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## ***Assignment 1***

Module: ISIT307 Web Server Programming

Tutorial Group: T304

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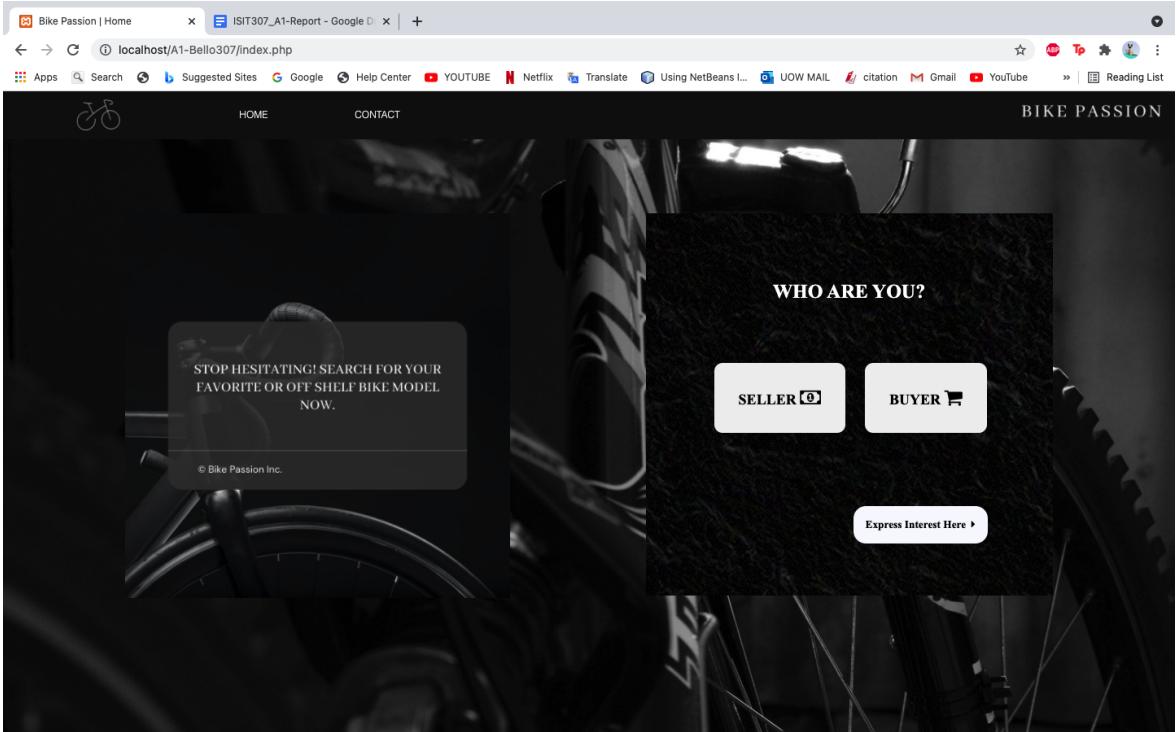
# **LIST OF FILES**

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- Bike Selling Page: seller.php
- Validating bike selling & confirmation page: sellervalidation.php
  - Product Listing: listing.php
- Search product by serial number: searching.php
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## Home page



This is the home page of Bike Passion. There is a top navigation bar which can direct users to the specific page when they click on the related button. Two squared-containers below: left and right; the left container is an image slideshow created for design purpose while the right container is designed for users to choose their own identity.

### index.php

```
<!--1st container for UI design-->
<div class="container">
    
    
    
    
</div>
```

Left container: carousel() in JavaScript is written to change the image for every 4 seconds. Image's width had been set to 105% for alignment purposes.

```
<script>
//slideshow for container 1
var myIndex = 0;
carousel();

function carousel()
{
    var i;
    var x = document.getElementsByClassName("mySlides");
    for (i = 0; i < x.length; i++)
    {
        x[i].style.display = "none";
    }
    myIndex++;

    if (myIndex > x.length)
    {
        myIndex = 1
    }
    x[myIndex-1].style.display = "block";
    setTimeout(carousel, 4000); // Change image every 4 seconds
}

</script>
```

```
<!--2nd container for user identity-->
<div class="container1"><br>
    <h2 style="padding-top: 45px; text-align: center; color:white; font-family: Times New Roman, Times, serif;">WHO ARE YOU?</h2><br><br><br>
    <button onclick="window.location.href='seller.php'"><b style="font-size: 18px; border-radius: 24px; color:white; padding: 10px; margin-right: 20px;">SELLER</b><i style="font-size: 24px; color:white; border-radius: 50%; padding: 10px; border: 1px solid black; margin-right: 20px;"><fa fa-money aria-hidden="true"></fa></i></button>&ampnbsp&ampnbsp&ampnbsp&ampnbsp&ampnbsp
    <button onclick="window.location.href='listing.php'"><b style="font-size: 18px; border-radius: 24px; color:white; padding: 10px; margin-right: 20px;">BUYER</b><i style="font-size: 24px; color:white; border-radius: 50%; padding: 10px; border: 1px solid black; margin-right: 20px;"><fa fa-shopping-cart aria-hidden="true"></fa></i></button><br><br><br><br>
    <button style="border-radius: 15px; background-color: ghostwhite; display:block; margin-right: 20px; padding: 15px; border: 1px solid black; color:white; font-size: 18px; font-weight: bold; text-decoration: none; transition: all 0.3s ease-in-out; position: relative; z-index: 1; border: 1px solid black; padding: 10px; margin-right: 20px;"><b>Express Interest Here <span style="color:white; font-size: 14px; position: absolute; right: -5px; top: -5px; border: 1px solid black; border-radius: 50%; padding: 2px 5px; background-color: white; transform: rotate(45deg); transform-origin: center; white-space: nowrap; font-weight: bold; font-style: italic; font-size: 12px; line-height: 1; opacity: 0.8; transition: all 0.3s ease-in-out; z-index: 2; "><fa fa-caret-right aria-hidden="true"></fa></span></b></button>
</div>
```

Right container: There are 2 buttons for users to select their role. If users click on “SELLER”, he/she will be redirected to a form page: seller.php. However if he is a buyer, he will be led to productlisting.php in this case to view all listed existing products. There is an additional button “Express Interest Here” for buyers who already know what to buy and want to fill in the form directly.

## Bike Selling Page

The screenshot shows a web page titled "SELL YOUR BIKE". The page has a dark background featuring a close-up image of a bicycle wheel and frame. On the left, there's a sidebar with links for "HOME" and "CONTACT". The main content area is titled "SELL YOUR BIKE" and contains several input fields:

- Personal Details:** Fields for Name, E-mail, and Phone No., each marked with a red asterisk (\*) indicating required input.
- Product Basic Information:** Fields for Bike Type (dropdown menu showing "Road Bike"), Serial Number, and a Description area containing placeholder text "Size,material,etc".
- Product Details:** Fields for Year of Manufacture, Characteristics, and Condition (radio buttons for "New" and "Used").
- A "Submit" button at the bottom right.

Here is a form for sellers to fill in their personal information and their bike's details. Red stars beside each input bar indicate that the box must be filled.

