation, and system evolution.

A good SDD is usually developed iteratively, incorporating feedback and evolving with the system. This collaborative process ensures all technical and non-technical participants are aligned with the system's goals and design.

1.1 PURPOSE

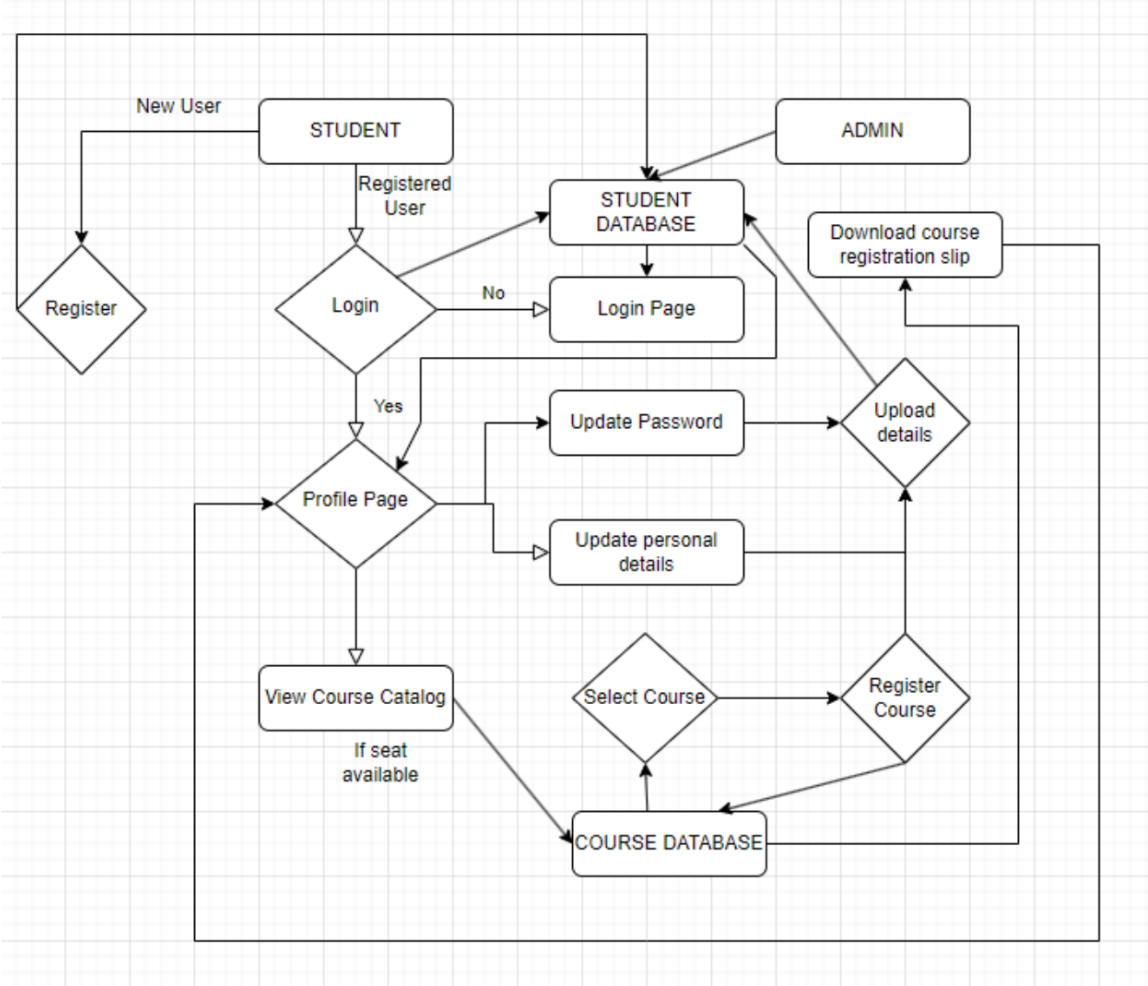
• The purpose of this project is to provide a user-friendly platform for reserving and managing online courses.
• This system aims to streamline the course reservation process for students and administrators.
• The system provides real-time course availability, enrollment management, and notifications.
• Students can explore available courses, view schedules, and reserve seats without visiting the institution physically.
• Instructors and administrators can manage course offerings, track reservations, and generate reports.

