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**Task 2**

**Planning**

**Objectives:**  To plan the code for the system.

**Activities**:

Take overview of needs and requirements of the system.

Preparing for the code.

**Analysis**

**Objectives**: Identify the needs and requirements of the booking system. Understand what features are necessary, such as booking submission, status updates, viewing bookings, and generating statistics.

**Activities**:

Gather requirements from stakeholders or end users.

Define what information needs to be captured (e.g., customer details, booking details, costs).

Determine the necessary functionalities (e.g., booking approval, status updates, reporting).

**Design**

**Objectives**: Create a blueprint for the system based on the requirements gathered.

**Activities**:

Design the overall architecture of the system, including the structure of the BookingSystem class.

Define data structures (e.g., how bookings will be stored and accessed).

Create algorithms for core functionalities (e.g., calculating totals, updating statuses).

Design the user interface for interaction (e.g., command-line options).

**Implementation**

**Objectives**: Translate the design into code.

**Activities**:

Write the code for the BookingSystem class and its methods.

Implement the main control flow (e.g., handling user choices).

Ensure that all functionalities are correctly implemented (e.g., booking submission, status updates).

**Testing**

**Objectives**: Release the system to users.

**Activities**:

Prepare the system for deployment (e.g., packaging the code).

Deploy the system to the intended environment (e.g., setting up a deployment package).

Provide documentation and training to users if necessary.

**Maintenance**

**Objectives**: Ensure the system continues to function correctly and make improvements as needed.

**Activities**:

Monitor the system for any issues or bugs.

Provide updates and fixes as necessary (e.g., fixing bugs found in production).

Implement enhancements or new features based on user feedback or changing requirements.