### seller.php

```
<!--form start-->
<form id="form" method="post" action=<?php echo htmlspecialchars($_SERVER["PHP_SELF"]); ?>>
<h3>Personal Details</h3>
Name:&nbsp;
<input type="text" name="name" value=<?php echo $name?>>
<span class="error">*<?php echo $nameErr; ?> </span>
<br><br>
E-mail:&nbsp; <input type="text" name="email" value=<?php echo $email?>>
<span class="error">*<?php echo $emailErr; ?> </span>
<br><br>
Phone No:&nbsp; <input type="text" name="phone" value=<?php echo $phone?>>
<span class="error">*<?php echo $phoneErr; ?> </span>
<br><br>

<h3>Product Basic Information</h3>
Bike Type:&nbsp;
<select name="type" id="type">
    <option value="Road Bike">Road Bike</option>
    <option value="Mountain Bike">Mountain Bike</option>
    <option value="Touring Bike">Touring Bike</option>
    <option value="Folding Bike">Folding Bike</option>
    <option value="Electric Bike">Electric Bike</option>
    <option value="Others">Others</option>
</select><br><br>
Serial Number:&nbsp; <input type="text" name="serialnumber" value=<?php echo $serialnumber?>>
<span class="error">*<?php echo $serialnumberErr; ?> </span>
<br><br>
Description:&nbsp;
<textarea style="height: 40px; width: 200px;" type="text" placeholder="Size,material,etc" name="des" id="des" rows="3" cols="20"></textarea>
<br><br>

<h3>Product Details</h3>
Year of Manufacture:&nbsp; <input type="text" name="manu" value=<?php echo $manu?>>
<span class="error">*<?php echo $manuErr; ?> </span>
<br><br>
Characteristics:&nbsp; <input type="text" name="character" value=<?php echo $character?>>
<span class="error">*<?php echo $characterErr; ?> </span>
<br><br>
Condition:
<input style="width: 30px;" type="radio" name="condition" value="New">New
<input style="width: 30px;" type="radio" name="condition" value="Used">Used
<span class="error">*<?php echo $conditionErr; ?> </span>
<br><br>
<input style="float: right; width: 130px; height: 50px; border-radius: 25px;" type="submit" name="submit" value="Submit">
</form>
```

When the form is submitted by a seller, the data will be sent by method="post".

`$_SERVER["PHP_SELF"]` allows the server to send the submitted form data to the page itself for validation purpose while `htmlspecialchars` is used to converts special characters to HTML entities and prevent hackers from exploiting the code by injecting HTML or Javascript code

## Form validation: seller.php

```
//if form posted
if ($_SERVER["REQUEST_METHOD"] == "POST")
{
    //name validation
    if(empty($_POST["sname"]))
    {
        $snameErr = "Name is required";
    }
    else
    {
        $sname = input_data($_POST["sname"]);
    }

    //email validation
    if(empty($_POST["semail"]))
    {
        $semailErr = "Email is required";
    }
    else
    {
        $semail = input_data($_POST["semail"]);
        if(!filter_var($semail, FILTER_VALIDATE_EMAIL)//user@mail.com
        {
            $semailErr = "Invalid email format";
        }
    }

    //phone no validation
    if(empty($_POST["sphone"]))
    {
        $sphoneErr = "Phone no. is required";
    }
    else
    {
        $sphone = input_data($_POST["sphone"]);
        if(!preg_match("/^[\d]*$/", $sphone))//numeric number
        {
            $sphoneErr = "Only numbers are allowed";
        }
    }

    //serial number validation
    if(empty($_POST["serialnumber"]))
    {
        $serialnumberErr = "Field cannot be empty";
    }
    else
    {
        $serialnumber = input_data($_POST["serialnumber"]);
        if(!preg_match("/^(0-9){2}(-[0-9]{3})(-[a-z]{3})$/", $serialnumber))//yy-nnn-ccc
        {
            $serialnumberErr = "Follow format yy-nnn-ccc";
        }
    }

    //manufacture validation
    if(empty($_POST["manu"]))
    {
        $manuErr= "Field cannot be empty";
    }
    else
    {
        $manu = input_data($_POST["manu"]);
        if(!preg_match("/^[\d]*$/", $manu)) //numeric number
        {
            $manuErr = "Only numbers are allowed";
        }
    }

    //characteristics validation
    if(empty($_POST["character"]))
    {
        $characterErr= "Field cannot be empty";
    }
    else
    {
        $character = input_data($_POST["character"]);
    }

    //condition
    if(empty($_POST["condition"]))
    {
        $conditionErr = "Select at least one";
    }
    else
    {
        $condition= input_data($_POST["condition"]);
    }
}

//end of form validation

```

## Bike Selling Page

**SELL YOUR BIKE**

\* Required Field

**Personal Details**

Name:  \* Name is required

E-mail:  \* Email is required

Phone No:  \* Phone no. is required

**Product Basic Information**

Bike Type:  Road Bike

Serial Number:  \* Field cannot be empty  
Size,material,etc

Description:

**Product Details**

Year of Manufacture:  \* Field cannot be empty

Characteristics:  \* Field cannot be empty

Condition:  New  Used \* Select at least one

When the form is posted, the server will send all data to the current page for validation. If the user enters nothing inside the input bar of Name, Email, Phone, Serial Number, Year of manufacture, Characteristic and Condition, the page will return errors.

E-mail:  josep \* Invalid email format

Phone No:  josep \* Only numbers are allowed

In addition, if the entered email does not follow the format([user@mail.com](mailto:user@mail.com)) and the inserted phone number is nonnumerical, the page will also return an error.

Serial Number:  iwe-23-123 \* Follow format yy-nnn-ccc

Moreover, the user must insert a serial number which is compatible with the format yy-nnn-ccc(year-3number-3alphabet). Else, an error message will pop up until he inserts a serial number which follows the format.

Serial Number:  21-123-mal \*

```

function input_data($data)
{
    $data = trim($data);
    $data = stripslashes($data);
    $data = htmlspecialchars($data);
    return $data;
}
?>

```

Input\_data function is used to store the data without errors.

```

//if submit
if(isset($_POST['submit']))
{
    //if no error
    if($snameErr==""&&$semailErr==""&&$sphoneErr==""&&$serialnumberErr==""&&
       $manuErr==""&&$characterErr==""&&$conditionErr=="")
    {
        //outputting data
        $sname = stripslashes($_POST["sname"]);
        $semail = stripslashes($_POST["semail"]);
        $sphone= stripslashes($_POST["sphone"]);
        $serialnumber = stripslashes($_POST["serialnumber"]);
        $type = stripslashes($_POST["type"]);
        $des = stripslashes($_POST["des"]);
        $manu = stripslashes($_POST["manu"]);
        $character = stripslashes($_POST["character"]);
        $condition = stripslashes($_POST["condition"]);

        $arr = []; //declare empty array
        $Array = file_get_contents('BikesforSale.txt');//get txt file
        $pattern = "/^.*$serialnumber.*\$/m";

        if(preg_match_all($pattern, $Array, $matches))
        {
            //join array
            $a= implode(" ", $matches[0]);
            //delete ~ between infos
            $arr = explode("~", $a);
        }
    }
}

```

When the seller presses the submit button, the server will output all written data. However, in order to make sure there is no duplicated serial number in our system, I had declared \$pattern and preg\_match\_all to find the matched array in the txt file by using the seller's entered serial number.

```

if(in_array($serialnumber, $arr))
{
    echo "<p>The serial number you entered already exists!<br />\n";
    echo "Your message was not saved.</p>";
    $serialnumber = "";
}

```

Besides, the in\_array function is used to check whether the matched array is in \$arr, if it does, the system will return an error message as it does not allow repeated serial numbers.

