**Software Development Life cycle**

**State all the SDLC phases: explain each phase, its role in software development and its input & output**

**Analysis**:

Explanation: in this phase, start collect and understand the project requirements (stories) and its conditions from clients, whose will work in this phase should have high understood of business terms.

Role: in this phase the team meat with client and gathering requirements and its conditions and try to put those requirements in the form which can understood by developers.

Input: meeting with the clints, who will start explaining their requirements

Output: list of stories (requirements), its steps and conditions.

**Design:**

Explanation: in this phase we translate the stories as graphics which the user can see, and plane how they can take action on.

Role: architects and designers create the system's architecture, data models, user interface (UI) design, and overall structure.

Input: list of stories (requirements) and its steps and conditions.

Output: Expected site graphics

**Development:**

Explanation: in this phase, developers start code the requirements and its conditions, rather front end and backend develop.

Role: developers write code based on the design specifications.

Input: UX/UI design of project

Output: codes of whole project of all features and stories

**Testing:**

Explanation: in this phase, test the performance of site and ensures that the software works as expected and meets the requirements.

Role: testers execute various tests to identify issues or problems in the software.

Input: codes of site

Output: issues or errors in software

**Deployment:**

Explanation: in this phase, distribute the site to use in the real world, by select the domain of the site and hosting.

Role: select domain and hosting the software.

Input: code files of sites

Output: link of site

**Maintenance:**

Explanation: in this phase, make improvements to the site based on reports from user or tester after the site is published on the internet.

Role: defines user feedback, adds new features, and ensures the software remains secure and efficient.

Input: site issues , new features

Output: new version of site with improvements or repots to help user to improve the user experience