1. **Write an algorithm, draw a flowchart and Write a PHP script to print the value of variable in PHP and use print function for printing.**

```
<!DOCTYPE html>
<html>
<body>
<?php
print "Hello world!";
?>
</body>
</html>
```

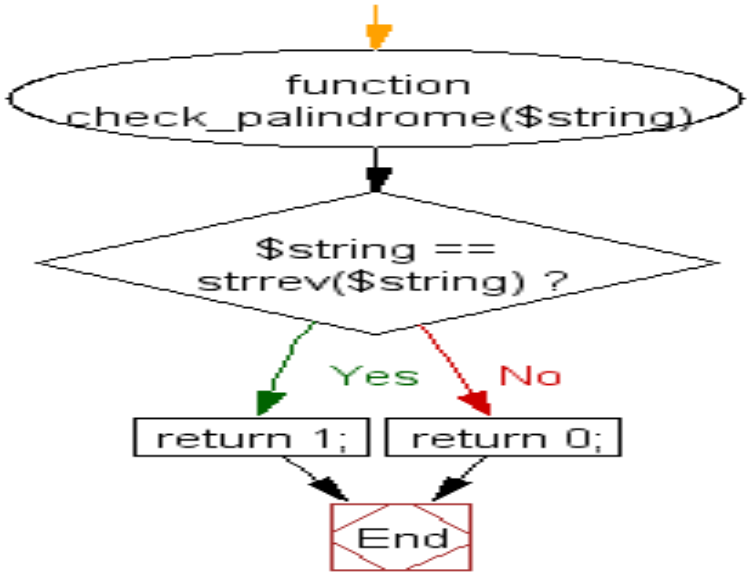
OR

```
<?php
$str = "Hello world!";
print $str;
print "<br>What a nice day!";
?>
```

……

2. **Write an algorithm, draw a flowchart and Write a PHP script to check whether an entered string is palindrome or not.**

```
<?php
function check_palindrome($string)
{
  if ($string == strrev($string))
     return 1;
  else
          return 0;
}
echo check_palindrome('madam')."\n";
?>
```



……..

3. **Write an algorithm, draw a flowchart and Write a PHP script to print the values of variable using echo.**

PHP Code:

```
<?php

echo "Tomorrow I \'ll learn PHP global variables."."\n";

echo "This is a bad command : del c:\\*.*"."\n";

?>
```

Sample Output:

```
Tomorrow I 'll learn PHP global variables.
This is a bad command : del c:\*.*
```

Flowchart:

…….

4. **Write an algorithm, draw a flowchart and Write a PHP script to print Fibonacci series using recursion.**

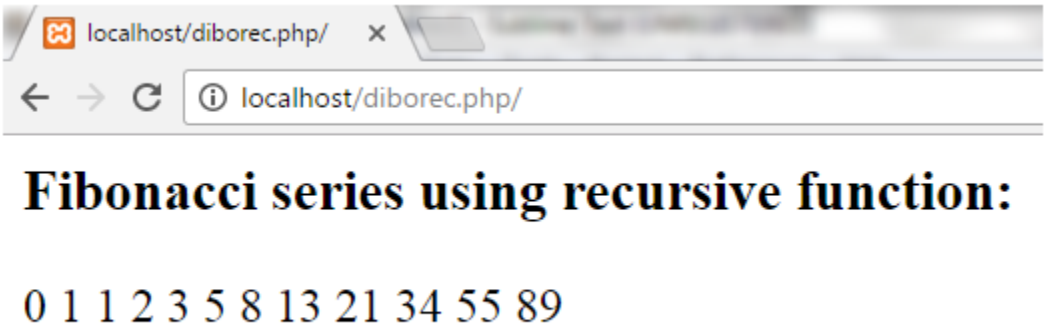
Fibonacci series using Recursive function

Recursion is a phenomenon in which the recursion function calls itself until the base condition is reached.

```
<?php
/* Print fiboancci series upto 12 elements. */
$num = 12;
echo "<h3>Fibonacci series using recursive function:</h3>";
echo "\n";
/* Recursive function for fibonacci series. */
function series($num){
   if($num == 0){
```

```
   return 0;
   }else if( $num == 1){
return 1;
}  else {
return (series($num-1) + series($num-2));
}
}
/* Call Function. */
for ($i = 0; $i < $num; $i++){
echo series($i);
echo "\n";
}
```

Output:



Fibonacci Series Algorithm:

- **Start**
- **Declare variables i, a,b , show**
- **Initialize the variables, a=0, b=1, and show =0**
- **Enter the number of terms of Fibonacci series to be printed**
- **Print First two terms of series**
- **Use loop for the following steps**
  ->show=a+b
  ->a=b