BikesforSale.txt — Edited

```
Jasmine~jas@hotlink.com~82938293~89-292-ncp~Electric Bike~15''~1989~Yellow colour~Used
Constance Liew~cliew@gmail.com~62739402~17-121-qqq~Touring Bike~27''~2017~Red colour~New
Justin Voo~justinvoo892@gmail.com~78920374~19-234-cap~Road Bike~25'' in size~2019~black and
silver in colour~Used
Vincent Chew~cvinc23@gmail.com~78290823~20-139-ggx~Electric Bike~Gocycle GX, a folding electric
bike~2020~yellow black ~Used
Loo Aik Ling~akling98@gmail.com~78921526~08-123-sss~Road Bike~Stronger rims and wider
tires~2008~Green black~Used
Josephine~josephor921@gmail.com~98126745~21-123-mal~Electric Bike~Schwinn E-Scooter~2021~Black
colour~Used
```

Note that the serial number “89-292-ncp” is already exist in BikesforSale.txt

## SELL YOUR BIKE

\* Required Field

### Personal Details

Name: xy \*

E-mail: XY@gmail.com \*

Phone No: 82937483 \*

Seller xy tries to insert “89-292-ncp” for her bike

### Product Basic Information

Bike Type: Touring Bike

Serial Number: 89-292-ncp \*

suitable for adults

Description:

## SELL YOUR BIKE

The serial number you entered already exists!  
Your data was not saved.

\* Required Field

However, error messages popped out and the data cannot be saved due to bike “89-292-ncp” already exists.

### Personal Details

Name: xy \*

E-mail: XY@gmail.com \*

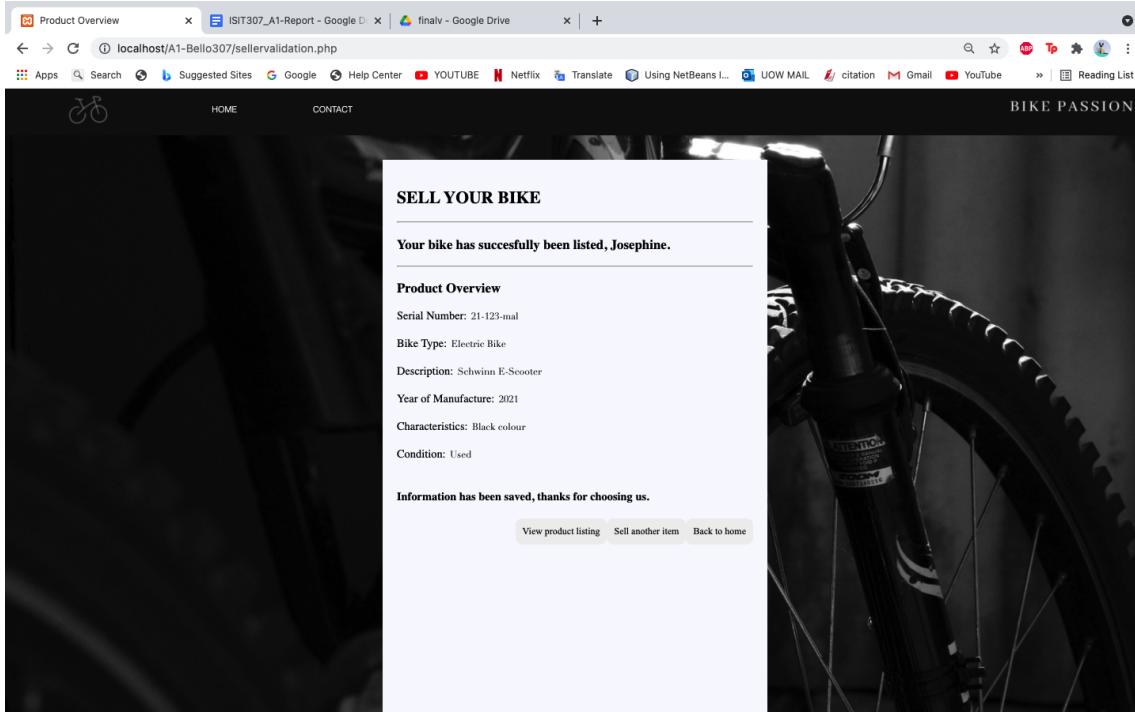
Phone No: 82937483 \*

```
else
{
    //insetting data into txt file with this format
    $info = "$sname~$semail~$sphone~$serialnumber~$type~$des~$manu~$character~$condition\n";
    $infomationFile = fopen($infoFile, "ab");//Append, open or create file for writing
    if($infomationFile==FALSE)
        echo "Information cannot be saved. Please try again.\n";
    else
    {
        //file write
        fwrite($infomationFile, $info);
        //file close
        fclose($infomationFile);

        //send all data of this session to sellervalidation.php
        $_SESSION['sname'] = $_POST['sname'];
        $_SESSION['serialnumber'] = $_POST['serialnumber'];
        $_SESSION['type'] = $_POST['type'];
        $_SESSION['des'] = $_POST['des'];
        $_SESSION['manu'] = $_POST['manu'];
        $_SESSION['character'] = $_POST['character'];
        $_SESSION['condition'] = $_POST['condition'];
        header('location:sellervalidation.php');
    }
}
```

Finally, when the seller has successfully submitted the form, the inserted data will be outputted and written to “BikesforSales.txt”. `$_SESSION[‘variable’]` is used to pass the values to the next page.

## Validating bike selling & confirmation page



When the product is posted successfully, the server will redirect to sellervalidation.php for sellers to view and confirm their post.

### sellervalidation.php

```
sellervalidation.php
<?php
session_start()
?>
```

This file is started with function session\_start() in order to receive the passed variables from seller.php.

```
<div class="container2" style="padding: 20px;">
<h2>SELL YOUR BIKE </h2>
<hr>
<!--SESSION IS USED TO GET DATA FROM seller.php-->
<h3>Your bike has successfully been listed, <?php echo $_SESSION['sname'] ?>. </h3>
<hr>
<!--display and inform seller abt the info overview-->
<h3>Product Overview</h3>
Serial Number:
<input type="text" name="serialnumber" value="<?php echo $_SESSION['serialnumber']?>" readonly><br><br>
Bike Type:
<input type="text" name="type" value="<?php echo $_SESSION['type']?>" readonly><br><br>
Description:
<input style="width: 350px;" type="text" name="des" value="<?php echo $_SESSION['des']?>" readonly><br><br>
Year of Manufacture:
<input type="text" name="manu" value="<?php echo $_SESSION['manu']?>" readonly><br><br>
Characteristics:
<input type="text" name="character" value="<?php echo $_SESSION['character']?>" readonly><br><br>
Condition:
<input type="text" name="condition" value="<?php echo $_SESSION['condition']?>" readonly><br><br>
<hr>Information has been saved, thanks for choosing us.</hr>
<button onclick="window.location.href='index.php'">Back to home</button>
<button onclick="window.location.href='seller.php'">Sell another item</button>
<button onclick="window.location.href='listing.php'">View product listing</button>

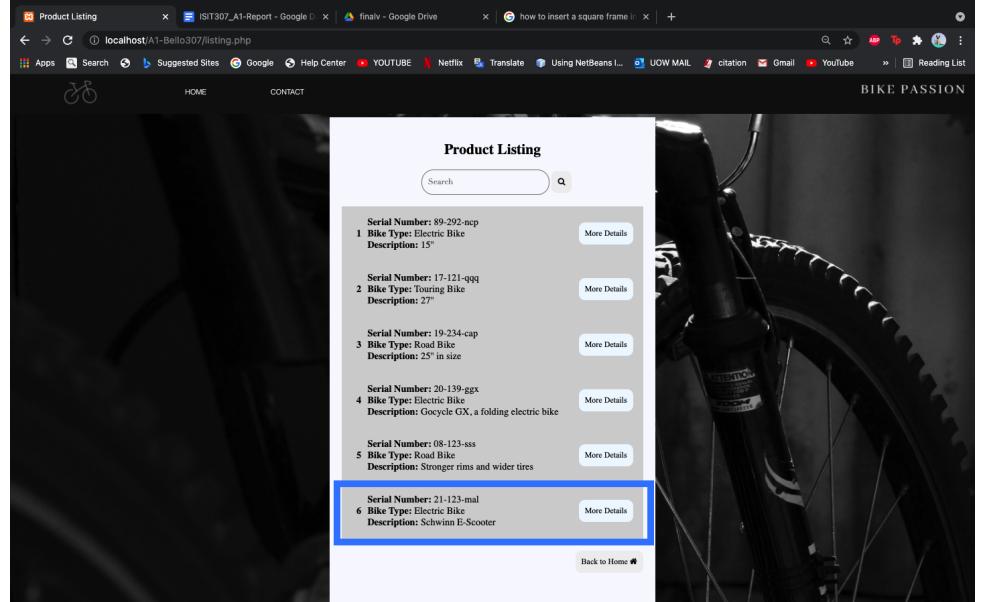
</div>
```

