

1) Discuss Model-View-Controller(MVC) pattern.

Ans: MVC is short for Model, View, and Controller. MVC is a popular way of organizing your code. The big idea behind MVC is that each section of your code has a purpose, and those purposes are different. Some of your code holds the data of your app, some of your code makes your app look nice,

2) What is CodeIgniter?

Ans: CodeIgniter is an open source framework for web application. It is used to develop websites on PHP. It is loosely based on MVC pattern, and it is easy to use compare to other PHP framework.

3) Discuss the config files in codeigniter.

Ans: CodeIgniter has one primary config file, located at application/config/config.php. Opening the file using text editor I can see some config items are stored in an array called \$config.

4) How to set the default controller?

Ans: CodeIgniter can be told to load a default controller when a URI is not present, as will be the case when only your site root URL is requested. To specify a default controller, open your application/config/routes.php file and set this variable:

```
$route['default_controller'] = 'Blog';
```

5) How to configure database?

Ans: CodeIgniter has a config file that lets you store your database connection values (username, password, database name, etc.). The config file is located at application/config/database.php. You can also set database connection values for specific environments by placing database.php in the respective environment config folder.

6) How to set the base URL?

Using the URL helper, then echoing base_url() will give output.

```
$config['base_url'] = 'http://example.com/';
```

Above line should be added in config.php inside application/config folder.

7) How to use anchor in codeigniter?

Ans: Creates a standard HTML anchor link for my site URL:

```
echo anchor('news/local/123', 'My News', 'title="News title"');
```

8) Discuss benchmark class.

The Benchmarking Class is used to calculate the time between two points in my application. It's always ON, which means we do not need to load the library before using it. The timing between the two points that you specify in my application is very accurate because this library is loaded at the same time as CodeIgniter, and ended by the output class immediately before data is sent to the browser.

```
$this->benchmark->mark('start');  
// something happens here  
$this->benchmark->mark('end');  
echo $this->benchmark->elapsed_time('start', 'end');
```

https://www.packtpub.com/mapt/book/web_development/9781849510905/2/ch02lvl1sec19/benchmarking-class

9) Discuss input and security class.

Ans: The Security Class contains methods that help you create a secure application, processing input data for security.

First load helper file `$this->load->helper('security');`

```
$this->security->xss_clean();
```

```
$this->security->sanitize_filename();
```

```
$filename = $this->security->sanitize_filename($this->input->post('filename'));
```

We can enable csrf protection by opening your application/config/config.php file and setting this:

```
$config['csrf_protection'] = TRUE;
```

10) How to retrieve get, post, cookie or server data in CI?

Ans:

```
$this->input->post('some_field');
```

```
$this->input->post('some_field', TRUE);
```

```
$this->input->get('some_field', TRUE);
```

```
$this->input->get_post('some_field', TRUE);
```

```
$this->input->cookie('some_field', TRUE);
```

```
$this->input->server('some_field', TRUE);
```

11) Discuss the email class. How to set from, to, cc, bcc, subject and message? How to send email?

Ans: `$this->email->from('you@example.com', 'Your Name');`

```
$this->email->to('someone@example.com');
```

```
$this->email->cc('another@person.com');
```

```
$this->email->bcc('theboss@example.com');
```

```
$this->email->subject('Email Test');
```

```
$this->email->message('This is a simple test we wrote for the email class.');
```

Sending an email is

```
$this->email->send();
```

12) Discuss the session class.

```
$this->load->library('session');
```

Ans: A CodeIgniter session is simply an array containing the following data:

1. The user's unique Session ID (this is a randomly-generated number, which is hashed with SHA1 for portability, and is regenerated every five minutes)
2. The user's IP address
3. The user's User Agent string
4. The "last activity" timestamp

13) How to add session data and retrieve session data.

Ans: `$data = array(`

```
'username' => 'Rahim',
```

```
'email' => 'rahim@gmail.com',
```

```
'logged_in' => TRUE
```

```
);
```

```
$this->session->set_userdata($data);
```

Retrieve Userdata

```
$username = $this->session->userdata('username');
```

14) How to unset and destroy session data.

