## Tutorial 05: Introduction to JavaScript

1. What is printed to the console when this code runs?

```
let city = "Kuala Lumpur";
function travel(){
    let city = "Johor Bahru";
    console.log(city);
}
travel();
```

Johor Bahru

2. What two values are printed to the console when this code runs?

```
let dailyWeather = "Rain and thunderstorm";
 function forecastWeather () {
    let dailyWeather = "Mostly cloudy";
    console.log(dailyWeather);
}
forecastWeather();
console.log(dailyWeather);
```

Mostly cloudy
Rain and thunderstorm

3. Print out all odd numbers between 10 and 40. Write two solutions: one with a ***while*** loop and one with a ***for*** loop.

```
let n = 10;
while (n<41) {
   if (n%2===1) {
      console.log(n);
   }
   n++;
}
```

```
for (int i=10; i<41; i++) {
    if (i%2===1) {
        console.log(i);
    }
}
```

4. Create an array of movie objects. Each movie should have a `title`, `rating`, and `hasWatched` properties. Iterate through the array and print out something that looks like:

    *You have watched "In Bruges" - 5 stars*
    *You have not seen "Frozen" - 4.5 stars*
    *You have watched "Mad Max Fury Road" - 5 stars*
    *You have not seen "Les Miserables" - 3.5 stars*

    You may use the JavaScript Array `forEach()` iterative method
    References:
    - https://developer.mozilla.org/en-US/docs/Web/JavaScript/Reference/Global_Objects/Array/forEach
    - https://www.freecodecamp.org/news/javascript-foreach-js-array-for-each-example/

```
let movie = [
    ["In Bruges", 5, true],
    ["Frozen", 4.5, false],
    ["Mad Max Fury Road", 5, true],
    ["Les Miserables", 3.5, false]
];
movie.forEach((element) => {
    let string = "";
    if(element[2] == true) {
        string = ("You have watched \"" + element[0] + "\" - " + element[1] + " stars");
    }
    else {
        string = ("You have not seen \"" + element[0] + "\" - " + element[1] + " stars");
    }
    console.log(string);
});
```

**5. Write an external JavaScript named "calculateCost.js" that calculate the cost of the purchasing coffee beans from JavaJam Coffee House.**

a. Create a folder called "**javajam4**" to contain your JavaJam Coffee House website files. Copy all the files from your Tutorial 3 or Tutorial 4's folder (javajam2 or javajam3) into the "**javajam4**" folder. You may organize files and folder structure in your project folder, e.g. create a '**scripts**' folders to store all the JavaScript code used to add interactive functionality to your site.

b. Launch a text editor and open the **menu.html** file. To use an external script, put the name of the JavasScript file in the src (source) attribute of a <script> tag and add the link at the end of <body> section:

**<script type="text/javascript" src="scripts/calculateCost.js"></script>**

c. The prices of the Coffee Beans per pack (500g) are as follows:

- 1: Brazil Cerrado = RM42
- 2: Vanguard Blend = RM42
- 3: Organic Marcala = RM56
- 4: Taster Pack Trio = RM 69

d. Your 'calculateCost' JavaScript program needs to do the following tasks:

i. Ask users to enter the Coffee Bean ID number.

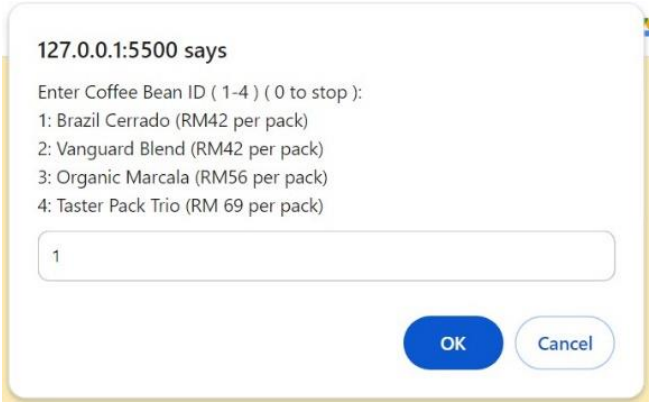


*Figure 1: Menu Page - Ask for the Coffee Bean ID*

ii. Ask users to enter the number of pack of coffee beans that the users want to purchase.

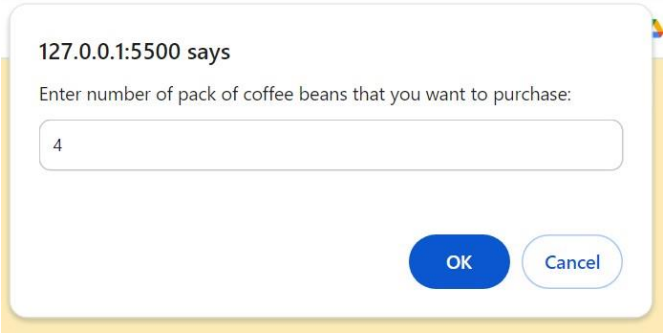


*Figure 2: Menu Page - Ask for the number of pack of coffee bean that the user want to purchase.*

iii. Write a JavaScript function named “calculateTotal” to calculate the total cost of coffee beans. This function should take two parameters (inputs from users – the Coffee Bean ID and number of pack). The function should display the calculated total cost of coffee beans using an alert message:

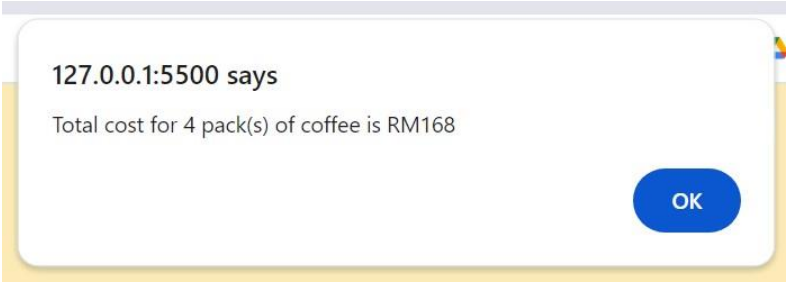


*Figure 3: Menu Page - Display the calculated total cost of the coffee beans*

iv. The program should display an error message when users enter a Coffee Bean ID not between 0 and 4

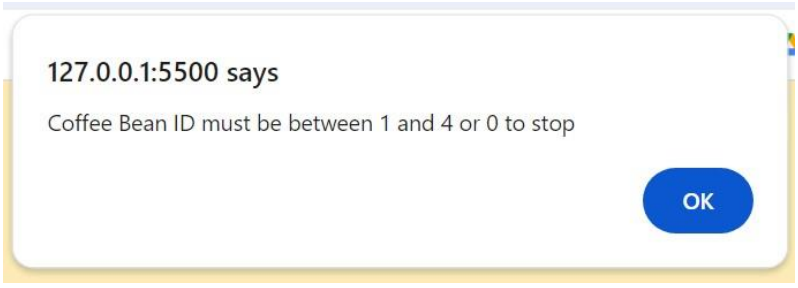


*Figure 4: Menu Page - Display error message when the user enters a class ID not between 0 to 3.*

**Hints:**

- Convert the user input string to integer
- Use a loop to determine when the program should stop looping and display the final result. For example, allow users to enter 0 to stop.
- Write conditional statements to check whether the users enter a correct Coffee Bean ID and calculate the total cost for the coffee beans if users enter a correct Coffee Bean ID.