A list of non-editable information will be displayed and each variable's value is being retrieved by using <?php echo \$\_SESSION['variablename']?>

## Product Listing Page

The image attached shows a list of posted products. Taking Josephine for example, the basic information of her bike has been successfully added to the list.

On this page, every potential buyer is able to view the basic information about all bikes for sale and if they're interested in any of them, they can click on the "More Details" button for more information about the chosen bike.



## listing.php

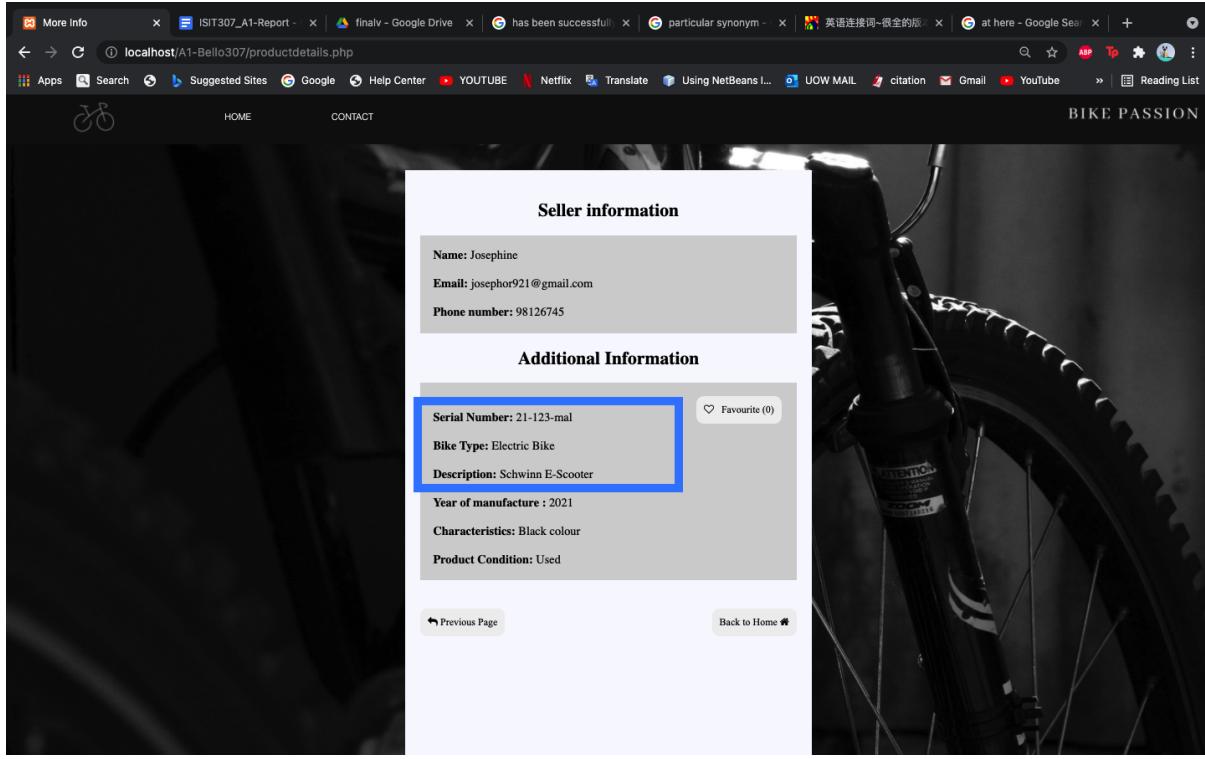
```
<?php
//if no seller no product
if ((!file_exists("BikesforSale.txt")) )
echo "<p>There are no product posted.</p>\n";
else
{
    //declare file
    $Array = file("BikesforSale.txt");

    //count element inside txt file
    $count = count($Array);
    for ($i = 0; $i < $count; ++$i)
    {
        $cur = explode("~", $Array[$i]); //delete "~" between data
        $key[] = $cur[3]; //let serial number become key
        $infoArray[] = $cur[4] . "~" . $cur[5]; //let type&description become values
    }
    //combine key and values
    $keyArray = array_combine($key, $infoArray);
    $no = 1;
    //for every array
    foreach($keyArray as $Message)
    {
        //delete "~" between data
        $cur = explode("~", $Message);
        echo "<table style='background-color: lightgray; padding:10px;' border='0' width='100%'\>\n";
        echo "<tr>\n";
        echo "<td width='5%' style='text-align:center; padding:2px;><span style='font-weight:bold>" . $no . "</span></td>\n";
        //display key
        echo "<td width='70%'><span style='font-weight:bold> Serial Number</span> " . htmlentities(key($keyArray)) . "<br />";
        //display value
        echo "<span style='font-weight:bold>Bike Type:</span> " . htmlentities($cur[0]) . "<br />";
        echo "<span style='font-weight:bold>Description:</span> " . htmlentities($cur[1]) . "</td>\n";
        echo "<td width='20%'>"; 
        ?>
        <!--send key to productdetails.php when user clicks on more details-->
        <form action="productdetails.php" method="post">
        <input type="hidden" id="detail" name="detail" value="<?php echo htmlentities(key($keyArray)) ?>"/>
        <button style="background-color: aliceblue;" onclick="window.location.href='productdetails.php'">More Details</button></td>
        </form>
        <?php
        echo "</tr>\n";
        echo "</table>\n\n";
        ++$no;
        next($keyArray); //next array
    }
}
?>
```

Initially, BikesforSales.txt is read and declared as an array. Then, explode("~, \$Array[\$i]) is used to delete "~" between variables in .txt file. Serial number is declared as key[] of array ,while Bike Type and Description are declared as values of the array. After that, the key and values of the array are combined together as one by using function array\_combine(). Finally, foreach(\$keyArray as \$Message) prints out all basic information of all bikes for sale.

