Software Development Week 3

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1 Operators

1.0.1 Table

Operator	Type of operator	Operation
=	Assignment	assigns a name to a value
¡¿	Comparison	Returns true if the left value does not equal the right value
==	Comparison	Returns true if the left value is equal to the right value
¡=	Comparison	Returns true if the left value is less than or equal to the right value
and	Logical	Returns true is the left and right expressions return true
*	Arithmetic	Returns the product of the left and right values
——	Logical	Returns true if either the left or right value returns true
¿	Comparison	Returns true if the left value is greater than the right value
&&	Logical	Returns true is the left and right expressions return true
!	Comparison	Returns true if the right value equals false
/	Arithmetic	Returns the result of the left value divided by the right value
or	Logical	Returns true if either the left or right value returns true
!=	Comparison	Returns true if the left value does not equal the right value

1.0.2 Identical Operators

The —— and OR operators, && and AND, are identical in practice.

2 Data Types

Data to store	Data type	Justification	Variable name
Person's age	`Uint`	numerical value, cannot be decimal or negative	`$age`
Interest rate	`Float`	Needs to support decimals	`$interest_rate`
Person's surname	`String`	Has characters	`$surname`
Australian postcode	`Uint`	Cannot be decimal or negative	`$postcode`
Australian and international postcodes	Array of String (`String[]`)	List of postcodes, international postcodes can contain letters	`$postcodes`
Person's date of birth	`String`	Too many different formats	`$dob`
State of a light switch	`Bool`	Can be represented as on or off	`$is_on`

3 Conditionals

3.0.1 Switch Statement

```php
<?php
  declare(strict_types = 1);
  function select_choice(int $choice): string {
    switch ($choice) {
      case 1:
        return "Here is your lemonade";
        break;
      case 2:
        return "Here is your orange squash";
        break;
      case 3:
        return "Here is your cola";
        break;
      case 4:
        return "Here is your ginger beer";
        break;
      default:
        return "nuh uh";
        break;
    }
  }
?>
```

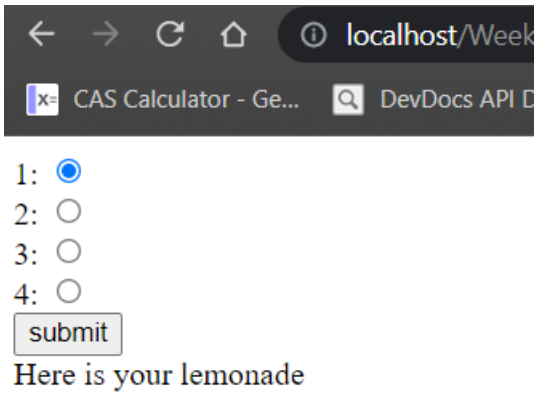

Figure 1: The output of the code shown above

3.0.2 If Statements

```php
<?php
  function age_check(int $age): string {
    if ($age < 3) return "You are too young for school";
    if ($age > 18) return "You do not have to go to school";
    if ($age < 5) return "You can go to preschool";
    if ($age < 12) return "You can go to primary school";
    return "You can go to high school";
  }
?>
```

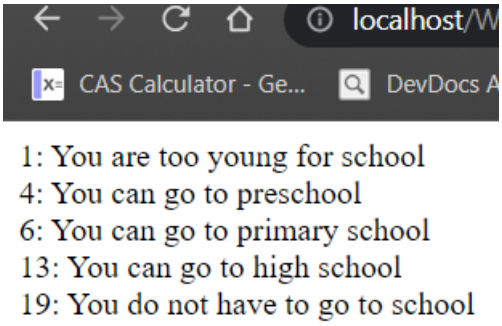

Figure 2: The output of the code shown above