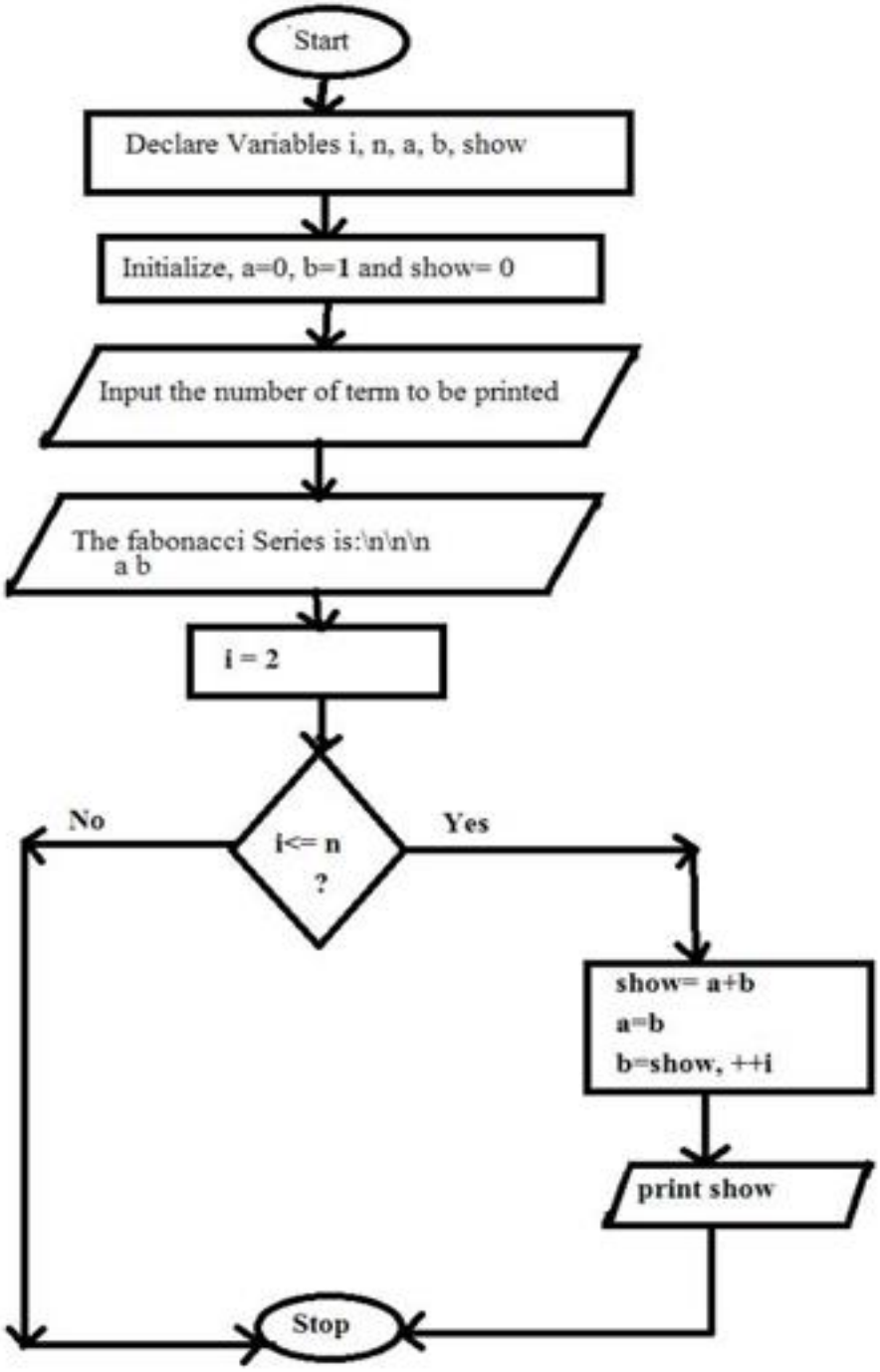
->b=show

->increase value of i each time by 1

-> print the value of show

- **End**

Fibonacci Series Flowchart:



5. Write an algorithm, draw a flowchart and Write a PHP script to print the following pattern using nested loop

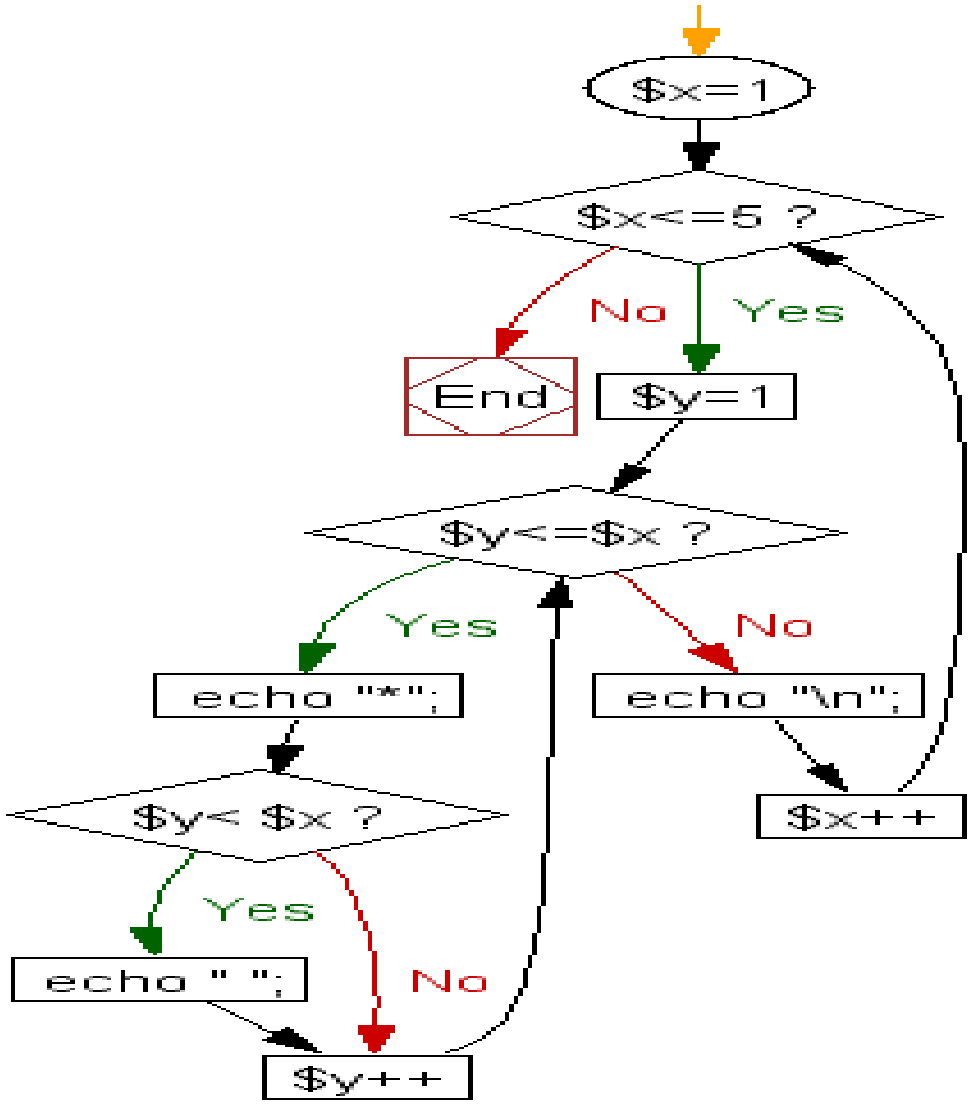
```
*
 * *
* * *
* * * *
* * * * *
```

```
<?php
for($x=1;$x<=5;$x++)
{
  for ($y=1;$y<=$x;$y++)
   {
          echo "*";
            if($y< $x)
                  {
                    echo " ";
                  }
    }
 echo "\n";
}
?>
```

