CS 331 (Software Engineering Lab)
Assignment 4 (Total Marks = 40)

Some instructions:

1. Write the answers briefly, use bullet points to clearly articulate your answers.
2. You can use diagrams in relevant places for clearly showing different components of your software.
3. Unnecessarily long and confusing answers must be avoided.

Software architecture styles define the overall structure of a software system by providing a blueprint for how components interact.

I. Choose an appropriate software architecture style (like *Layered Architecture, Microservices Architecture, Monolithic Architecture, Service-Oriented Architecture*, etc.) for your software engineering project. Also,
   A. Justify how your software architecture falls in that specific category by defining the granularity of the software components.
   B. Justify why this software architecture style is the best choice for your software engineering project considering scalability, maintainability, performance, and other requirements. **[Marks = 5+5=10]**

II. Mention the components present in your software engineering project (i.e. application components). **[Marks = 5]**

III. How are you planning to host these application components? **[Marks = 5]**
   - **Host site :** Clearly state the target server/cloud where you are planning to deploy each component
   - **Deployment strategy :** Describe in steps the deployment policies adopted including server configuration, configuring the APIs to initiate communication between these components.
   - **Security (Optional, based on project type) :** If you are going to apply any security mechanism to some of the components, give brief details of the security measures (like firewalls, encryption) that you are going to undertake.

IV. How can your end users access these services (i.e. application components)? Draw a pictorial representation showing the interaction between the user and the system (front end), interaction between different components including the backend. **[Marks = 5+5=10]**

V. Implement these application components (at least two) and show their interactions. **[Marks = 10]**