

**PES UNIVERSITY**  
**AUGUST – DECEMBER 2022 SEMESTER 5**

**SOFTWARE ENGINEERING LAB TASKS**

**Professor-in-charge: Dr. Jayashree R**

**Teaching Assistant: Aanchal Narendran (Sem VII)**

**We hope at this point in your semester you have achieved considerable progress in your Software Engineering Project. All of the tasks in this lab manual are geared towards improving and testing your project prior to your submissions.**

| <b>Name</b>             | <b>SRN</b>           |
|-------------------------|----------------------|
| <b>Siddarth M.P</b>     | <b>PES1UG20CS423</b> |
| <b>PavanKumar Hegde</b> | <b>PES1UG20CS823</b> |
| <b>Siddharth M</b>      | <b>PES1UG20CS425</b> |
| <b>Shuchith B U</b>     | <b>PES1UG20CS421</b> |
| <b>Shreyansh</b>        | <b>PES1UG20CS404</b> |

**Problem Statement – 1: Unit Testing**

A unit is the smallest block of code that functions individually. The first level of testing is Unit testing and this problem statement is geared towards the same.

- Discuss with your teammates and demarcate units in your code base
  - Note: discuss why the code snippet you have chosen can be classified as a unit
- Develop test cases for both valid and invalid data
- Ideate how you could further modularize larger blocks of code into compact units with your teammates

**Unit Testing –**

i) Checking for Correct/Incorrect Login of the User/Non-User

```
class LoginTest extends \PHP\unit\testcase{
    function checkemail($str) {
return
(!preg_match("/^([a-z0-9\+\_\-]+)(\.[a-z0-9\+\_\-]+)*@([a-z0-9\+\_\-]+\.)+[a-z]{2,6}$/i", $str)) ? FALSE : TRUE;
    }

    if(!checkemail("janson@gmail")){
        echo "Invalid email address.";
    }

else{
echo "Valid email address.";
}

function checkpassword($_POST) {
if(!empty($_POST["password"]) && ($_POST["password"] ==
$_POST["cpassword"])) {
$password = test_input($_POST["password"]);
$cpassword = test_input($_POST["cpassword"]); if
(strlen($_POST["password"]) <= '8') {
```

```

$passwordErr = "Your Password Must Contain At Least 8
Characters
!";
}
elseif(!preg_match("#[0-9]+#", $password)) {
$passwordErr = "Your Password Must Contain At Least 1 Number!";
}
elseif(!preg_match("#[A-Z]+#", $password)) {
$passwordErr = "Your Password Must Contain At Least 1 Capital
Letter!";
}
elseif(!preg_match("#[a-z]+#", $password)) {
$passwordErr = "Your Password Must Contain At Least 1 Lowercase
Letter!";
} else {
$passwordErr = "Please Check You've Entered Or Confirmed Your
Password!";
}
}
}
}

public function testlogin(){
$login = new Ecommerce\Login;
$result = $login->login('janson@gmail','123456789');

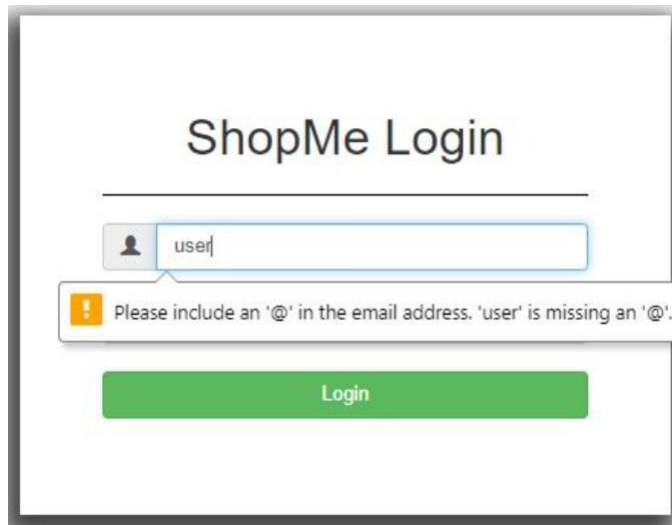
$this->assertEquals(TRUE,$result)
}
}