Sample Output:

```
*
* *
* * *
* * * *
* * * * *
```

Flowchart :



Algorithm:

- **Start**
- **Declare and initialize required variables for controlling loop, inputting number of rows and printing numbers.**
- **Enter the number of rows to be printed.**
- **Print the number in standard format utilizing the application of loop as follows**

  do for x=1 to n

  do for y=1 to n

  print number

  increase the number ans y by 1

  go to next line

- **Print triangle**
- **Stop**

…….

6. **Write an algorithm, draw a flowchart and Write a PHP script to replace the first 'the' of the following string with 'That'**

– Sample: ‘the quick brown fox jumps over the lazy dog’.

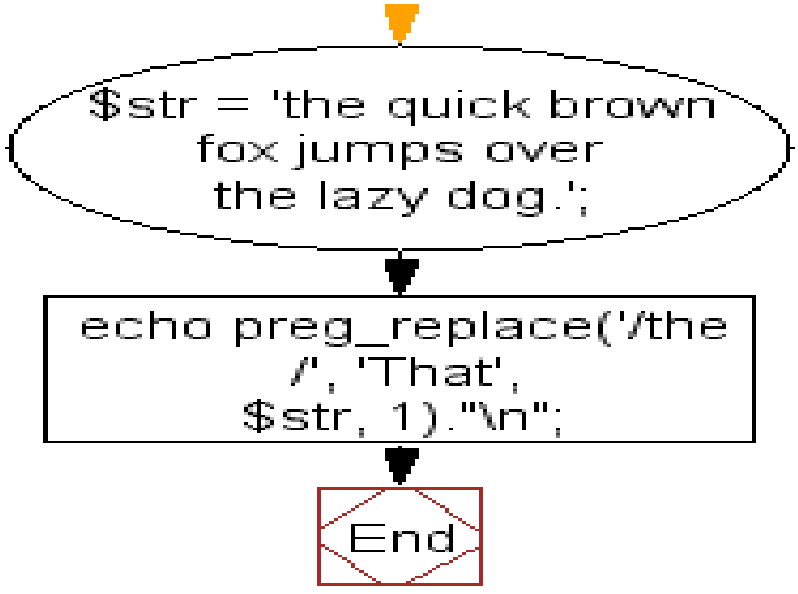
PHP Code:

```
<?php
$str = 'the quick brown fox jumps over the lazy dog.';
echo preg_replace('/the/', 'That', $str, 1)."\n";
?>
```

Sample Output:

```
That quick brown fox jumps over the lazy dog.
```

Flowchart :



7. **Write an algorithm, draw a flowchart and Write a PHP script to that creates the following table using for loops. Add cell padding="3px" and cell spacing="0px" to table tag.**

1 * 1 = 1	1 * 2 = 2	1 * 3 = 3	1 * 4 = 4	1 * 5 = 5
2 * 1 = 2	2 * 2 = 4	2 * 3 = 6	2 * 4 = 8	2 * 5 = 10
3 * 1 = 3	3 * 2 = 6	3 * 3 = 9	3 * 4 = 12	3 * 5 = 15
4 * 1 = 4	4 * 2 = 8	4 * 3 = 12	4 * 4 = 16	4 * 5 = 20
5 * 1 = 5	5 * 2 = 10	5 * 3 = 15	5 * 4 = 20	5 * 5 = 25
6 * 1 = 6	6 * 2 = 12	6 * 3 = 18	6 * 4 = 24	6 * 5 = 30

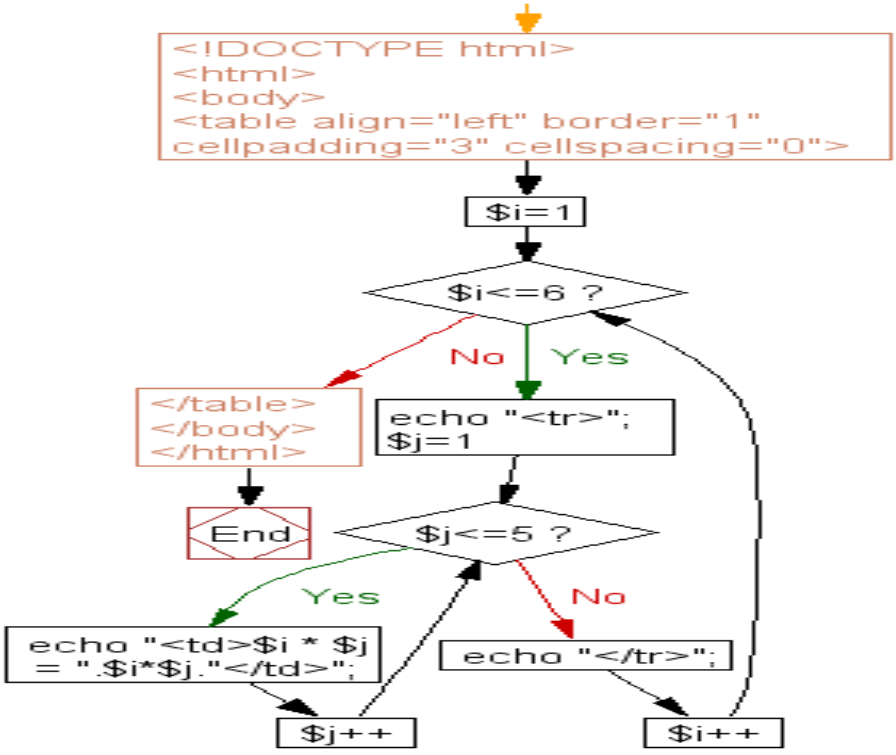
```
<!DOCTYPE html>
<html>
<body>
<table align="left" border="1" cellpadding="3" cellspacing="0">
<?php
for($i=1;$i<=6;$i++)
{
echo "<tr>";
for ($j=1;$j<=5;$j++)
 {
 echo "<td>$i * $j = ".$i*$j."</td>";
 }
 echo "</tr>";
 }
```

```
?>

</table>

</body>

</html>
```

