**Model-View-Controller (MVC)**

The **Model-View-Controller (MVC)** framework is an architectural pattern that separates an application into three main logical components: the **model**, the view, and the controller.

The Model component corresponds to all the data-related logic that the user works with. It can add or retrieve data from the database. The model interacts with the database and gives the required data back to the controller.

The View component is used for all the UI logic of the application. It generates a user interface for the user. For example, the Customer view will include all the UI components such as text boxes, dropdowns, etc. that the final user interacts with.

The controller is the component that enables the interconnection between the views and the model so it acts as an intermediary.  It process all the business logic and incoming requests, manipulate data using the Model component and interact with the Views to render the final output.

MVC is one of the most frequently used industry-standard web development framework to create scalable and extensible projects. It is also used for designing mobile apps.

**Features of MVC :**

* It provides a clear separation of **business logic, Ul logic, and input logic.**
* It offers full control over your HTML and URLs which makes it easy to design web application architecture.

REST (representational state transfer)

**R**epresentational **S**tate **T**ransfer (REST) is an architectural style that defines a set of constraints to be used for creating web services. **REST API** is a way of accessing web services in a simple and flexible way without having any processing.

REST technology is generally preferred to the more robust Simple Object Access Protocol (SOAP) technology because REST uses less bandwidth, simple and flexible making it more suitable for internet usage. It’s used to fetch or give some information from a web service. All communication done via REST API uses only HTTP request.

**Working:**A request is sent from client to server in the form of a web URL as HTTP GET or POST or PUT or DELETE request. After that, a response comes back from the server in the form of a resource which can be anything like HTML, XML, Image, or JSON. But now JSON is the most popular format being used in Web Services.

In **HTTP** there are five methods that are commonly used in a REST-based Architecture i.e., POST, GET, PUT, PATCH, and DELETE.

**GET:**The HTTP GET method is used to **read** (or retrieve) a representation of a resource.

**POST:** The POST verb is most often utilized to **create** new resources.

**PUT:**It is used for **updating** the capabilities.

**PATCH:**It is used to **modify** capabilities.

**DELETE:**It is used to **delete** a resource identified by a URI.

REST is a set of architectural constraints, not a protocol or a standard. API developers can implement REST in a variety of ways.

A REST API (also known as RESTful API) is an application programming interface (API or web API) that conforms to the constraints of REST architectural style and allows for interaction with RESTful web services.

When a client request is made via a RESTful API, it transfers a representation of the state of the resource to the requester or endpoint. This information, or representation, is delivered in one of several formats via HTTP: JSON (Javascript Object Notation), HTML, XLT, Python, PHP, or plain text.

An API is a set of definitions and protocols for building and integrating application software.