**Week – 11**

**Aim**: To explore different web frameworks like Angular JS, JQuery, Flask, Web2Py, Fuel PHP

**Description**:-

Angular JS:

HTML is great for declaring static documents, but it falters when we try to use it for declaring dynamic views in web-applications. AngularJS lets you extend HTML vocabulary for your application. The resulting environment is extraordinarily expressive, readable, and quick to develop. AngularJS is a toolset for building the framework most suited to your application development. It is fully extensible and works well with other libraries. Every feature can be modified or replaced to suit your unique development workflow and feature needs. Read on to find out how. Unlike other frameworks, there is no need to inherit from proprietary types in order to wrap the model in accessors methods. AngularJS models are plain old JavaScript objects. This makes your code easy to test, maintain, reuse, and again free from boilerplate.

JQuery:

jQuery is a fast, small, and feature-rich JavaScript library. It makes things like HTML document traversal and manipulation, event handling, animation, and Ajax much simpler with an easy-to-use API that works across a multitude of browsers. With a combination of versatility and extensibility, jQuery has changed the way that millions of people write JavaScript. The purpose of jQuery is to make it much easier to use JavaScript on your website. jQuery takes a lot of common tasks that require many lines of JavaScript code to accomplish, and wraps them into methods that you can call with a single line of code.jQuery also simplifies a lot of the complicated things from JavaScript, like AJAX calls and DOM manipulation.

The jQuery library contains the following features:

* HTML/DOM manipulation
* CSS manipulation
* HTML event methods
* Effects and animations
* AJAX
* Utilities

Flask:

Flask is a web application framework written in Python. Armin Ronacher, who leads an international group of Python enthusiasts named Pocco, develops it. Flask is based on Werkzeug WSGI toolkit and Jinja2 template engine. Both are Pocco projects. [Flask](http://flask.pocoo.org/) is a small and lightweight Python web framework that provides useful tools and features that make creating web applications in Python easier. It gives developers flexibility and is a more accessible framework for new developers since you can build a web application quickly using only a single Python file. Flask is also extensible and doesn’t force a particular directory structure or require complicated boilerplate code before getting started. Flask supports extensions that can add application features as if they were implemented in Flask itself. Extensions exist for object-relational mappers, form validation, upload handling, various open authentication technologies and several common framework related tools.

Web2Py:

Web2py is an [open-source](https://en.wikipedia.org/wiki/Open-source_software) [web application framework](https://en.wikipedia.org/wiki/Web_application_framework) written in the [Python](https://en.wikipedia.org/wiki/Python_(programming_language)) [programming language](https://en.wikipedia.org/wiki/Programming_language). Web2py allows [web developers](https://en.wikipedia.org/wiki/Web_developers) to program [dynamic web content](https://en.wikipedia.org/wiki/Dynamic_web_content) using [Python](https://en.wikipedia.org/wiki/Python_(programming_language)). Web2py is designed to help reduce tedious web development tasks, such as developing [web forms](https://en.wikipedia.org/wiki/Web_form) from scratch, although a web developer may build a [form](https://en.wikipedia.org/wiki/Form_(HTML)) from scratch if required.

Web2py was originally designed as a teaching tool with emphasis on ease of use and [deployment](https://en.wikipedia.org/wiki/Software_deployment). Therefore, it does not have any project-level configuration files. The design of web2py was inspired by the [Ruby on Rails](https://en.wikipedia.org/wiki/Ruby_on_Rails) and [Django](https://en.wikipedia.org/wiki/Django_(web_framework)) frameworks. Like these frameworks, web2py focuses on [rapid development](https://en.wikipedia.org/wiki/Rapid_application_development), favors [convention over configuration](https://en.wikipedia.org/wiki/Convention_over_configuration) approach and follows a [model–view–controller](https://en.wikipedia.org/wiki/Model%E2%80%93view%E2%80%93controller) (MVC) [architectural pattern](https://en.wikipedia.org/wiki/Architectural_pattern_(computer_science)). The lead developer of web2py is Massimo DiPierro, an associate professor of [Computer Science](https://en.wikipedia.org/wiki/Computer_Science) at [DePaul University](https://en.wikipedia.org/wiki/DePaul_University) in [Chicago](https://en.wikipedia.org/wiki/Chicago). As of 2011, the web2py homepage lists over 70 "main contributors".

FuelPHP:

FuelPHP is a MVC ([Model-View-Controller](http://en.wikipedia.org/wiki/Model%E2%80%93view%E2%80%93controller)) framework that was designed from the ground up to have full support for [HMVC](http://en.wikipedia.org/wiki/HMVC) as part of its architecture. But we didn't stop there, we also added [ViewModels](http://fuelphp.com/docs/general/viewmodels.html) (also known as [presentation models](http://en.wikipedia.org/wiki/Model_View_ViewModel)) into the mix which give you the option to add a powerful layer between the Controller and the View.

FuelPHP also supports a more router based approach where you might route directly to a closure which deals with the input uri, making the closure the controller and giving it control of further execution. FuelPHP is a simple, flexible, community driven PHP 5 web framework. It was born out of the frustrations people have with the current available frameworks and developed with support from a community of developers. FuelPHP is extremely portable, works on almost any server and prides itself on clean syntax.

Features:-

* FuelPHP is written in [PHP](https://en.wikipedia.org/wiki/PHP) 5.3 and requires at least 5.3.3 for V1.x.[[24]](https://en.wikipedia.org/wiki/FuelPHP#cite_note-IntroFuelPhpBlog-24)[[25]](https://en.wikipedia.org/wiki/FuelPHP#cite_note-FuelPhpRequirements-25)
* Cascading File System (inspired by [Kohana](http://www.kohanaframework.org/) [framework](https://en.wikipedia.org/wiki/Web_application_framework)): a directory structure partially based on [namespaces](https://en.wikipedia.org/wiki/Namespaces) used by [classes](https://en.wikipedia.org/wiki/Classes_(computer_science)).[[24]](https://en.wikipedia.org/wiki/FuelPHP#cite_note-IntroFuelPhpBlog-24)
* Flexibility: almost every component of the core framework can be extended or replaced.[[26]](https://en.wikipedia.org/wiki/FuelPHP#cite_note-26)
* [Modularity](https://en.wikipedia.org/wiki/Modularity_(programming)): applications can be divided up into modules.[[27]](https://en.wikipedia.org/wiki/FuelPHP#cite_note-27)
* [Extensibility](https://en.wikipedia.org/wiki/Extensibility): additional functionalities can be added to the framework through [packages](http://docs.fuelphp.com/general/packages.html) Features