Sample Output:

1 * 1 = 1	1 * 2 = 2	1 * 3 = 3	1 * 4 = 4	1 * 5 = 5
2 * 1 = 2	2 * 2 = 4	2 * 3 = 6	2 * 4 = 8	2 * 5 = 10
3 * 1 = 3	3 * 2 = 6	3 * 3 = 9	3 * 4 = 12	3 * 5 = 15
4 * 1 = 4	4 * 2 = 8	4 * 3 = 12	4 * 4 = 16	4 * 5 = 20
5 * 1 = 5	5 * 2 = 10	5 * 3 = 15	5 * 4 = 20	5 * 5 = 25
6 * 1 = 6	6 * 2 = 12	6 * 3 = 18	6 * 4 = 24	6 * 5 = 30

Flowchart :



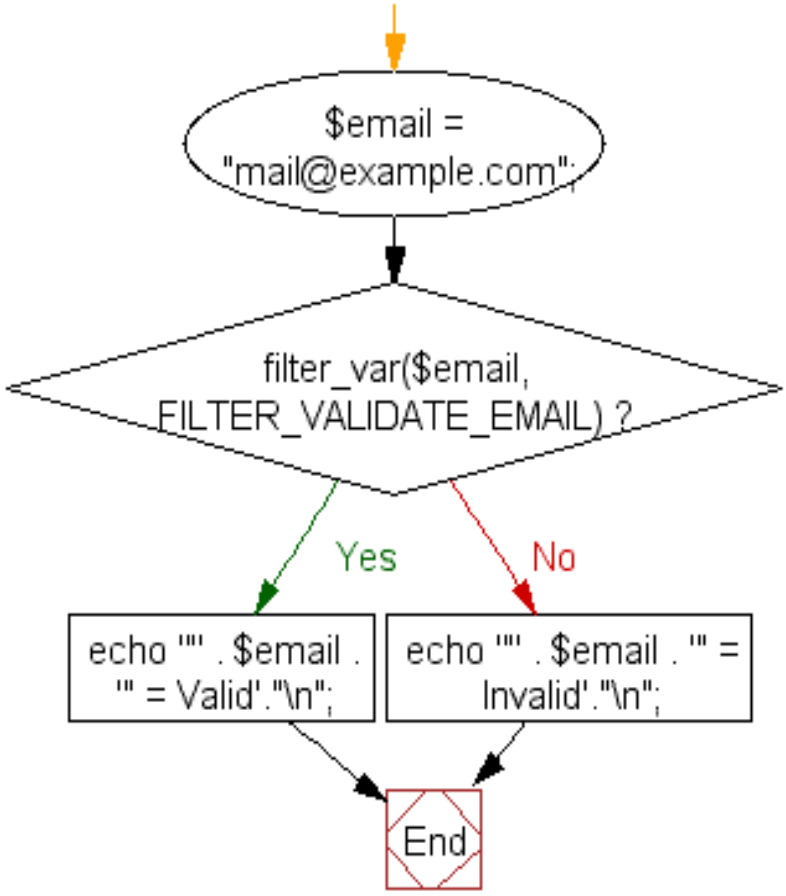
8. **Write an algorithm, draw a flowchart and Write a PHP script to check that email id is valid or not.**

```
<?php
// pass valid/invalid emails
$email = "mail@example.com";
if (filter_var($email, FILTER_VALIDATE_EMAIL))
{
    echo '"' . $email . '" = Valid'."\n";
}
else
{
    echo '"' . $email . '" = Invalid'."\n";
}
?>
```

Sample Output:

```
"mail@example.com" = Valid
```

Flowchart:


$email = "mail@example.com";
filter_var($email, FILTER_VALIDATE_EMAIL) ?
Yes
No
echo "" . $email . '" = Valid'."\n";
echo "" . $email . '" = Invalid'."\n";
End

9. **Write a PHP script that inserts a new item in an array in any position.**

Sample Solution:

