Practice Questions Lecture 4: Modular Design and SOLID Principles

1. **Modularization Techniques**
    a) Discuss two modularisation techniques employed in the Hostel Booking System for organising code into manageable and reusable modules.
    b) Provide code snippets or examples illustrating how these techniques enhance code modularity.
2. **SOLID Principles for Code Organization**
    a) Choose one of the SOLID principles (e.g., Single Responsibility Principle) and explain how it is applied in the architecture of the Hostel Booking System.
    b) Provide specific instances in the codebase where adherence to this SOLID principle enhances maintainability and flexibility.
3. **Functional Decomposition**
    a) Explain how functional decomposition is used in the Hostel Booking System to organise code around specific functionalities.
    b) Provide an example of a function or module demonstrating functional decomposition and discuss its advantages to code organisation.
4. **Architecture**
    a) Describe the overall architecture of the Hostel Booking System, highlighting the key components and their interactions.
    b) Discuss how the chosen architecture contributes to scalability and ease of maintenance in the application.