```

## **OUTPUT :**

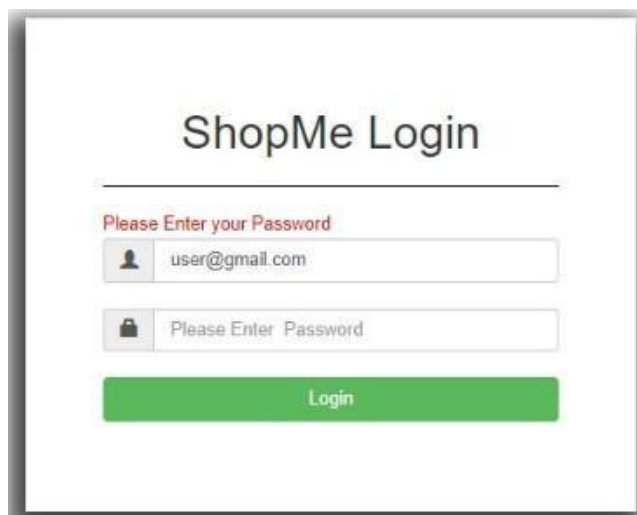
***Login / Sign-Up page created for the website :***

***Making Sure that user has entered Valid E-mail Id***



The image shows a web form titled "ShopMe Login". It has a single input field with a user icon on the left and the text "user|" inside. Below the input field, there is a yellow warning icon and a message: "Please include an '@' in the email address. 'user' is missing an '@'." At the bottom of the form is a green button labeled "Login".


***Checking for other possible test cases which may include Logging In of user without entering the password :***






The image shows a web form titled "ShopMe Login". It has two input fields. The first field has a user icon on the left and the text "user@gmail.com" inside. Above this field is the text "Please Enter your Password" in red. The second field has a lock icon on the left and the text "Please Enter Password" inside. At the bottom of the form is a green button labeled "Login".

***Making sure that Entered Mail-Id is valid and exists before Logging-In / Sign Up , by checking with proper Mail-Id Syntax , that needs to be followed mandatorily :***


## ShopMe Login

 user.com@gmail

  Please match the requested format.




## ShopMe Login


 user@.com


  "." is used at a wrong position in '.com'.



## ShopMe Login

 user@

 Please enter a part following '@'. 'user@' is incomplete.



ii) Testing User Sign Up with correct details of the user

```

class SignUpTest extends \PHP\unit\testcase{
    function checksignup($_POST){
        require('config.php');
        // If the values are posted, insert them into the database. if
        (isset($_POST['username']) && isset($_POST['password']))){
            $username = $_POST['username'];
            $email = $_POST['email'];
            $password = $_POST['password'];
            $cpassword = $_POST['confirmpassword'];
            $sqlquery = "SELECT 1 FROM register WHERE email = '$email'";
            $selectresult = mysql_query($sqlquery);
            if(mysql_num_rows($selectresult)>0)
            {
                $msg = 'email already exists';
            }
            elseif($password != $cpassword){
                $msg = "passwords doesn't match";
            }
            else{
                $query = "INSERT INTO `register` (username,
                password,confirmpassword, email) VALUES ('$username', '$password', '$cpassword',
                '$email')";
                $result = mysql_query($query); if($result){
                    $msg = "User Created Successfully.";
                }
            }
        }
    }
}

```

**OUTPUT:**

***Entering correct credentials for admin registration:***

### **Successful Sign-Up of admin :**

Click [here](#) to login.