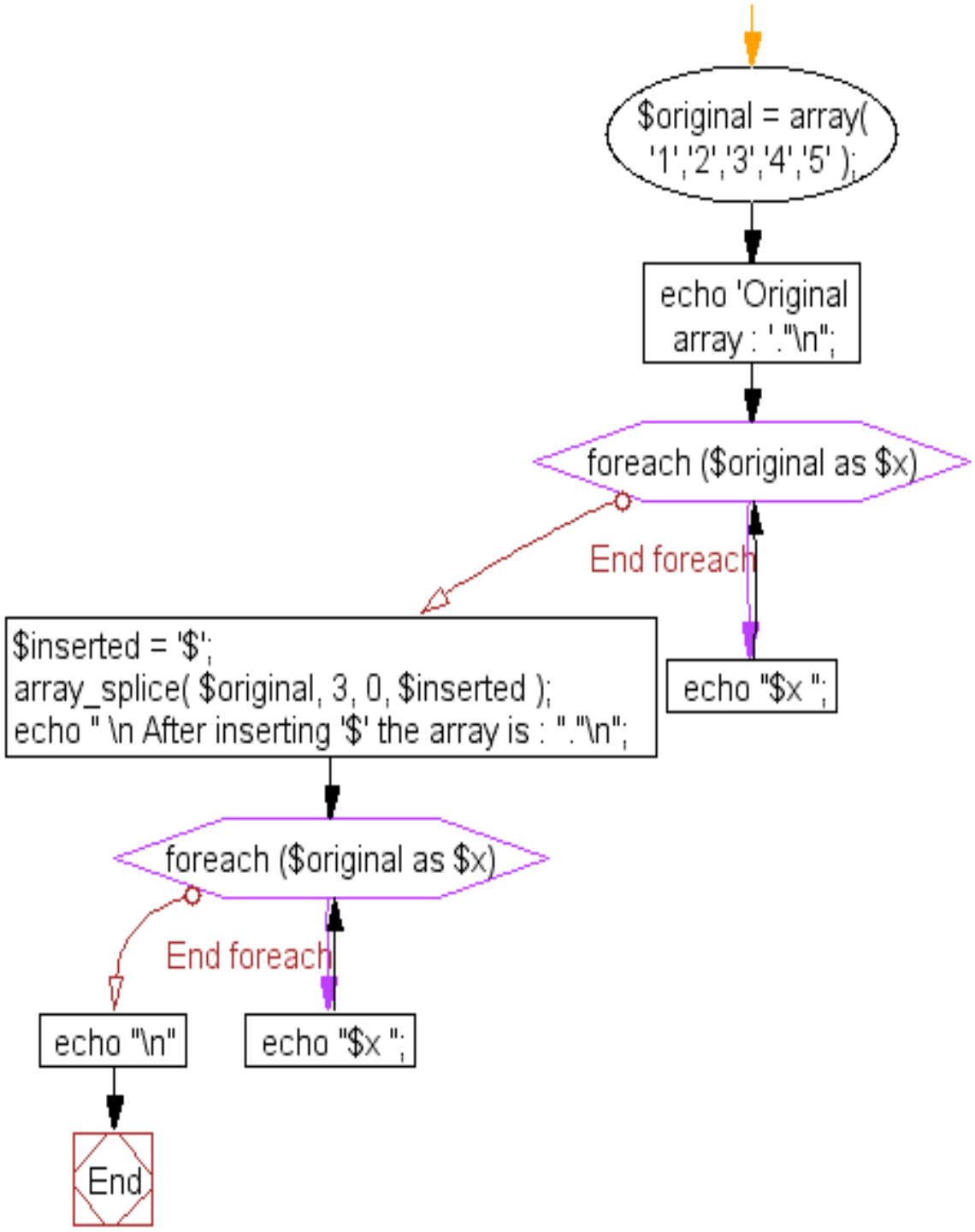
PHP Code:

```
<?php
$original = array( '1','2','3','4','5' );
echo 'Original array : '."\n";
foreach ($original as $x)
{echo "$x ";}
$inserted = '$';
array_splice( $original, 3, 0, $inserted );
echo " \n After inserting '$' the array is : "."\n";
foreach ($original as $x)
{echo "$x ";}
echo "\n"
?>
```

Sample Output:

```
Original array :
1 2 3 4 5
 After inserting '$' the array is :
1 2 3 $ 4 5
```

Flowchart:


$original = array('1','2','3','4','5');
echo 'Original array : '."\n";
foreach ($original as $x)
End foreach
echo "$x ";
$inserted = '$';
array_splice($original, 3, 0, $inserted);
echo " \n After inserting '$' the array is : "."\n";
foreach ($original as $x)
End foreach
echo "$x ";
echo "\n"
End

10. **Write an algorithm, draw a flowchart and Write a PHP script to create a simple 'birthday countdown' script, the script will count the number of days between current day and birth day.**

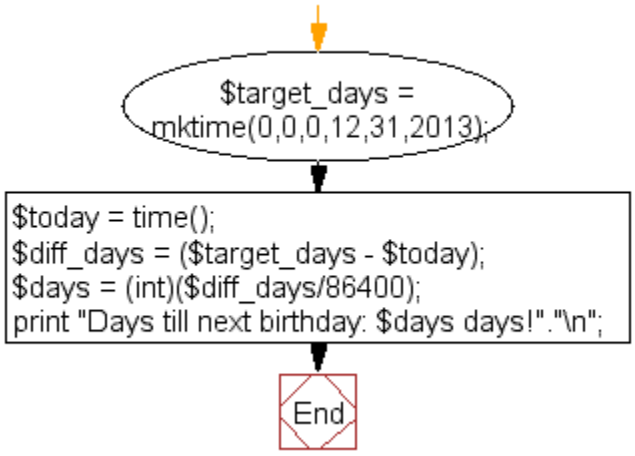
PHP Code:

```
<?php

$target_days = mktime(0,0,0,12,31,2013);// modify the birth day 12/31/2013

$today = time();

$diff_days = ($target_days - $today);

$days = (int)($diff_days/86400);

print "Days till next birthday: $days days!"."\n";

?>
```

Sample Output:

```
Days till next birthday: -1143 days!
```

Flowchart :



11. **Write an algorithm, draw a flowchart and Write a PHP script to sort an array of positive integers using the Sort function asort() and ksort().**

```
<?php

echo "

Associative array : Ascending order sort by value

";

$array2=array("Sophia"=>"31","Jacob"=>"41","William"=>"39","Ramesh"=>"40"); asort($array2);

foreach($array2 as $y=>$y_value)

{

echo "Age of ".$y." is : ".$y_value."

";

}

echo "

Associative array : Ascending order sort by Key

";

$array3=array("Sophia"=>"31","Jacob"=>"41","William"=>"39","Ramesh"=>"40"); ksort($array3);

foreach($array3 as $y=>$y_value)

{

echo "Age of ".$y." is : ".$y_value."

";
```