Ans: Removing a single session item

```
$this->session->unset_userdata('username');
```

Removing multiple session items

```
$items = array('username' => '', 'email' => '');  
$this->session->unset_userdata($items);
```

Destroying a session

```
$this->session->sess_destroy();
```

15) How to load the form validation library? List the form validation rules.

```
Ans: $this->load->library('form_validation');  
$this->form_validation->set_rules('field_name', 'human_name', 'rules');
```

The following rules are readily available for use:

- required
- matches[field_name]
- min_length[x]
- max_length[x]
- exact_length[x]
- alpha
- alpha_numeric
- alpha_dash
- numeric
- integer
- is_natural
- is_natural_no_zero
- valid_email
- valid_emails
- valid_ip
- valid_base64

16) How to load a view, model, database, library and helper files in codeigniter?

```
Ans: $this->load->library('library_name');  
$this->load->model('model_name');  
$this->load->database();  
$this->load->helper('helper_name');
```

17) How to pass variable data from controller to a view file in codeigniter?

```
Ans: $data['title'] = "My Web Page";  
$data['content'] = "<h1>My Web Page Content</h1>";  
$this->load->view('view_name', $data);
```

18) Which configuration file is used to autoload resources?

Ans: To autoload resources, open the application/config/autoload.php file and add the item you want loaded to the autoload array.

The following items can be loaded automatically:

Classes found in the libraries/ directory
Helper files found in the helpers/ directory
Custom config files found in the config/ directory
Language files found in the system/language/ directory
Models found in the models/ folder

19) Discuss the php closing tag in codeigniter.

Ans: PHP closing tag `?>` is optional to the PHP parser. Any whitespace after the PHP closing tag can result in PHP errors, warnings, or even blank pages. For this reason, all PHP files should omit the closing PHP tag, and instead use a comment block to display relevant details for the file location.

20) Discuss class, method and variable naming rules in codeigniter.

Ans: Class and Method Naming

INCORRECT:

```
class superclass
class SuperClass
```

CORRECT:

```
class Super_class
```

```
class Super_class {
```

```
    function __construct()
    {
```

```
    }
```

```
}
```

Variable Names

INCORRECT:

```
$j = 'foo';           // single letter variables should only be used in for() loops
$str                 // contains uppercase letters
$bufferedText        // uses CamelCasing, and could be shortened without losing semantic
meaning
$groupid              // multiple words, needs underscore separator
$name_of_last_city_used // too long
```

CORRECT:

```
for ($j = 0; $j < 10; $j++)
$str
$buffer
$group_id
$last_city
```

<https://www.codeigniter.com/userguide2/general/styleguide.html>

21) Discuss the codeigniter URI.

Ans: CodeIgniter favors URI segments to map URLs to Controller files for one simple reason. Using other methods—such as building query strings—is not search engine friendly and also creates some security issues.

URIs are more user-friendly

www.example.com/index.php/product/page/1

Query String

www.example.com/?c=product&m=page

22) What is the function of helper files? From where you can load helper files? How to load helper files?

Ans: Helper files are a collection of functions in a particular group. For example, CodeIgniter has a URL helper, which lets you easily print your website URL or the current URL, build links, and a few other functions too. Helpers can be used within Models, Controllers, and View files. Helpers are not written in an object oriented format in the way that Controllers and Models are, they are simply a collection of procedural functions.

Example:

```
$this->load->helper('form');
```

23) Discuss set_value() and form_error() function.

Ans: Re-populating field values

```
value="<?php echo set_value('name'); ?>"
```

Showing individual errors

```
<?php echo form_error('name'); ?>
```

24) How to load database library? How to perform database query?

Ans:

```
$this->load->database();
```

```
$this->db->query();
```

25) How to show database query result?

Ans:

```
foreach($query->result() as $row)
```

```
{  
    echo $row->username;  
    echo $row->email;  
}
```

Or

```
foreach($query->result_array() as $row)  
{  
    echo $row['username'];  
    echo $row['email'];  
}
```

26) How to see how many records returned from a database query? How to free result?

```
echo $query->num_rows();
```

```
$query->free_result();
```

27) Discuss active record in codeigniter:

Ans: The Active Record in CodeIgniter is quite different to the AR you may find in Rails or other frameworks. The way that Active Record in CodeIgniter works is that you build up your queries using different functions. For simple queries, you might only need to use one or two functions, but for some you may need to use more—for example, if you have to look for certain conditionals, such as where a username and password are the same.