First Name

Last Name

Email

Password

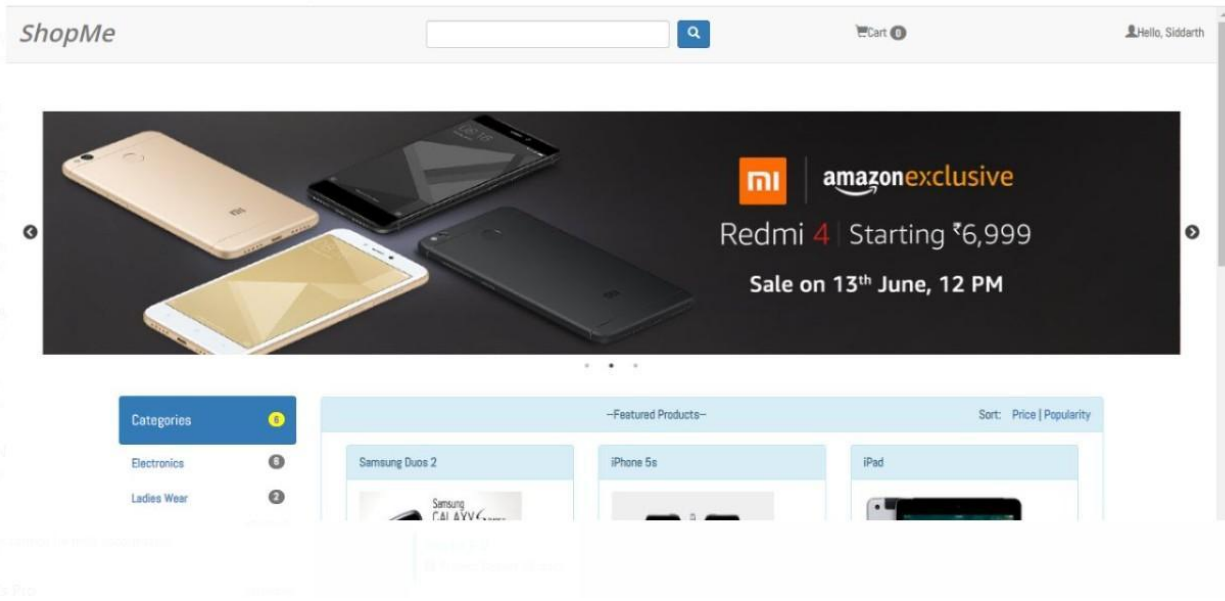
Mobile

Address #1

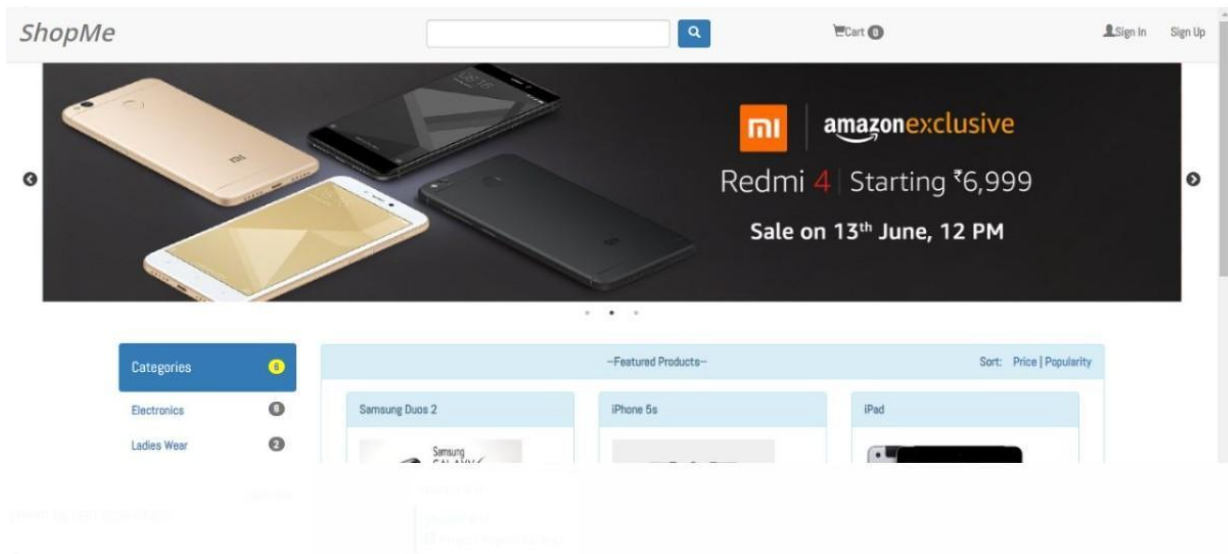
Address #2

[Signup](#)