Inside the foreach() there is a form which allows the server to POST the serial number as key(\$keyArray) to productdetails.php upon submission.

## More products information



When buyer clicks on the “More Details” button, PHP server will lead him to productdetails.php. Buyer can retrieve all related information about his chosen bike such as seller contact number and additional info of the bike as well as the number of buyers who had shown their interest on this bike. The image attached has taken Josephine for example.

### productdetails.php

```
//empty array
$arr=[];
//get serial number of that clicked product
$detail = $_POST['detail'];
//get content of txtfile
$array = file_get_contents('BikesforSale.txt');
//get infos by serial number
$pattern = "/^.*$detail.*\$/m";
if(preg_match_all($pattern, $array, $matches))
{
    $a= implode(" ", $matches[0]);
    $arr = explode("\n", $a);
}
//if serial number is in array
if(in_array($_POST['detail'], $arr))
{
    //display data AS arr[index]
    echo "<table style='background-color:lightgray;padding:15px;' border='0' width='100%>\n";
    echo "<tr>\n";
    echo "<td width='70%><span style='font-weight:bold>Name: </span> " . htmlentities($arr[0]) . "<br />".<br />";
    echo "<span style='font-weight:bold>Email: </span> " . htmlentities($arr[1]) . "<br />".<br />";
    echo "<span style='font-weight:bold>Phone number:</span> " . htmlentities($arr[2]) . "</td>\n";
    echo "<td width='20%'>\n";
    echo "</tr>\n";
    echo "<tr></tr>\n";
    echo "</table>\n\n";
    echo "<h2 style='text-align:center;>Additional Information</h2>";
    echo "<table style='background-color:lightgray;padding:15px;' border='0' width='100%>\n";
    echo "<tr>\n";
    echo "<td width='100%>\n";
```

At the beginning, the serial number of the chosen bike is being retrieved by `$_POST['detail']`. Then, `File_get_contents` is used to get the content of

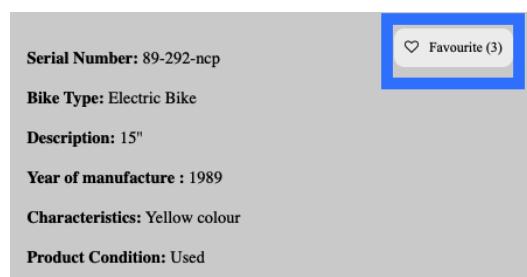
BikesforSale.txt and regex is used to find the matched line(by using the posted serial number) in txt file.

Thus, function preg\_match\_all is used to get all matched arrays and implode is used to join the matched array as one. Explode function is used again for deletion of “~” between each variable. Moreover, in\_array() function is called to check whether the serial number of the chosen bike is inside the found,matched array.

```
$ab = [];
$count = 0;
$hi= file_get_contents('ExpInterest.txt');
if(preg_match_all($pattern, $hi, $matches))
{
    $count += substr_count($hi, $detail);
}
```

Another preg\_match\_all function is used to count the number of buyers who are interested in the chosen bike. In this case, I had used the function substr\_count() to count how many time did the particular serial number appeared in “ExpInterest.txt”.

The squared “favourite” button shows how many buyers had shown their interest on the chosen bike. In this example, 3 buyers are interested in the bike: 89-292-ncp. When buyers click on “favourite” button, it will lead them to a form to express their interest.



```
● ○ ●
ExpInterest.txt
rachel-erwe@gmail.com~12324545~17-121-qqq~123
xy-xy123@gmail.com~1234567~89-292-ncp~123
Soo Lim~s1@gmail.com~72839482~89-292-ncp~129.90
Sam Lim~slim12@gmail.com~23498293~19-234-cap~89.00
Audrey Ang~aa111@gmail.com~92839302~ 89-292-ncp~82.90
```

In ExpInterest.txt, apparently we can see that there are three potential buyers who are interested in purchasing the bike: 89-292-ncp.

### Search product by serial number

#### Product Listing

21-123-mal



More Details

**Serial Number:** 21-123-mal  
**Bike Type:** Electric Bike  
**Description:** Schwinn E-Scooter

Previous Page

Back to Home

#### Product Listing

pc500



No results found

Search for existing product

Search for non-existing product

## searching.php

Form is used again to send the inserted serial number(for searching).

```

<?php
$arr=[]; //empty array
$search = $_POST['search']; //get entered serial number
$Array = file_get_contents('BikesforSale.txt');//get txt file

//get all infos about the entered serial number
$pattern = "/^.*$search.*$/m";

//if pattern found matches in txt file
if(preg_match_all($pattern, $Array, $matches))
{
    //join array
    $s= implode(" ", $matches[0]);
    //delete ~ between infos
    $arr = explode("~", $a);
}

//if entered serial number is found in array
if(in_array($_POST['search'], $arr))
{
    //display
    echo "<table style='background-color:lightgray;padding:15px;' border='0' width='100%'\>\n";
    echo "<tr>\n";
    //arr[3],[4],[5] are the position of displayed data in an array
    echo "<td width='70%'><span style='font-weight:bold'> Serial Number:</span> " . htmlentities($arr[3]) . "<br />";
    echo "<span style='font-weight:bold'>Bike Type:</span> " . htmlentities($arr[4]) . "<br />";
    echo "<span style='font-weight:bold'>Description:</span> " . htmlentities($arr[5]) . "</td>\n";
    echo "<td width='20%'> ";
    ?>
    <!--if user click on more details, send arr[3] to productdetails.php-->
    <form action="productdetails.php" method="post">
        <input type="hidden" id="detail" name="detail" value="php echo htmlentities($arr[3]); ?" />
        <button style="background-color: alicedblue;" onclick="window.location.href='productdetails.php'">More Details</button></td>
    </form>
    <?php
    echo "</tr>\n";
    echo "<tr><tr>\n";
    echo "</table>\n\n";
}

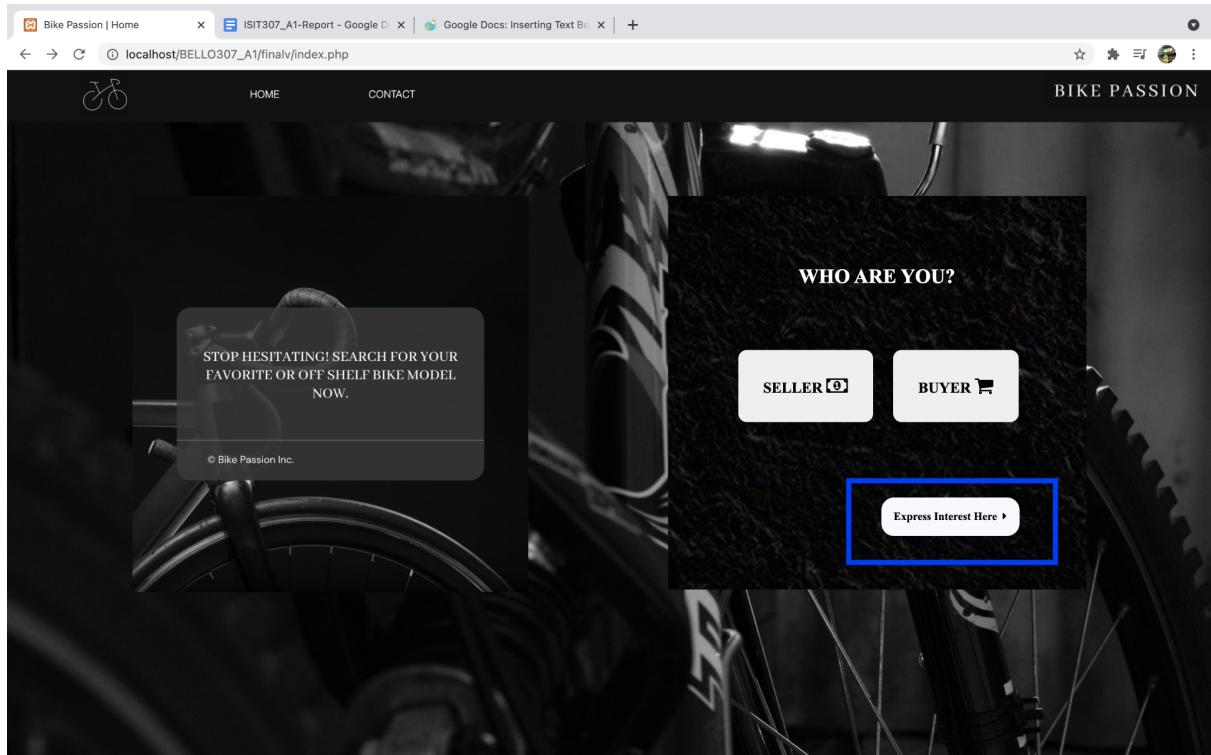
```