28) How to show all the record in a table?

```
$this->db->get('table_name');
```

29) How to put where clause in a query?

```
$this->db->where('id', $id);
```

30) How to select fields in a query?

```
$this->db->select('name, username, email');
```

```
$query = $this->db->get('table_name');
```

31) How to select from in a query?

```
$this->db->from('table_name');
```

```
$query = $this->db->get();
```

32) How to use group by and order by?

```
$this->db->order_by("title", "desc");
```

33) How to use limit.

```
$this->db->limit(10);
```

34) How to update data?

```
$data = array(  
    'title' => $title,
```

```

        'name' => $name,
        'date' => $date
    );

$this->db->where('id', $id);
$this->db->update('mytable', $data);

```

35) How to delete record?

```

$this->db->where('id', $id);
$this->db->delete('mytable');

```

36) How to delete all the record in a table?

```

$this->db->empty_table('mytable');
Or
$this->db->truncate('mytable')

```

37) Explain how you can enable CSRF (Cross Site Request Forgery) in CodeIgniter?

Ans: We can activate CSRF (Cross Site Request Forgery) protection in CodeIgniter by operating your application/config/config.php file and setting it to

```
$config['csrf_protection'] = TRUE;
```

If you avail the form helper, the form_open() function will insert a hidden csrf field in your forms automatically

38) Explain what are hooks in CodeIgniter?

CodeIgniter's hooks feature provides a way to change the inner working of the framework without hacking the core files. In other word, hooks allow you to execute a script with a particular path within the CodeIgniter. Usually, it is defined in application/config/hooks.php file.

39) Explain how you will load or add a model in CodeIgniter?

Within your controller functions, models will typically be loaded; you will use the function

```
$this->load->model('Model_Name');
```

40) Explain what helpers in CodeIgniter are and how you can load a helper file?

In CodeIgniter, helpers are group of function in a particular category that assist you to perform specific functions. In CodeIgniter, you will find many helpers like URL helpers- helping in creating links, Text helpers- perform various text formatting routines, Cookies- helpers set and read cookies. You can load helper file by using command

```
$this->load->helper('name');
```

41) Explain routing in CodeIgniter?

In CodeIgniter, the way PHP files served is different rather than accessing it directly from the browser. This process is called routing. Routing in CodeIgniter gives you freedom to customize the default URL pattern to use our own URL pattern according to the requirement. So, whenever there is a request made and matches our URL pattern it will automatically direct to the specified controller and function.

42) Why is there a need to configure the URL routes?

Changing the URL routes has some benefits like

- From SEO point of view, to make URL SEO friendly and get more user visits
- Hide some URL element such as a function name, controller name, etc. from the users for security reasons
- Provide different functionality to particular parts of a system

43) Mention what are the security parameter for XSS in CodeIgniter?

CodeIgniter has got a cross-site scripting hack prevention filter. This filter either runs automatically or you can run it as per item basis, to filter all POST and COOKIE data that come across. The XSS filter will target the commonly used methods to trigger JavaScript or other types of code that attempt to hijack cookies or other

malicious activity. If it detects any suspicious thing or anything disallowed is encountered, it will convert the data to character entities.

44) Explain how you can link images/CSS/JavaScript from a view in codeigniter?

In HTML, there is no Codeigniter way, as such it is a PHP server side framework. Just use an absolute path to your resources to link images/CSS/JavaScript from a view in CodeIgniter

/css/styles.css

/js/query.php

/img/news/566.gpg

45) What is the purpose of Flash data?

Flash data is very useful, and is usually used for informational messages such as "You have been logged out" or "Removed user account" .

46) What are the functions of strip_image_tags and encode_php_tags prepping rules?

The function strip_image_tags will remove image tags, leaving the RAW image URL.

47) What are the functions of num_rows() and num_fields()?

Num_rows() return a specific row by passing the row number as a digit in the first parameter.

Num_fields() return the number of fields returned by our query.

48) What is the purpose of active record caching?

Using active record caching, we can prevent the reset and reuse queries easily.

49) What is a library?

A CodeIgniter library is simply a class file that abstracts functionality into easy-to-use functions that take much of the strain off the developer.