**SDLC Course Project List:**

**1. E-commerce Website Development**

* **Description**: Develop a small e-commerce website where users can browse products, add them to a cart, and make purchases.
* **SDLC Focus**: Requirements analysis (user stories for different functionalities), system and design modeling, front-end and back-end development, testing, and deployment.

**2. Inventory Management System**

* **Description**: Create a web-based inventory management application for a small business to manage its stock levels, orders, suppliers, and products.
* **SDLC Focus**: Requirement gathering, system design, and testing various features, including CRUD (Create, Read, Update, Delete) operations, and automated report generation.

**3. Social Media App Prototype**

* **Description**: Build a prototype of a social media platform where users can create profiles, post updates, comment, and interact.
* **SDLC Focus**: Focus on requirement elicitation for social features, UI/UX design, user interactions, and feedback testing.

**4. Library Management System**

* **Description**: Design and implement a system that handles book cataloging, borrowing, returning, and member management for a library.
* **SDLC Focus**: Requirements gathering and modeling, data design, security features for login, testing for database interactions.

**5. Online Food Delivery System**

* **Description**: Create a platform where users can browse restaurants, view menus, order food, and make payments.
* **SDLC Focus**: Requirements analysis for user roles (user, admin, delivery person), database design for menus and orders, testing and deployment.

**6. Hospital Management System**

* **Description**: Build a system to manage patients, doctors, appointments, and billing for a small clinic or hospital.
* **SDLC Focus**: Stakeholder interviews and requirements gathering, UI design for different user types, testing, and maintenance planning.

**7. Student Management System**

* **Description**: Develop a system to manage student records, course enrollment, attendance, and grading for an educational institution.
* **SDLC Focus**: Requirements analysis, design of database structure, testing for functionalities like data entry, and reporting.

**8. Chat Application with Real-Time Messaging**

* **Description**: Implement a basic chat application with real-time messaging and user authentication.
* **SDLC Focus**: Requirements elicitation for messaging features, user flow and UI design, performance testing, and maintenance.

**9. Weather Forecasting Web Application**

* **Description**: Build a web application that retrieves and displays weather data and forecasts for different locations.
* **SDLC Focus**: Requirement analysis, integration of third-party APIs, unit and integration testing, and UX design.

**10. Banking System Prototype**

* **Description**: Create a banking system with account management, transaction handling, and fund transfer capabilities.
* **SDLC Focus**: Detailed requirement elicitation for security, database modeling, extensive testing, and security analysis.

### **11. Task Management System**

* **Objective**: Create a web-based task management tool where users can create, assign, and track tasks.
* **Key SDLC Phases**:
  + **Requirements Gathering**: Identify user roles and features (task creation, assignments, deadlines).
  + **Design**: UI mockups and database schema.
  + **Development**: Implement backend (CRUD operations) and frontend.
  + **Testing**: Usability testing and unit tests.
  + **Deployment**: Deploy a simple live version.

**12. Learning Management System (LMS) Prototype**

* **Objective**: Build a prototype for a platform where instructors can upload materials, and students can track progress and submit assignments.
* **Key SDLC Phases**:
  + **Planning**: Define user needs and feature prioritization.
  + **Design**: Create workflows and UI mockups.
  + **Development**: Develop login, material upload, and tracking features.
  + **Testing**: Test workflows and assess scalability.
  + **Deployment**: Create a demo environment.

**13. Customer Relationship Management (CRM) System**

* **Objective**: Design a CRM system to manage customer information, interactions, and follow-ups.
* **Key SDLC Phases**:
  + **Requirements Analysis**: Define features like contact management, communication tracking, and report generation.
  + **System Design**: Database schema and interface wireframes.
  + **Development**: CRUD operations, search, and reporting features.
  + **Testing**: Perform load testing and quality checks.
  + **Maintenance Plan**: Outline a basic maintenance strategy.

**14. Online Examination System**

* **Objective**: Develop a system to create, schedule, and evaluate exams online.
* **Key SDLC Phases**:
  + **Requirements Gathering**: Identify exam creation, time limits, and user roles.
  + **System Design**: Mockups for exam interface and database design.
  + **Development**: Implement exam creation, timer, and scoring modules.
  + **Testing**: Conduct functionality tests and usability testing.
  + **Deployment**: Deploy for internal course demo purposes.

**15. Health Tracking Application**

* **Objective**: Design an app for users to track their health metrics (e.g., steps, sleep, calories).
* **Key SDLC Phases**:
  + **Requirements Gathering**: Identify target metrics and user needs.
  + **Design**: Wireframe the user interface and database schema.
  + **Development**: Implement data logging and visual feedback (charts).
  + **Testing**: Conduct mobile responsiveness testing.
  + **Deployment**: Launch a demo version.

**16. Expense Tracker Application**

* **Objective**: Develop an application where users can log and categorize expenses.
* **Key SDLC Phases**:
  + **Requirements Analysis**: Features for adding, viewing, and categorizing expenses.
  + **System Design**: Database design and UI sketches.
  + **Development**: Implement the expense tracking and report generation features.
  + **Testing**: Focus on accuracy and interface usability.
  + **Deployment**: Set up a test deployment for feedback.

**17. Event Management System**

* **Objective**: Create a platform for organizing and managing events, including RSVP and scheduling.
* **Key SDLC Phases**:
  + **Requirements Gathering**: Define event creation, registration, and management functions.
  + **Design**: UI mockups and database setup.
  + **Development**: Implement event scheduling, invitations, and participant tracking.
  + **Testing**: Conduct load testing.
  + **Maintenance**: Plan for updates and bug fixes.

**18. Personal Finance Management Tool**

* **Objective**: Build a personal finance tool to help users set budgets and track spending.
* **Key SDLC Phases**:
  + **Planning & Requirements**: Define user needs for budgeting, tracking, and visual summaries.
  + **Design**: Database schema and UI/UX design.
  + **Development**: Build budget tracking and graphing modules.
  + **Testing**: Test for data accuracy and security.
  + **Maintenance**: Outline a maintenance plan for future improvements.

**19. Community Forum System**

* **Objective**: Develop a forum where users can create discussions, post replies, and search topics.
* **Key SDLC Phases**:
  + **Requirements Elicitation**: Define user roles (admin, user) and core features (posting, commenting).
  + **System Design**: Design interface and database.
  + **Development**: Implement post, comment, and search functionalities.
  + **Testing**: Perform functionality and scalability tests.
  + **Deployment**: Create a basic live version for feedback.

**20. Inventory and Order Management System**

* **Objective**: Create a system to manage inventory, order processing, and tracking.
* **Key SDLC Phases**:
  + **Planning**: Define inventory tracking, orders, and reporting requirements.
  + **Design**: Mock up user interface and database structure.
  + **Development**: Implement inventory and order management modules.
  + **Testing**: Test for data accuracy and transaction processing.
  + **Maintenance**: Develop a post-launch support plan.