Electricity Billing System Architecture

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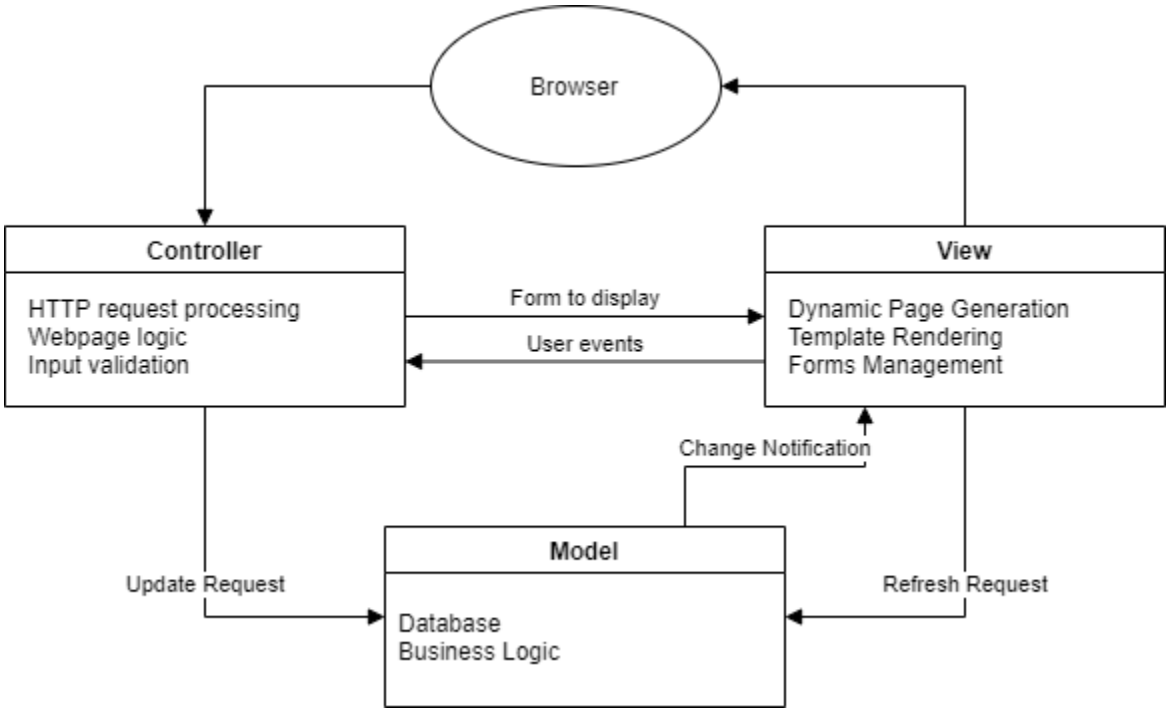

The electricity billing system will be constructed as a web application. The high level architecture model is as pictured above. The model sub-system defines the database tables as well as what operations are allowed on those models. The view subsystem will generate web pages based on model data, as well as create the forms necessary to change or update models. The controller subsystem handles HTTP requests, as well as any necessary logic for presenting a web page to the end user. The view subsystem will present the user with an interactable web page, and the actions of the user will be passed to the controller.

A Model-View-Controller (MVC) pattern has been selected as it is the most appropriate architectural pattern for our web application. The administrators, employees, and customers will each need their own view of the data, and changes to the data by any one of them will need to be propagated to all views. This disconnection between data and its representation means we can adjust views or add new ones all together while keeping our data clean and successfully limiting the operations that can be done on it.

The technology used to develop this project is Django, a python based web framework. This framework makes the assumption that a Model-View-Controller pattern is used, and working with this assumption means that developing the web application will require minimal extra work to define the subsystems and their connections. Usually when working in a Model-View-Controller pattern, significant extra work is required to abstract away these systems, but this is done for us by using the Django framework.