

The View component: defines and manages how the data is presented to the user.

- Input: user interactions, views, system state.
- Output: an interface displaying data and current state of the system to the user and allowing the user to interact with the system.
- Functions:
 - Renders UI (user interface) views and elements (text, images, boxes, tables, buttons, input boxes, and so on).
 - Re-renders (update) UI when state changes.
 - Sends user events (button presses, mouse clicks, selections, form submissions, and so on) to the Controller.
 - Sends user-inputted data (login credentials, information, form data, and so on) to Controller.
 - Allow intuitive interactions (menu opening, sliding sliders, checking boxes, and so on) with the UI.

The Controller component: manages user interactions and passes these interactions to the View and the Model.

- Input: User events and user-inputted data sent from the View component, information which is got from database, location and routes got by calling geospatial API.
- Output: State update request in accordance with events and data changes, information to display in the View component.
- Functions:
 - Receive user input (events and data).
 - Send request to the Model component (get or modify information from database based on the user input through calling functions of database).
 - Call to the geospatial API in order to get routes and location.
 - Choose information from the database or external API to display for certain views, then send them to the View component.

The Model component: manages the system data and associated operations on that data.

- Input: State update requests from controller and state requests from view.
- Output: Change notification to view when state changes, the model of our database.

- Functions:
 - Responsible for storing, updating, loading all data.
 - Provide methods to request and modify data.
 - Contains properties of all data that is required for the View.
 - Enforce data type constraints.
 - Handles all validation and errors, and returns these to the Controller.
 - Notify View update when state(database) changes.