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| siba.ulfs1.eng..png | **I3302 E**  **Web Development server side** | Partial Exam  10/12/2019  Duration: 60 min  Dr. Mohamad Hamze |

**Problem I (22 pts)**

We are interested in implementing a car buying system using PHP. For that, you need to write a single page named **buyCars.php** that will use a set of functions written in the **functions.php** file.

The data is stored in the file: **cars.txt**.

Each car purchased is on a line and in the form: name,model,color,cylinder

Example: Karam,Rav4,Blue,4

For each question, you should use the functions already written in the previous questions.

Only at the first access to the page, cars contained in **cars.txt** must be loaded in the session.

*You should maintain, after each operation, the synchronization between the session and the file* ***cars.txt***.

The following functions can be used in your code:

– *array explode(string $delimiter, string $string)*: Returns an array of strings, each of which is a substring of the $string parameter retrieved using the $delimiter separator.

– *bool asort (array &$array)*: sorts an array following the values; returns true on success or false if an error occurs.

– *bool ksort (array &$array)*: sorts an array following the keys; returns true on success or false if an error occurs.

1. Write the function **dispBuyCar($c)** that allows a customer to purchase and customize its car on the TOYOTA website. This function allows you to display "select" menus from a multidimensional associative array **$allcars**, as shown in the example below.

function dispBuyCar($c){

foreach($c as $k=>$v){

echo "<b>".$k."</b>";

echo "<select name='".$k."'>";

foreach($v as $e){

echo "<option>".$e."</option><br/>";

}

echo "</select><br/><br/>";

}

}

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| $allcars = array("model"=>array("Rav4","Carina","Camry"),  "color"=>array("red","blue","white"),  "cylinder"=>array(4,6,8));  dispBuyCar($allcars); |  |

1. Write the function **save($t)** which takes an associative array (as shown below) as parameter and write it to the **cars.txt** file (regardless of the size of the array).

function save($s){

$f=fopen("cars.txt","w");

foreach($s as $name=>$data){

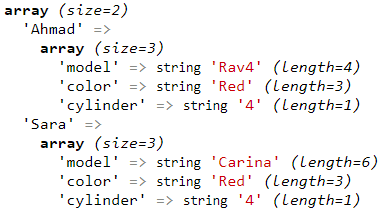
$c=$name.",".$data["model"].",".$data["color"].",".$data["cylinder"]."\r\n";

fputs($f,$c);

}

fclose($f);

}



1. The button **Buy** (name=newcar, value=Buy) adds a new car to the file **cars.txt**. Write the function **addCar($name, $model, $color, $cylinder)** to perform this task.

function addCar($name,$m,$co,$cy){

$\_SESSION['cars'][$name]=array("model"=>$m,"color"=>$co,"cylinder"=>$cy);

save($\_SESSION['cars']);

}

1. Write the function **load()** that loads the contents of the file **cars.txt** into a session of the form shown above.

function load(){

$tab=file("cars.txt");

foreach($tab as $t){

$car=explode(",",trim($t));

$\_SESSION["cars"][trim($car[0])]=array("model"=>trim($car[1]),"color"=>trim($car[2]),"cylinder"=>trim($car[3]));

}

}

1. Write the function **delete($t)** that deletes one or multiple cars. We delete cars from the session and update the file **cars.txt**.

function delete($c){

unset($\_SESSION["cars"][$c]);

save($\_SESSION['cars']);

}

1. Write the function **sortCars($t)** that sorts the superglobal associative array session either by key or by value, according to the value of the **$t** parameter.

function sortCars($t){

if($t==1) // key

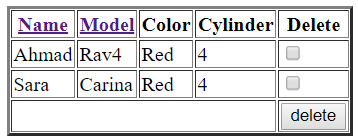
ksort($\_SESSION["cars"]);

else // value

asort($\_SESSION["cars"]);

save($\_SESSION['cars']);

}



1. Using the file **functions.php** (i.e. the functions already written in the previous questions), write the **buyCars.php** page.

<?php

session\_start();

require("functions.php");

// data used to buy a new car

$allcars = array("model"=>array("Rav4","Carina","Camry"),

"color"=>array("red","blue","white"),

"cylinder"=>array(4,6,8));

// Prepare the array to be filled by the session

$cars=array();

// Load the file into session for the first time

if(!isset($\_SESSION["cars"])){

load();

var\_dump($\_SESSION["cars"]);

$cars=$\_SESSION["cars"];

}

// Insert new car

if(isset($\_POST["newcar"])){

$name=$\_POST["client"];

$model=$\_POST["model"];

$color=$\_POST["color"];

$cylinder=$\_POST["cylinder"];

addCar($name,$model,$color,$cylinder);

}

// Delete all checked cars

if(isset($\_POST["del"])){

foreach ($\_POST["delete"] as $name) {

delete($name);

$cars=$\_SESSION["cars"];

}

}

// Sort the session on names or models

if(isset($\_GET["t"])){

sortCars($\_GET["t"]);

}

session\_destroy();

?>

<form action="<?php echo $\_SERVER['PHP\_SELF']; ?>" method="post">

<table border='2'>

<tr><th><a href="buyCars.php?t=1">Name</a></th><th><a href="buyCars.php?t=2">Model</a></th><th>Color</th><th>Cylinder</th><th>Delete</th></tr>

<!-- Display the session -->

<?php

foreach ($\_SESSION["cars"] as $name => $data) {

echo "<tr>";

echo "<td>$name</td><td>".$data["model"]."</td><td>".$data["color"]."</td><td>".$data["cylinder"]."</td>";

echo "<td><input type='checkbox' name='delete[]' value='".$name."'></td>";

echo "</tr>";

}

?>

<tr><td colspan="4">&nbsp;</td><td><input type="submit" name="del" value="delete"></tr>

</table>

</form>

<form action="<?php echo $\_SERVER['PHP\_SELF']; ?>" method="post">

<h2>Welcome to Toyota. Buy a car:</h2>

<?php dispBuyCar($allcars); ?>

<input type="submit" name="newcar" value="Buy">

</form>

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Good luck