SAMARTH SHANBHAG T2
THADOMAL SHAHANI TSEC ENGINEERING COLLEGE 111

Class assignment - 2

Q2. Write a short note on

a) Angular JS controller

→ They control the data of Angular JS applications.

→ They are regular JS objects.

→ The controller in Angular JS is a Javascript function that maintains the application data and behaviour using $ scope object.

Code:-
```
<div ng-app = "myApp" ng-controller = "myCtrl">
    First name : <input type = "text" ng-model = "firstname"><br>
    Last name : <input type = "text" ng-model = "lastname"><br>
    <br>
    Full name : {{firstName + " " + lastname}}
    </div>
    <script>
    var app = angular.module ('myApp', []);
    app.controller ('myCtrl', function ($scope) {
     $scope.firstname = "John";
     $scope.lastname = "Doe";
});
    </script>
```

→ Angular JS application is defined by ng-app = "myApp". The application runs inside the

→ "ng-controller = "myCtrl" is an Angular JS directive. It defines the controller

→ myCtrl is a Javascript function

→ After invoking the controller with a $ scope object, the controller creates two variables (firstname and lastname)

→ The ng-model directives bind the input fields to the controller properties (firstname and lastname)

b) Angular JS scope :- In Angular JS, scope is a JS object that acts as a context for variables and functions available to the templates. It serves as the glue between the controller (JS) and the view (HTML).

→ The scope contains data that can be bound to the view, and changes made to this data in the view or the controller are automatically reflected in both places due to Angular JS's two-way data binding

Code :-

```
<div ng-app = "myApp" ng-controller = "myCtrl">
<p> Name : {{name}} </p>
<button ng-click = "changeName()"> Change Name </button>
</div>
<script>
var app = angular.module('myApp', []);
app.controller('myCtrl', function($scope) {
$scope.name = "John Doe";

$scope.changeName = function() {
$scope.name = "Jane Doe";
};
});
</script>
```

Q4. Explain any 5 Angular JS directives with suitable example.

Solution:-

1) ng-app :- This directive initializes an Angular JS application. It designates the root element of the application and auto bootstraps it.

Code:-

```
<div ng-app="myApp">
</div>
<script>
var app = angular.module('myApp', []);
</script>
```

2) ng-init :- This directive initializes Angular JS application data. It is often used to set intial values of execute expressions when the page loads.

Code:-

```
<div ng-app="myApp" ng-init="name='John'">
<p>Hello, {{name}}!</p>
</div>
```

3) ng-model :- As mentioned earlier, this directive binds the value of HTML controls to application data, enabling two way data binding.

Code:

```
<div ng-app="myApp" ng-controller="myCtrl">
<input type="text" ng-model="name">
<p>Hello, {{name}}!</p>
</div>
<script>
var app = angular.module('myApp', []);
app.controller('myCtrl', function($scope) {
  $scope.name = "John";
});
</script>
```

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4) ng-repeat :- This directive iterates over a collection and generates HTML for each item in the collection, allowing dynamic rendering of lists

Code:-

```
<ul>
<li ng-repeat="item in items">{{item}}</li>
</ul>
<script>
var app = angular.module('myApp', []);
app.controller('myCtrl', function($scope){
$scope.items = ['Apple', 'Banana', 'Orange'];
});
</script>
```

5) ng-if :- This directive conditionally renders the HTML elements based on the evaluation of an expression. If the expression is truthy, the element is included in the DOM; otherwise it's removed.

Code:-

```
<div ng-app="myApp" ng-controller="myCtrl">
<p ng-if="showElement">This element is shown!</p>
</div>
<script>
var app = angular.module('myApp', []);
app.controller('myCtrl', function($scope){
  $scope.showElement = true;
});
</script>
```

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Q6. Write a flask code to implement GET and POST request.

lution:-

```
from flask import Flask, request, jsonify

app = Flask (__name__)
# GET request handler
@app.route ('/', methods = ['GET'])
def get_request_handler ():
    retur 'This is a get request'

# POST request handler

@app.route ('/', methods = ['POST'])
def post_request_handler ():
data = request.get_json () # Get JSON data from POST request body
# Process the received data eg:- Save to database
response_data = {'message': 'Data received Successfuly', 'data'
: data }
return jsonify (response_data)

if __name__ = "__main__':
    app.run (debug = True)
```

Q10. Write a Flask Script to display "This is TSEC TE Network"

olution:-

```
from flask import Flask
# Create a Flask application
app = Flask (__name__)
# Define a route for the root URL ("/")
@app.route ("/")
def hello ():
    return "This is TSEC TE Network"
if __name__ = "__main__":
app.run (debug = True)
```

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Q9 Write short notes on DRUPAL, JOOMLA, DJANGO

tion:- DRUPAL :-

→ It is a free, open source content management system to build and maintain websites, online directories, e-commerce stores, intranetes and other types of digital content

→ It is a popular and customizable content management framework. This makes it suitable to write both simple and complex applications.

