Learning Objectives:

‣ Write PHP code to create and call functions
‣ Write PHP code to use loops and conditional statements
‣ Write PHP code to create and manipulate indexed arrays

Write PHP code to produce the following HTML output in a webpage

Task 1: Use PHP to output your name, you favourite ice-cream flavour and your birth year using variables. Sample HTML code follows below to get you started.

```html
<!DOCTYPE html>
<html>
    <head>
        <title> My First PHP Exercise </title>
    </head>
    <body>
    <div>
        <h3> My name: </h3>
        <p> <!--NAME--> </p>
        <h3> My favourite ice cream flavour: </h3>
        <p> <!--FLAVOUR--> </p>
        <h3> My birth year: </h3>
        <p> <!--YEAR--> </p>
    </div>
    </body>
```

Tip: PHP variables begin with a $. Refer to slide 7, Week 1 supplemental slides.

Task 2: Use PHP to calculate the difference between your birth year and this year to show your age (in human years) <u>dynamically</u> on the web page you developed in exercise 1. Include today's date on your page.

```html
<!DOCTYPE html>
<html>
    <head>
        <title> My Second PHP Exercise </title>
    </head>
    <body>
    <div>
        <h3> Today's Date: </h3>
        <p> <!--DATE--> </p>
        <h3> My name: </h3>
        <p> <!--NAME--> </p>
        <h3> My favourite ice cream flavour: </h3>
        <p> <!--FLAVOUR--> </p>
        <h3> My age: </h3>
        <p> <!--AGE--> </p>
    </div>
    </body>
</html>
```

Tip: PHP Date Function: **https://www.php.net/manual/en/function.date.php**

idate( ) function can also be used which returns an integer value.

Task 3:

Write a PHP function called singItLionel( ) which prints the following when it is called 3 times:

> You're once..
>
> Twice..
>
> Three **times** a laaaydaaay

```
<!DOCTYPE html>
<html>
    <head>
        <title> My Third PHP Exercise </title>
    </head>
    <body>
    <?php
        function singItLionel(){
            //fill me in

        }
        singItLionel();
        singItLionel();
        singItLionel();
    ?>

    </body>
</html>
```

Note the bold word and new line for each print statement.

Tip: You need to use a static variable. Refer to slide 13, Week 1 supplemental slides.

Task 4: Create an indexed array and use values from the array

The **bold** content below should be **dynamically produced** on the HTML page using an array called players and array indices.

> The game will be played by **4** players. **Lou** and **Sid** will be paired and **Jim** and **Frank** will be paired.

```
<!DOCTYPE html>
<html>
    <head>
        <title> My Fourth PHP Exercise </title>
    </head>
    <body>
    <?php
        echo "The game will be played by *blank* players.
            *blank* and *blank* will be paired and
            *blank* and *blank* will be paired";

        //fill me in; replace the blanks above with variables
        //don't forget the bold tags!

    ?>

    </body>
</html>
```

Tip: You need to use a create an indexed array. Refer to slide 30, Week 1 supplemental slides.

EXTRA TASKS:

Task T1: Use loops and conditional statements to create an 8x8 board with alternating colour patterns

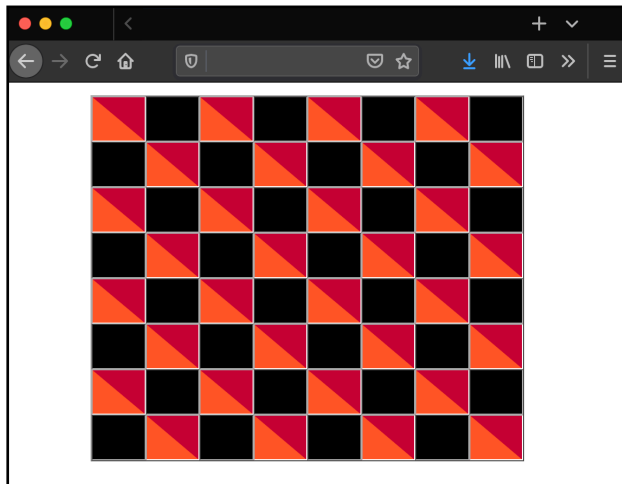The table dimensions: 400px wide. Cell dimensions: 40px square. The following style code produces

```
<!DOCTYPE html>
<html>
    <head>
        <title> My Extra PHP Exercise: T1 </title>
        <style>
            td.halfnhalf {
                background: linear-gradient(to top right, #FF5733  49.5%, #C70039  50.5%);
                color: #fff;
            }
        </style>
    </head>
    <body>
        <?php

          //fill me in with a table, loops and conditional statements
        ?>

    </body>
</html>
```
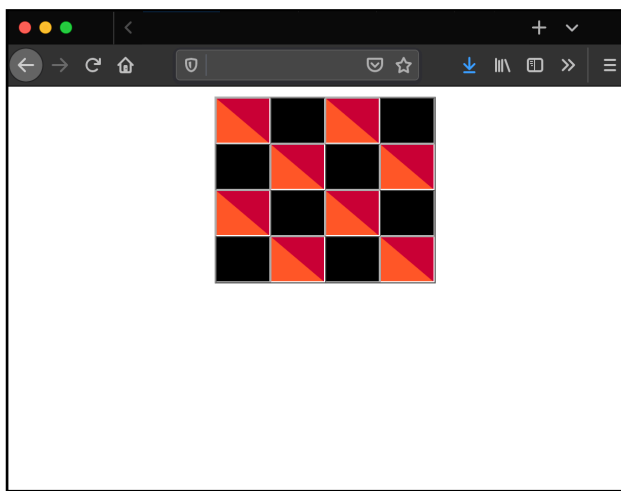
the shading in the first cell. Alternating cells have a black background.

Bonus: Modify your code from Task 2 so that it can produce an NxN grid

Task T2: Calculate and visualise the Hamming distance between two spellings of a word using functions.

Assume strings of the same length are being compared. Highlight the characters that differ and produce the Hamming distance which is the total number of characters that differ between the two strings in sequence.

Comparing: cat and bat
Character Differences: cat
Hamming Distance: 1

Comparing: there and their
Character Differences: there
Hamming Distance: 2

Comparing: wallpaper and windpiper
Character Differences: wallpaper
Hamming Distance: 4

Comparing: live and evil
Character Differences: live
Hamming Distance: 4

Comparing: bogota and toyota
Character Differences: bogota
Hamming Distance: 2