1.2 SCOPE

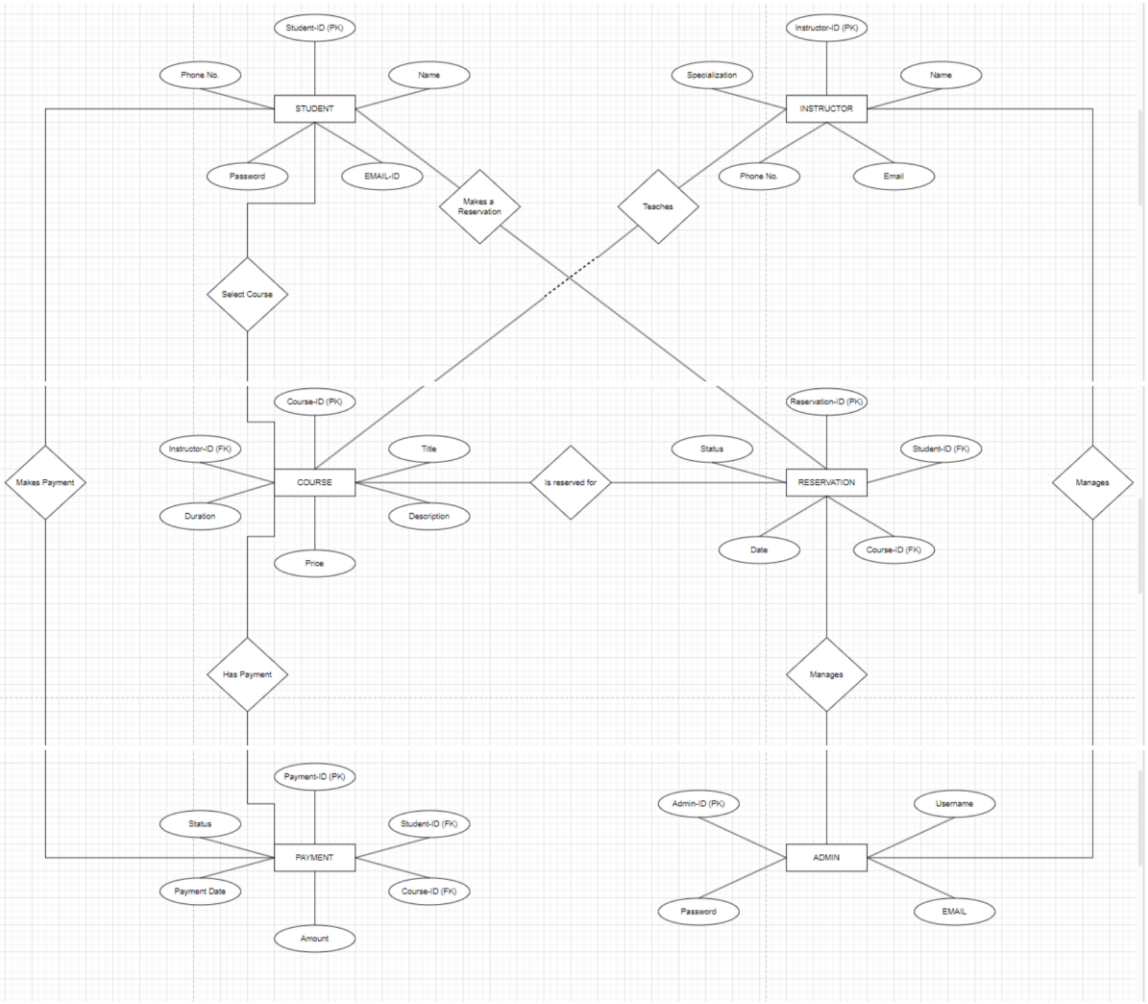
• This document covers the requirement specifications for the **Online Course Reservation System**.
• It does not provide references to unrelated academic systems such as examination management or grading platforms.
• All external interfaces, system dependencies, and user interactions are detailed in this document.

• The feasibility analysis aims to determine whether the Online Course Reservation System should proceed and, if so, its priority in the institution's IT roadmap.

CONTROL/DATA FLOW DIAGRAM:



ENTITY RELATIONSHIP DIAGRAM:



Entity Descriptions

Field Name	Data Type	Storage	Description	Constraints
Student_ID	Integer	4	Unique ID for each student	Primary Key, Not Null
Student_Name	Varchar(100)	-	Full name of the student	Not Null
Email	Varchar(100)	-	Student's email	Unique, Not Null
PhoneNumber	Varchar(15)	-	Student's contact number	Not Null
Course_ID	Integer	4	Unique ID for each course	Primary Key, Not Null
Course_Name	Varchar(255)	-	Title of the course	Not Null
Instructor_ID	Integer	4	ID of the course instructor	Foreign Key, References Instructor Table
Instructor_Name	Varchar(100)	-	Name of the instructor	Not Null
Schedule	Varchar(100)	-	Timing and days of the course	Not Null
Capacity	Integer	4	Maximum number of students allowed	Not Null
Reservation_ID	Integer	4	Unique ID for each reservation	Primary Key, Not Null

Course_ID	Integer	4	Course reserved	Foreign Key, References Course Table
Student_ID	Integer	4	Student who made the reservation	Foreign Key, References Student Table
Reservation_Date	Date	3	Date of course reservation	Not Null
Status	Varchar(20)	-	Reservation status (e.g., confirmed, waitlisted, cancelled)	Default = 'confirmed'
Field Name	**Data Type**	**Storage**	**Description**	**Constraints**
Student_ID	Integer	4	Unique ID for each student	Primary Key, Not Null