Answers

1. Planning

The planning stage is where I would define the scope of the project, identify the stakeholders, and develop a project plan. I would also conduct a feasibility study to assess the economic, technical, schedule, and operational feasibility of the project.

2. Analysis

The analysis stage is where I would gather requirements from the stakeholders and define the system's functional and non-functional requirements. I would also develop a data model and a process model for the system.

3. Design

The design stage is where I would develop the system's architecture, user interface, and database. I would also develop the system's programming and testing plans.

4. Implementation

The implementation stage is where I would build the system and deploy it to the production environment. I would also train the users on how to use the system.

5. Testing

The testing stage is where I would test the system to ensure that it meets the requirements and that it is free of defects. I would use a variety of testing methods, including unit testing, integration testing, system testing, and acceptance testing.

6. Maintenance

The maintenance stage is where I would fix defects, add new features, and improve the system's performance. I would also monitor the system's performance and make sure that it is meeting the needs of the stakeholders.

Here are some of the specific activities that I would perform in each stage of the SDLC:

Planning

* Define the scope of the project.
* Identify the stakeholders.
* Develop a project plan.
* Conduct a feasibility study.

Analysis

* Gather requirements from the stakeholders.
* Define the system's functional and non-functional requirements.
* Develop a data model.
* Develop a process model.

Design

* Develop the system's architecture.
* Develop the user interface.
* Develop the database.
* Develop the system's programming and testing plans.

Implementation

* Build the system.
* Deploy the system to the production environment.
* Train the users on how to use the system.

Testing

* Unit testing.
* Integration testing.
* System testing.
* Acceptance testing.

Maintenance

* Fix defects.
* Add new features.
* Improve the system's performance.
* Monitor the system's performance.