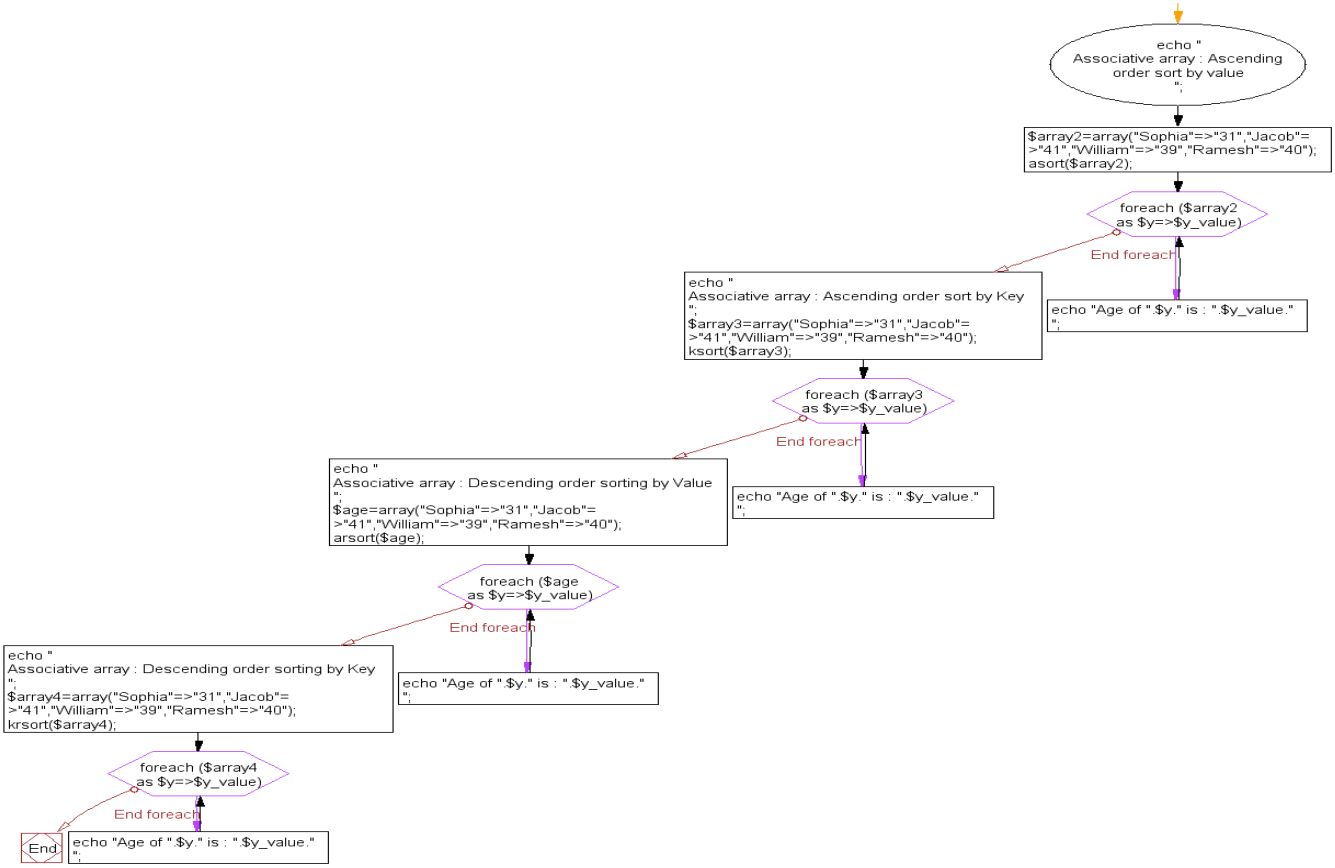
```
}

echo "

Associative array : Descending order sorting by Value

";

$age=array("Sophia"=>"31","Jacob"=>"41","William"=>"39","Ramesh
"=>"40");

arsort($age);

foreach($age as $y=>$y_value)

{

echo "Age of ".$y." is : ".$y_value."

";

}

echo "

Associative array : Descending order sorting by Key

";

$array4=array("Sophia"=>"31","Jacob"=>"41","William"=>"39","Ram
esh"=>"40"); krsort($array4);

foreach($array4 as $y=>$y_value)

{

echo "Age of ".$y." is : ".$y_value."

";

}

?>
```

Copy

Sample Output:

```
Associative array : Ascending order sort by value
Age of Sophia is : 31
Age of William is : 39
Age of Ramesh is : 40
Age of Jacob is : 41

Associative array : Ascending order sort by Key
Age of Jacob is : 41
Age of Ramesh is : 40
Age of Sophia is : 31
Age of William is : 39

Associative array : Descending order sorting by Value
Age of Jacob is : 41
Age of Ramesh is : 40
Age of William is : 39
Age of Sophia is : 31

Associative array : Descending order sorting by Key
Age of William is : 39
Age of Sophia is : 31
Age of Ramesh is : 40
Age of Jacob is : 41
```

Flowchart:



-

12. Write a SQL statement to create a simple table countries including columns country_id,country_name and region_id.

Sample Solution:

```
CREATE TABLE countries(
COUNTRY_ID varchar(2),
COUNTRY_NAME varchar(40),
REGION_ID decimal(10,0)
);
```

Copy

Let execute the above code in MySQL 5.6 command prompt

Here is the structure of the table:

```
mysql> DESC countries;
+-------------+--------------+------+-----+---------+-------+
| Field       | Type         | Null | Key | Default | Extra |
+-------------+--------------+------+-----+---------+-------+
| COUNTRY_ID   | varchar(2)   | YES |    | NULL    |       |
| COUNTRY_NAME | varchar(40)  | YES |    | NULL    |       |
| REGION_ID    | decimal(10,0) | YES |    | NULL    |       |
+-------------+--------------+------+-----+---------+-------+
```

13. **Write an algorithm, draw a flowchart and Write a PHP script to for Creating, Retrieving and Deleting data from the cookie using POST Method.**

What is a Cookie

A cookie is a small text file that lets you store a small amount of data (nearly 4KB) on the user's computer. They are typically used to keeping track of information such as username that the site can retrieve to personalize the page when user visit the website next time.

