**CSE303 - Software Design & Architecture**

**Bloom Taxonomy Level: <*Understanding*>**

**Section:** A

**Project Name:** *SmartWebCraft*

**Group Members:**

|  |  |
| --- | --- |
| **Name** | **ID** |
| Aoun Haider | FA21-BSE-133 |
| Muhammad Umer Atiq | FA21-BSE-007 |
| Muhammad Talha Shafiq | FA21-BSE-152 |
| Affan Ahmad | FA21-BSE-127 |
| Hussain Iqbal | FA21-BSE-109 |
| Muhammad Asad | FA21-BSE-052 |

**Note:** Each members’ work has been mentioned in [FA21-BSE-XYZ] Format before the start of work.

[FA21-BSE-133]

**Question no. 01**

**What will be the structure of the software built using MVC?**

1. **Model**

The system will

* handle the storage and manipulation of data.
* include classes and methods for handling user inputs, managing components and their properties, and interfacing with database.
* include components responsible for providing suggestions and optimizing system resources.
* implement log mechanism to track changes, errors, and system usage for data integrity.
* minimize resource usage and system sleep states.
* handle the installation, updates and integration of third-party plugins and extensions.
* handle user login, registration, and session management securely.

1. **View**

The system will

* display draggable and customizable UI components within the development canvas.
* provide tools for color selection, typography, and layout adjustments.
* collect user feedback on components, features, and overall user experience.
* include drag and drop interface where programmers can visually design their web application.
* ensure the platform is accessible to all users including those with disabilities.
* embed learning resources and guides for new users.
* display a gallery of design templates and themes for quick project initiation.
* offer real-time previews of responsive design across various screen sizes.
* support multiple languages and regional settings.
* facilitate the selection and customization of components using button, text fields, headers, etc.
* generate views dynamically based on the model’s data, ensuring responsiveness and user friendliness.
* display suggestions based on the model’s internal behavior.

1. **Controller**

The system will

* act as intermediary b/w the model and the view.
* handle user interactions with the drag and drop interface.
* receive input from the view and communicate with the model to update the application state accordingly.
* interact with AI trained model indirectly to get the suggestion based on the selected component.
* keep track of the current state of the development environment and user projects.
* monitor the performance of the platform and optimize for speed and efficiency.
* implement security mechanisms to protect user data and prevent unauthorized access.

[FA21-BSE-152]