When user clicks on  button, the inserted serial number will be retrieved and declared as \$search. After that, pattern, preg\_match\_all, implode, explode, in\_array, all these functions have been used again in the same way like how it applies to the file productdetails.php.

Jasmine~jas@hotlink.com~82938293~89-292~ncp~Electric Bike~15''~1989~Yellow colour~Used  
Constance Liew~cliew@gmail.com~62739402~17-121~qqq~Touring Bike~27''~2017~Red colour~New  
Justin Voo~justinvoo892@gmail.com~78920374~19-234~cap~Road Bike~25'' in size~2019-black and silver in colour~Used  
Vincent Chew~cvinc23@gmail.com~78290823~20-139~ggx~Electric Bike~Gocycle GX, a folding electric bike~2020-yellow black ~Used  
Loo Aik Ling~akling98@gmail.com~78921526~08-123~sss~Road Bike~Stronger rims and wider tires~2008-Green black~Used  
Josephine~josephor921@gmail.com~98126745~21-123~mal~Electric Bike~Schwinn E-Scooter~2021~Black colour~Used  
|

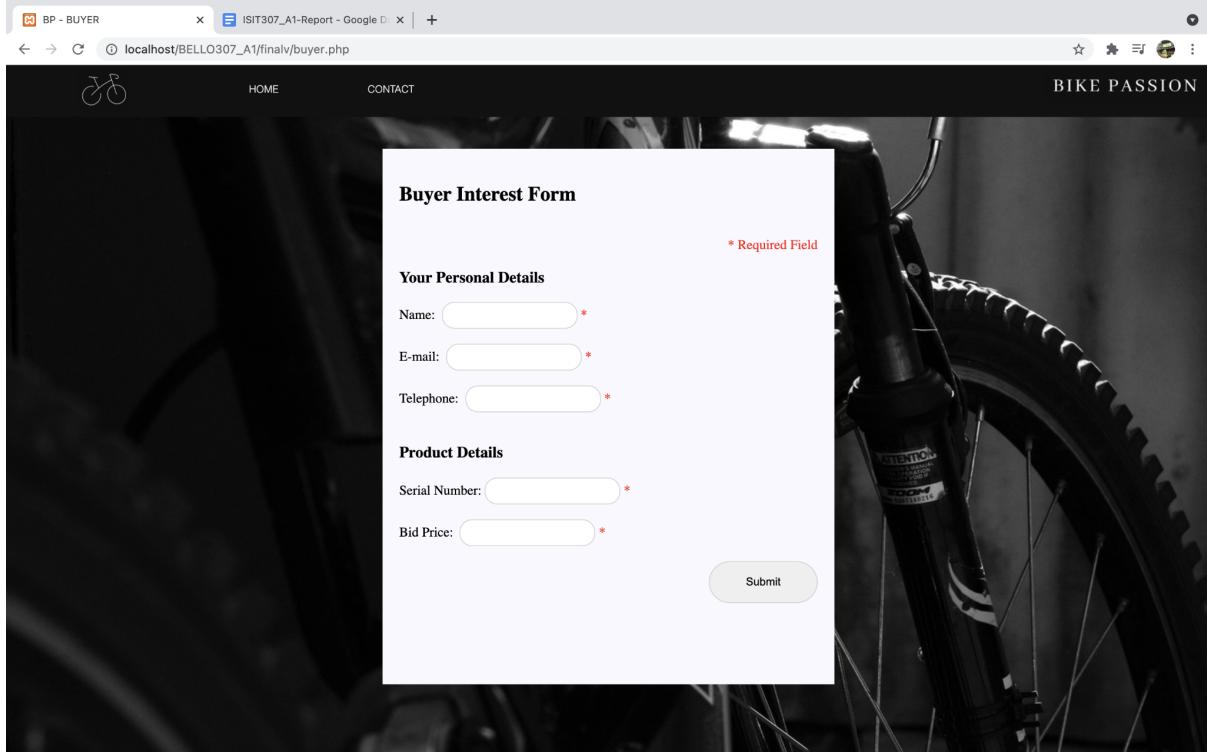
Data is written to BikesforSale.txt once the potential seller posted their product successfully.

## Homepage



This is the homepage of the website. Buyers who are interested in buying the product can express their interest by clicking on the express interest button which is shown in the blue box. This will lead them to the buyer form to express their interest which is buyer.php

## Buyer.php



The screenshot shows a web browser window with the title "BP - BUYER" and the URL "localhost/BELLO307\_A1/finalv/buyer.php". The page features a dark background with a close-up image of a bicycle's front wheel and handlebars. At the top, there's a navigation bar with "HOME" and "CONTACT" links, and a small bicycle icon. The main content is a white form titled "Buyer Interest Form". It has two sections: "Your Personal Details" and "Product Details", each containing several input fields with red asterisks indicating they are required. The "Submit" button is at the bottom right.

This is the buyer interest form that buyers will have to fill up to express their interest in a bike. All the fields are required are showed by an asterisk (\*), so the buyers will know that the fields are required to be filled in.

```
<form method="post" action=<?php echo htmlspecialchars($_SERVER["PHP_SELF"]);?>>

<br>
<span class="error" style="float:right; color:red" >* Required Field</span> <br>
<h3>Your Personal Details</h3>
Name:&nbsp; <input type="text" name="name" value=<?php echo $name;?>>
<span class="error" style="color:red">*<?php echo $nameErr;?></span>
<br><br>
E-mail:&nbsp; <input type="text" name="email" value=<?php echo $email;?>>
<span class="error" style="color:red">*<?php echo $emailErr;?></span>
<br><br>
Telephone:&nbsp; <input type="integer" name="phone" value=<?php echo $phone;?>>
<span class="error" style="color:red">*<?php echo $phoneErr;?></span>
<br><br>
<h3>Product Details</h3>
Serial Number:&nbsp;<input type="text" name="serialno" value=<?php echo $serialno;?>>
<span class="error" style="color:red">*<?php echo $serialnoErr;?></span>
<br><br>
Bid Price:&nbsp; <input type="text" name="bidprice" value=<?php echo $bidprice;?>>
<span class="error" style="color:red">*<?php echo $bidpriceErr;?></span>

<br><br>
<input style="float: right; width: 130px; height: 50px; border-radius: 25px;" type="submit" name="submit" value="Submit">
</form>
```

When the form is submitted by a buyer, the data will be sent by the “POST” method, `$_SERVER["PHP_SELF"]` allows the server to send the submitted form data to the current page to do validation, `htmlspecialchars` is used to convert the special characters to HTML entities to prevent hackers from injecting foreign codes.