### ***Redirecting user to Home Page upon successful Login :***



***Asking user to Login/Sign-up again if he/she has Logged out :***





### iii) Testing if the transaction is success or not.

```
class PaymentTest extends \PHP\unit\testcase{

function checkreference($_SERVER){
//check if request was made with the right data
if(!$_SERVER['REQUEST_METHOD'] == 'POST' || !isset($_POST['reference']))){
    die("Transaction reference not found");
}
//set reference to a variable @reference
$reference = $_POST['reference'];

//The parameter after verify/ is the transaction reference to be verified
$url = 'https://api.paystack.co/transaction/verify/'.$reference;
//open connection
$ch = curl_init();
//set request parameters
curl_setopt($ch, CURLOPT_URL, $url);
curl_setopt($ch, CURLOPT_RETURNTRANSFER, 1);
    curl_setopt($ch, CURLOPT_HTTPHEADER, ['Authorization: Bearer
secret_key']);

//send request
$request = curl_exec($ch);
//close connection
    curl_close($ch);
//declare an array that will contain the result
$result = array();

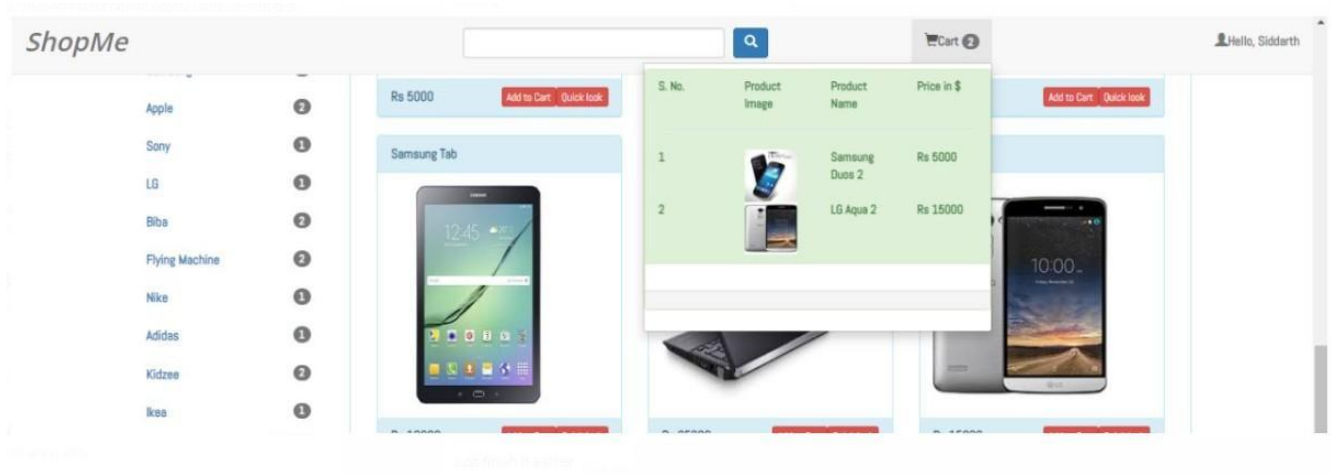
if($request){
$result = json_decode($request, true);
}

if (array_key_exists('data', $result) && array_key_exists('status',
$result['data']) && ($result['data']['status'] === 'success')) {
    echo "success";
//Perform necessary action
}else{
echo "Transaction was unsuccessful";
}







}
}
```

## **OUTPUT :**

***Consider that user has ordered/selected some set of products to his cart :***



***User can increase or decrease the quantity of the selected product before proceeding to checkout :***

| Cart Checkout   |   |                |               |          |              |
|---|---|----------------|---------------|----------|--------------|
| Action  | Product Image   | Product Name   | Product Price | Quantity | Price in Rs. |
|   |  | Samsung Duos 2 | 5000          | 1        | 5000         |
|   |  | LG Aque 2      | 15000         | 1        | 15000        |
| Total:  |   |                |               |          | \$20000      |

Checkout

***Upon successfully completing the Transaction by making the payment User will be given his transaction Id , so that any failure occurred during payment process can be enquired :***

Getting Started www.facebook.com Avataram Full Lengt... www.facebook.com Facebook www.facebook.com (1) Pavan Kumar Pavan Kumar Prime Video

ShoMe

## Thank you!

Hello Siddarth, your payment is successful.  
Your Transaction ID is 1400363352  
You can continue with your shopping.

Back to store