Setting a Cookie in PHP

The setcookie() function is used to set a cookie in PHP. Make sure you call the setcookie()function before any output generated by your script otherwise cookie will not set. The basic syntax of this function can be given with:

setcookie(name, value, expire, path, domain, secure);

Here's an example that uses setcookie() function to create a cookie named username and assign the value value John Carter to it. It also specify that the cookie will expire after 30 days (30 days * 24 hours * 60 min * 60 sec).

Example

```
<?php
// Setting a cookie
setcookie("username", "John Carter", time()+30*24*60*60);
?>
```

Accessing Cookies Values

The PHP $_COOKIE superglobal variable is used to retrieve a cookie value. It typically an associative array that contains a list of all the cookies values sent by the browser in the current request, keyed by cookie name. The individual cookie value can be accessed using standard array notation, for example to display the username cookie set in the previous example, you could use the following code.

```
<?php
// Accessing an individual cookie value
echo $_COOKIE["username"];
?>
```

Removing Cookies

You can delete a cookie by calling the same setcookie() function with the cookie name and any value (such as an empty string) however this time you need the set the expiration date in the past, as shown in the example below:

```
<?php
```

```
// Deleting a cookie
setcookie("username", "", time()-3600);
?>
```

14. **Write a SQL statement to create table countries including columns country_id, country_name and region_id and make sure that the column country_id will be unique and store an auto incremented value.**

Sample Solution:

```
CREATE TABLE IF NOT EXISTS countries (

COUNTRY_ID integer NOT NULL UNIQUE AUTO_INCREMENT PRIMARY KEY,

COUNTRY_NAME varchar(40) NOT NULL,

REGION_ID decimal(10,0) NOT NULL

);
```

Here is the structure of the table:

```
mysql> DESC countries;
+--------------+--------------+------+-----+---------+-------+
| Field        | Type         | Null | Key | Default | Extra |
+--------------+--------------+------+-----+---------+-------+
| COUNTRY_ID   | varchar(2)   | NO   | PRI |         |       |
| COUNTRY_NAME | varchar(40)  | YES  |     | NULL    |       |
| REGION_ID    | decimal(10,0) | YES  |     | NULL    |       |
+--------------+--------------+------+-----+---------+-------+
```

15. **Write an algorithm, draw a flowchart and Write a PHP script to convert a date from yyyymm-dd to dd-mm-yyyy. Sample Date: 2012-09-12 Expected Result: 12-09-2012**

Sample Solution:

PHP Code:

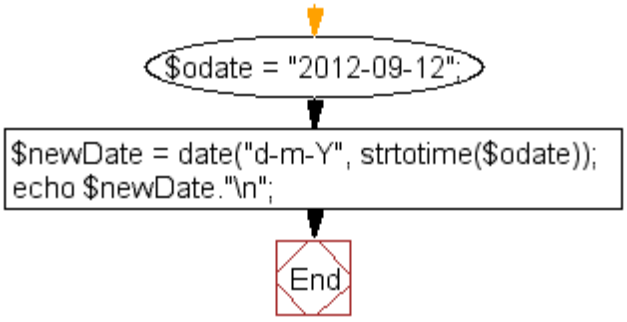
```
<?php
$odate = "2012-09-12";
$newDate = date("d-m-Y", strtotime($odate));
echo $newDate."\n";
?>
```

Copy

Sample Output:

12-09-2012

Flowchart :



16. **Write a SQL statement to create a table named countries including columns country_id, country_name and region_id and make sure that no countries except Italy, India and China will be entered in the table.**

Sample Solution:

```
CREATE TABLE IF NOT EXISTS countries (
COUNTRY_ID varchar(2),
COUNTRY_NAME varchar(40)
CHECK(COUNTRY_NAME IN('Italy','India','China')) ,
REGION_ID decimal(10,0)
```

```
);
```

Here is the structure of the table:

```
mysql> DESC countries;
+-------------+--------------+------+-----+---------+-------+
| Field       | Type         | Null | Key | Default | Extra |
+-------------+--------------+------+-----+---------+-------+
| COUNTRY_ID   | varchar(2)    | YES |     | NULL    |       |
| COUNTRY_NAME | varchar(40)   | YES |     | NULL    |       |
| REGION_ID    | decimal(10,0) | YES |     | NULL    |       |
+-------------+--------------+------+-----+---------+-------+
```

17. **Write an algorithm, draw a flowchart and Write a PHP script to remove the whitespaces from a string.**

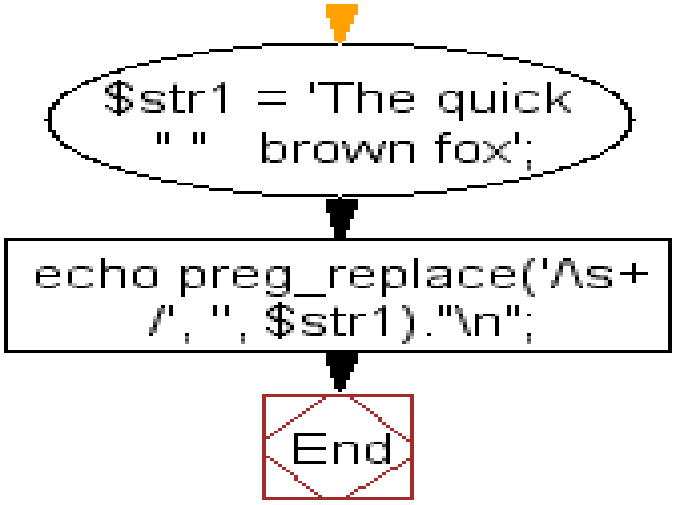
Sample Solution:

```
<?php
$str1 = 'The quick " "   brown fox';
echo preg_replace('/\s+/', '', $str1)."\n";
?>
```

Sample Output:

```
Thequick""brownfox
```

Flowchart :



18. Write a SQL statement to insert a record with your own value into the table countries against each columns.

Here in the following is the structure of the table countries.

```
+-------------+--------------+------+-----+---------+-------+
| Field       | Type         | Null | Key | Default | Extra |
+-------------+--------------+------+-----+---------+-------+
| COUNTRY_ID   | varchar(2)    | YES |     | NULL    |       |
| COUNTRY_NAME | varchar(40)   | YES |     | NULL    |       |
| REGION_ID    | decimal(10,0) | YES |     | NULL    |       |
+-------------+--------------+------+-----+------
```