## Form validation

```
<?php
session_start();
//define var and set empty values
$nameErr = $emailErr = $phoneErr = $serialnoErr = $bidpriceErr = "";
$name = $email = $phone = $serialno = $bidprice = "";
if ($_SERVER["REQUEST_METHOD"]=="POST")
{
    //name validation, only letters and whitespace
    if (empty($_POST["name"]))
    {
        $nameErr ="Name is required";
    }
    else
    {
        $name= test_input($_POST["name"]);
        if (!preg_match("/^([a-zA-Z-' ])*$/",$name))
        {
            $nameErr="Only letters and white space allowed";
        }
    }

    //email validation
    if (empty($_POST["email"]))
    {
        $emailErr="Email is required";
    }
    else
    {
        $email= test_input($_POST["email"]);
        if(!filter_var($email,FILTER_VALIDATE_EMAIL))
        {
            $emailErr="Invalid email format";
        }
    }

    //phone validation
    if (empty($_POST["phone"]))
    {
        $phoneErr="Phone number is required";
    }
    else
    {
        $phone=test_input($_POST["phone"]);
        if(!preg_match("/^([0-9])*$/", $phone))
        {
            $phoneErr="Only numbers are allowed";
        }
    }
}
```

### Buyer Interest Form

\* Required Field

Your Personal Details

Name:  \* Name is required

E-mail:  \* Email is required

Telephone:  \*Phone number is required

Product Details

Serial Number:  \*Field cannot be empty

Bid Price:  \*Field cannot be empty

Submit

When the buyer tries to post the form, all the data in the current page will be sent to the current page for validation. If the user did not enter any information into the fields: Name, email, telephone, serial number and Bid Price, the page will return with the above errors.

\* Required Field

Your Personal Details

Name:  \* Only letters and white space allowed

E-mail:  \* Invalid email format

Telephone:  \*Only numbers are allowed

When the user does not enter the name with only letters and white space, the error message will show up to tell the user the correct format that they should enter.

When the user enters the email which is not in the format [user@email.com](mailto:user@email.com), the error message will show to tell the user to enter the correct format.

When the user enters a phone number that is not a number, the error message will pop up as shown above.

## Form validation

```
//serial number validation

if(empty($_POST["serialno"]))
{
    $serialnoErr = "Field cannot be empty";
}
else
{
    $serialno = test_input($_POST["serialno"]);

    if(!preg_match("/^([0-9]{2})([0-9]{3})([a-z]{3})$/", $serialno))//yy-nnn-ccc
    {
        $serialnoErr = "Follow format yy-nnn-ccc";
    }
}

//bid price validation
if (empty($_POST["bidprice"]))
{
    $bidpriceErr= "Field cannot be empty";
}
else
{
    $bidprice=test_input($_POST["bidprice"]);

    if (!preg_match("/^([0-9]+(\.[0-9]{2})?)$/", $bidprice))
    {
        $bidpriceErr= "Price can only have 2 numbers after decimals";
    }
}

}// end of form validation
```

**Product Details**

Serial Number:  \*Field cannot be empty

Bid Price:  \*Field cannot be empty

**Product Details**

Serial Number:  \*Follow format yy-nnn-ccc

Bid Price:  \*Price can only have 2 numbers after decimals

When the user tries to post the form, the data will be sent to the current page for validation. If the user did not enter any information into the fields: Serial Number and Bid Price, the errors will be displayed as above where the field cannot be empty. When the user posts the product details into the form with the wrong format, the error messages will show as shown above, prompting the user to enter the information with the correct format.

### Test\_input()

```
function test_input($data)
{
    $data = trim($data);
    $data = stripslashes($data);
    $data = htmlspecialchars($data);
    return $data;
}
```

The function test\_input is used to store the data without any errors.

```
<h2> Buyer Interest Form</h2>
<?php
//declare txt file
$infoFile = "ExpInterest.txt";

//if submit
if(isset($_POST['submit']))
{
    //if no error
    if($nameErr === "" && $emailErr === "" && $phoneErr === "" && $serialnoErr === "" &&
        $bidpriceErr === "")
    {
        //outputting data
        $name = stripslashes($_POST["name"]);
        $email = stripslashes($_POST["email"]);
        $phone= stripslashes($_POST["phone"]);
        $serialno = stripslashes($_POST["serialno"]);
        $bidprice=stripslashes($_POST["bidprice"]);

        //insetting data into txt file with this format
        $info = "$name~$email~$phone~$serialno~$bidprice\n";
        $infomationFile = fopen($infoFile, "ab");//Append, open or create file for writing
        if($infomationFile === FALSE)
            echo "Information cannot be saved. Please try again.\n";
        else
        {
            //file write
            fwrite($infomationFile, $info);
            //file close
            fclose($infomationFile);

            //send all data of this session to buyervalidation.php
            $_SESSION['name'] = $_POST['name'];
            $_SESSION['email'] = $_POST['email'];
            $_SESSION['phone'] = $_POST['phone'];
            $_SESSION['serialno'] = $_POST['serialno'];
            $_SESSION['bidprice'] = $_POST['bidprice'];

            header('location:buyervalidation.php');
        }
    }
}

?>
```

When the buyer has submitted the form successfully, the data entered will be outputted and written to "ExpInterest.txt"\$\_SESSION['variable'] is used to pass the values to the next page.

