

**Source File:** ~/public.html/lab06.php  
**Input:** URL  
**Output:** Standard Output  
**Value:** 3

Write a program that will accept three positive integers that represent a date. The input to your program will be a string via a URL. This string should be tokenized using the space character as a delimiter. Let the first integer represent the month, the second the day, and the third the year. Determine the day of the week on which the given date fell/falls/will fall. Print the day of the week as well as the date.

The Rev. Mr. Zeller developed a formula for computing the day of the week on which a given date fell or will fall. Let  $a$ ,  $b$ ,  $c$ , and  $d$  be integers defined as follows:

$a$  = the month of the year, with March = 1, April = 2, and so on, with January and February being counted as months 11 and 12 of the **preceding** year.

$b$  = the day of the month.

$c$  = the last two digits of the year.

$d$  = the first two digits of the year.

Then calculate the following integer quantities:

$w$  = the integer quotient  $(13a - 1)/5$ .

$x$  = the integer quotient  $c/4$ .

$y$  = the integer quotient  $d/4$ .

$z = w + x + y + b + c - 2d$ .

$r = z$  reduced modulo 7; that is,  $r$  is the remainder of  $z$  divided by 7;  $r = 0$  represents Sunday,  $r = 1$  or  $r = -6$  represents Monday,  $r = 2$  or  $r = -5$  represents Tuesday, and so on.

For example, July 31, 1929, gives  $a = 5, b = 31, c = 29, d = 19, w = 12, x = 7, y = 4, z = 45, r = 3$ . Thus, July 31, 1929 occurred on a Wednesday. January 3, 1988, gives  $a = 11, b = 3, c = 87, d = 19, w = 28, x = 21, y = 4, z = 105, r = 0$ . Thus, January 3, 1988 occurred on a Sunday. January 1, 1901, gives  $a = 11, b = 1, c = 0, d = 19, w = 28, x = 0, y = 4, z = -5, r = -5$ . Thus January 1, 1901 occurred on a Tuesday.

Include the following functions:

- `function dayOfWeek($month, $day, $year)`
- `function printDayOfWeek($r)`

Some additional notes for this assignment:

- Insert an HTML comment at the top of the document identifying you as the author, the class, and the assignment number.
- Add an echo statement to the beginning of the script section that will display your name, the course number, and the assignment number.
- Since this assignment uses several PHP code blocks, it's always a good idea to check for syntax errors. You can do this by using the `-l` option to the `php` command at the command line as in

```
1 newuser@csunix ~/public_html> php -l lab06.php
2 No syntax errors detected in lab06.php
```

- You should always validate the rendered HTML code. The validator is discussed near the top of p. 6 and in Appendix A on pp. 629–631. By including the following link and image, a user will be able to click the image and receive a report from the validator.

```
1 <?php
2   $location = 'https://' . $_SERVER['HTTP_HOST'] . $_SERVER['REQUEST_URI'];
3   $location = urlencode($location);
4   echo '<a href="https://validator.w3.org/nu/?doc=' . $location . '">';
5   ?>
6   
8 </a>
```

After the document is valid, open it in your Web browser to see how it renders.

Upon completion of this assignment, submit your source file via Blackboard.