Sample Solution:

```
INSERT INTO countries VALUES('C1','India',1001);
```

Here is the structure of the table:

```
mysql> SELECT * FROM countries;
+------------+--------------+-----------+
| COUNTRY_ID | COUNTRY_NAME | REGION_ID |
+------------+--------------+-----------+
| C1         | India        |      1001 |
+------------+--------------+-----------+
```

19. **Write an algorithm, draw a flowchart and Write a PHP function that checks if a string is all lower case.**

Sample Solution:

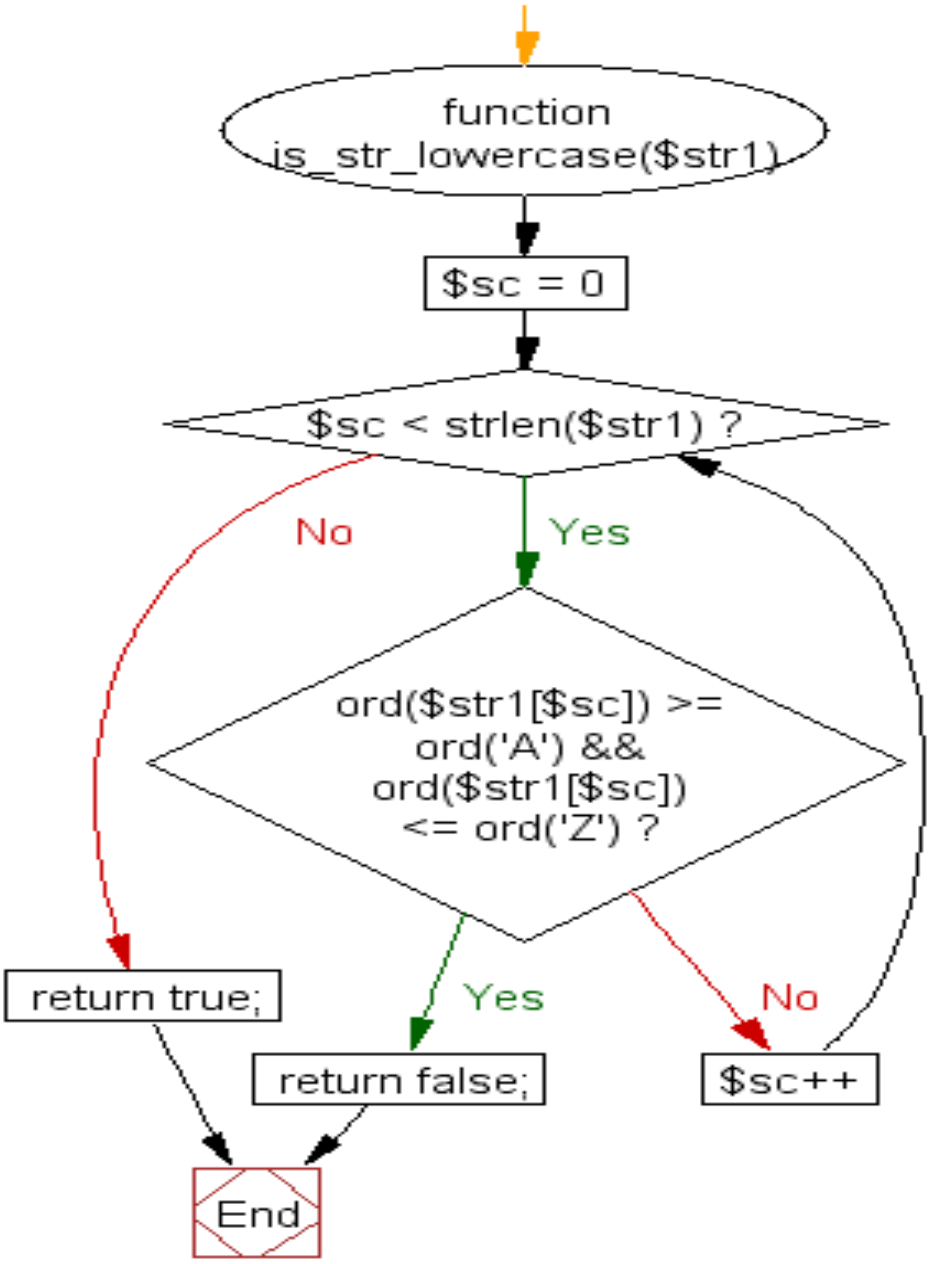
```
<?php
function is_str_lowercase($str1)
  {
   for ($sc = 0; $sc < strlen($str1); $sc++) {
                if (ord($str1[$sc]) >= ord('A') &&
        ord($str1[$sc]) <= ord('Z')) {
     return false;
       }
       }
```

```
    return true;
     }
var_dump(is_str_lowercase('abc def ghi'));
var_dump(is_str_lowercase('abc dEf ghi'));
?>
```

Sample Output:

```
bool(true)
bool(false)
```

Flowchart :


function
is_str_lowercase($str1)
$sc = 0
$sc < strlen($str1) ?
No
Yes
ord($str1[$sc]) >=
ord('A') &&
ord($str1[$sc])
<= ord('Z') ?
Yes
No
return true;
return false;
$sc++
End

20. **Write a SQL statement to rename the table countries to country_new.**

Here is the list of tables.

```
+--------------+
| Tables_in_hrr |
+--------------+
| countries     |
| departments   |
| dup_countries |
| employees     |
| jobs          |
+--------------+
```

Code:

```
ALTER TABLE countries RENAME country_new;
```

Now, after execute the command see the list of tables.

```
+--------------+
| Tables_in_hrr |
+--------------+
| country_new   |
| departments   |
| dup_countries |
| employees     |
| jobs          |
+--------------+
```