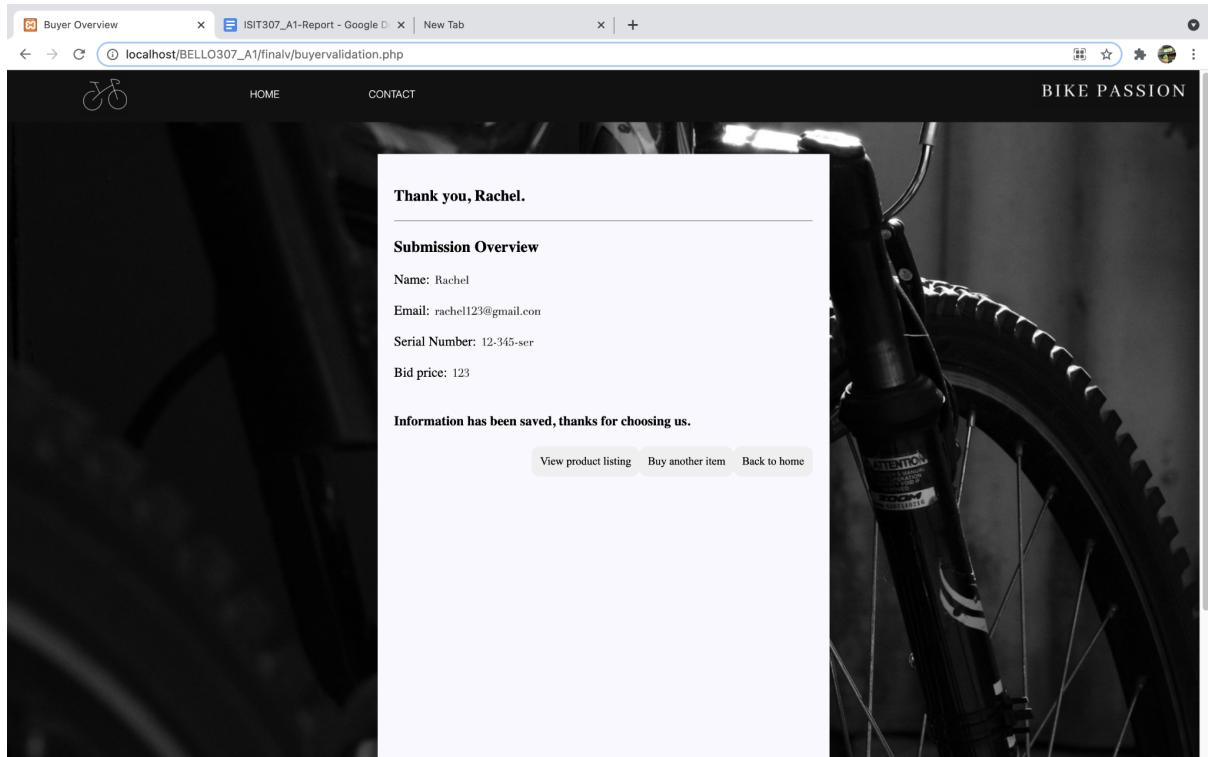
### ExplInterest.txt

The screenshot shows a Windows Notepad window with the title bar 'ExplInterest.txt'. The content of the window is as follows:

```
|rachel~erwe@gmail.com~12324545~17-121-qqq~123
xy~xy123@gmail.com~1234567~89-292-ncp~123
Soo Lim~s_l@gmail.com~72839482~89-292-ncp~129.90
Sam Lim~slim12@gmail.com~23498293~19-234-cap~89.00
Audrey Ang~aa111@gmail.com~92839302~ 89-292-ncp~82.90
Rachel~rachel123@gmail.com~12345678~12-345-ser~123
```

The information that the buyer has entered into the form can be then retrieved from ExplInterest.txt as seen above. We will be able to see the name, email, telephone, serial number and bid price in the respective order, separated by “~”.

## Submission overview



When the buyer has posted the buyer interest form successfully, the server will redirect to `buyervalidation.php` to sellers to view and confirm the interest.

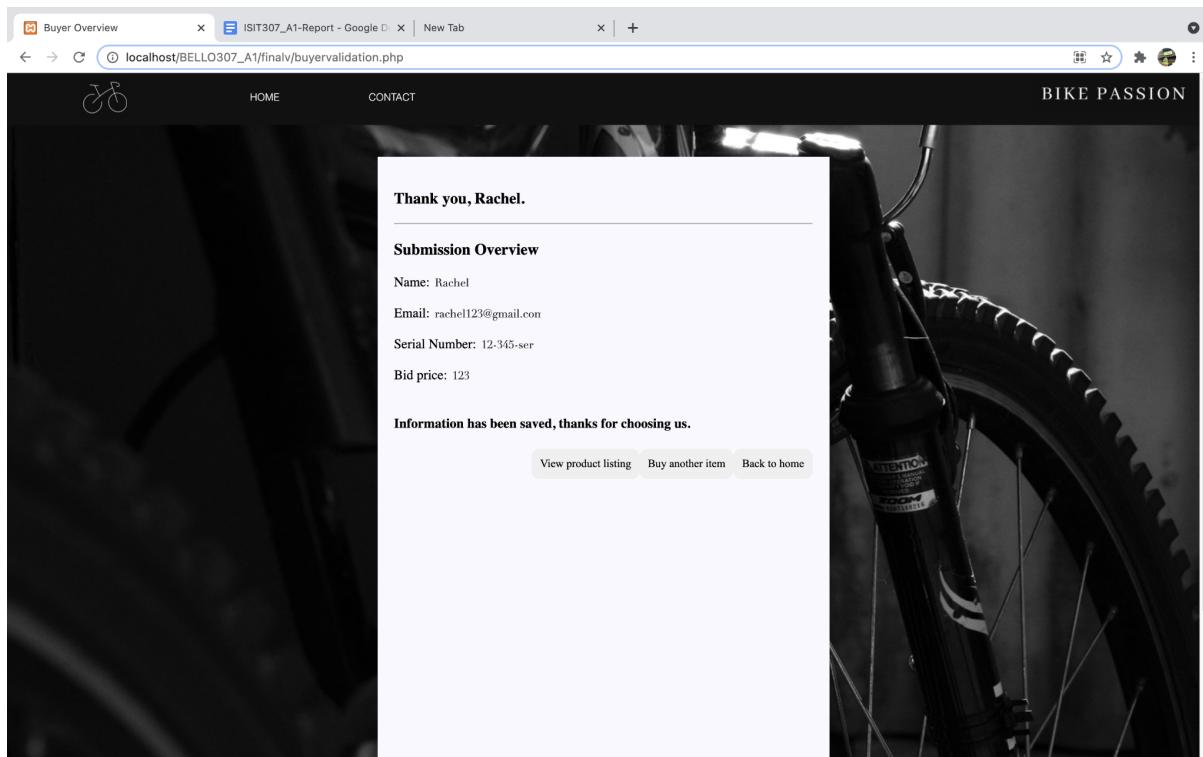
buyer.php		buyervalidation.php
1	<?php session_start() ?>	
2		
3		

In order to receive the data variables submitted from `buyer.php`, we have to use the function `session start()`

```
<!--SESSION IS USED TO GET DATA FROM buyer.php-->
<h3>Thank you, <?php echo $_SESSION['name'] ?>.</h3>
<hr>
<!--display and inform seller abt the info overview-->
<h3>Submission Overview</h3>
Name:
<input type="text" name="name" value="<?php echo $_SESSION['name'] ?>" readonly><br><br>
Email:
<input type="text" name="email" value="<?php echo $_SESSION['email'] ?>" readonly><br><br>
Serial Number:
<input type="text" name="serialno" value="<?php echo $_SESSION['serialno'] ?>" readonly><br><br>
Bid price:
<input type="text" name="bidprice" value="<?php echo $_SESSION['bidprice'] ?>" readonly><br><br>

<h4>Information has been saved, thanks for choosing us.</h4>
<button onclick="window.location.href='index.php'">Back to home</button>
<button onclick="window.location.href='buyer.php'">Buy another item</button>
<button onclick="window.location.href='listing.php'">View product listing</button>
```

This will display the information that we have entered in each variable which is being retrieved from using `<?php echo $_SESSION['variable']>`



```
<h4>Information has been saved, thanks for choosing us.</h4>
<button onclick="window.location.href='index.php'">Back to home</button>
<button onclick="window.location.href='buyer.php'">Buy another item</button>
<button onclick="window.location.href='listing.php'">View product listing</button>
```

The buyer can click on the button shown above “View Product listing” to view other bikes that are available, it will lead to the page listing.php

The buyer can also click on the button “ Buy another item” to enter another express interest form which will redirect them to the page of buyer.php

The buyer can also click on the button “Back to home” to get back to the home page will redirect to the index.php