

# Week 4

## Task 1a

```
for($i=0;$i<10;$i++){  
    echo $i+1;  
}
```

## Task 1b

```
function calculateBMI($weight, $height) {  
    return $weight / ($height * $height);  
}  
  
$people = array(  
    array("name" => "John", "height" => 1.75, "weight" => 70),  
    array("name" => "Emma", "height" => 1.6, "weight" => 55),  
    array("name" => "David", "height" => 1.8, "weight" => 85)  
);  
  
foreach ($people as $person) {  
    $bmi = calculateBMI($person["weight"], $person["height"]);  
    $classification = "";  
  
    if ($bmi < 18.5) {  
        $classification = "Underweight";  
    } elseif ($bmi >= 18.5 && $bmi <= 24.9) {  
        $classification = "Normal weight";  
    } elseif ($bmi >= 25 && $bmi <= 29.9) {  
        $classification = "Overweight";  
    } else {  
        $classification = "Obesity";  
    }  
  
    echo $person["name"] . " weighs " . $person["weight"] . " kilos and is " .  
    $person["height"] . " metres tall. " . $person["name"] . "'s BMI is " . $bmi .  
    " which classifies them as " . $classification . "<br>";  
}
```

## Task 2a

- **Indexed Arrays:** These are arrays with numeric indexes starting from 0 by default. The keys are the numbers themselves, and they start from 0 unless specified otherwise.
- **Associative Arrays:** These are arrays where each key is associated with a specific value, rather than a numeric index. The keys can be strings or integers and do not have to follow any particular order.

## Task 2b

- Array A is an **associative array** because its elements are paired with string keys representing colours.
- Array B is an **indexed array** because its elements are accessed by numerical indices starting from 0.
- The keys for Array A are Red , White , Green , and Blue .
- The elements stored in Array B are 22.7 , 28.5 , 22.1

## Task 2c

```
$arrayA = array("Red" => "#FF0000", "White" => "#FFFFFF", "Green" => "#008000",  
"Blue" => "#0000FF");  
$arrayB = array(22.7, 28.5, 22.1);  
  
foreach ($arrayA as $color => $hex) {  
    echo "Color: " . $color . ", Hex Code: " . $hex . "<br>";  
}  
  
for ($i = 0; $i < count($arrayB); $i++) {  
    echo "Value: " . $arrayB[$i] . "<br>";  
}
```