→ It includes thousands of modules and themes to attract web audiences and build a community.

Key features :- 1) It is known for "What you see is what you get," or WYSIWYG, content creation and editing tools. Even non-technical users can update and publish content

2) It has the theme system to customize front-end.

3) It has drag-drop interface to build web-pages

4) Enables user to add media to the website

Other features :-

- Menu management
- URL management
- Simple syndicate
- log management
- Content scheduling
- SEO

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Layers in DRUPAL :- Control flow works on 5 main layers.

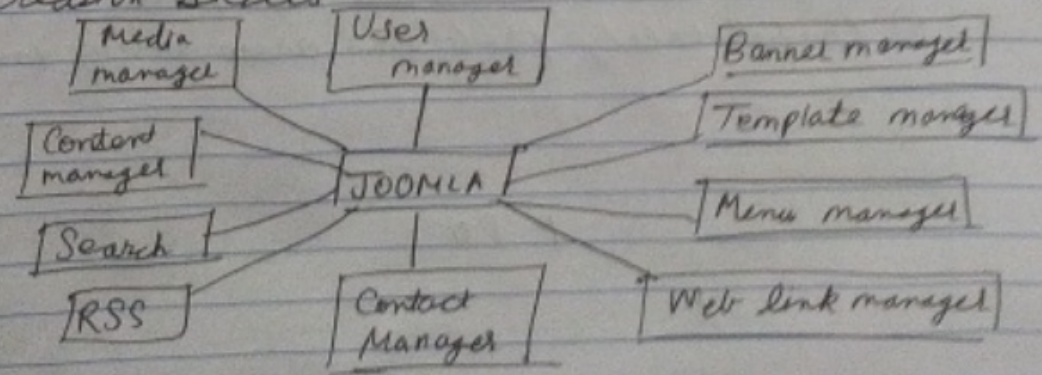
1) Bottom (Base) layer is data layer
2) Second layer → Modules
3) Third layer → Blocks and Menu's
4) Fourth layer → Permissions
5) Fifth layer → The skin (HTML/CSS)

Advantages :-

→ It is open source and extensible
→ Highly customizable tools available
→ It include Web development facilities.
→ Access the thousands of modules to get more user control.
→ Easy to install and highly accessible.
→ It is collaborative by design.

Joomla :-

→ It is an open source content management system which is used to build websites and online applications.
→ It is free and extensible which is seperated into front-end and back-end.
→ It is developed using PHP, OOP and MySQL
→ It is to be used by people who have basic website creation skills.



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- User manger - It allows managing User information.
- Content manger - It manages content using WYSIWYG.
- Banner manager - Used to add banners on the website
- Template manger - Manages the design to be used on the website
- Media manager - Easily uploading media
- Contants manager - Allows to add contracts and user information.
- Search - Searching appropriation information on the web is allowed.
- Menu manager - It allows creating Menu's easily.
- RSS - Real simple syndication

Advantages :- 1) Open source and available for free
2) Easy to install and use.
3) Build web site/app in less amount of time
4) Very easy to edit content.
5) Data safety is present.
6) Joomla is compatible with all browsers.

Disadvantages :- 1) Makes website heavy to load and run
2) It is NOT SEO friendly.
3) Development is difficult to handle.
4) Plugins and modules are not FREE
5) Compatibility problems arise during installing.

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DJANGO:-

→ It is a high level Python Web framework that encourages rapid development and clean pragmatic design.

→ It follows the 'Dont repeat yourself' (DRY) principle aiming to minimize redundancy.

→ It promotes code reusablity.

→ Provides built in features for handling common web development tasks. like URL routing.

→ It includes Object-relational-Mapping (ORM) system for interacting with database. It makes working with data models easy.

→ It comes with a rich set of tools and libraries, reducing the need of third-party redundancies.

→ It has a vibrant community and extensive documentation making it easy for developers to find support.