**School Of computing**

**ST0502 Fundamentals of Programming**

**Practical 1: Introduction to JavaScript Programing**

**What you will learn / do in this lab**

* Write the code to print out a specific output using escape characters
* Identify correctly the validity of a variable name
* Identify the most suitable data type of a given category
* Trace a program to determine what is the final output of the code

1) Write JS code to display the following output using a **single** console.log statement:

|  |  |  |
| --- | --- | --- |
|  | Output should be as shown below | Code |
| (a) | "The quick brown fox  jumps over the  lazy dog." | console.log("The quick brown fox\n jumps over the\nlazy dog."); |
| (b) | \_\_\_\_  /. .\  | \/ |  \\_\_\_\_/ | console.log(' \_\_\_\_\_\_\n/ . . \\\n| \\/ |\n\\\_\_\_\_\_\_/') |
| (c) | I've tried so hard   and got so far and   in the end it doesn't   even matter. | console.log("I\'ve tried so hard\nand got so far and\nin the end it doesn\'t\neven matter.") |

2) Identify and state reason(s) if the following variable names is valid/invalid.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Variable Name | Valid / Invalid | Reason(s) |
|  | n@m3 | Invalid | @ |
|  | while | Invalid | Reserved word |
|  | 1234Hi5 | Invalid | Starts with a digit |
|  | $I\_\_I$ | Valid |  |
|  | P0ck3t | Valid |  |
|  | Mr. Molly | Invalid | . and space |
|  | switch | Invalid | Reserved word |
|  | \_MannerMakesMan | Valid |  |

3) Determine the most suitable data type for the following categories:

|  |  |  |
| --- | --- | --- |
|  | Category | Data Types |
|  | Mailing Address | String |
|  | Body Mass Index (BMI) | Floating Point |
|  | Credit Card Number (16 digits) | String |
|  | Is a year a leap year | Boolean |
|  | Amount of Water in Water Bottle | Floating Point |
|  | Does password contains at least 8 characters | Boolean |
|  | Movie Title & Director | String |
|  | Year Published of a Book | Integer |

4) Trace the following code to determine the final value printed. You are to treat each part independently.

|  |  |  |
| --- | --- | --- |
|  | Program | Output |
| (a) | var x = 4;  x = 5;  console.log(x); | X takes the value 4  X takes the value 5  Display 5 |
| (b) | var x, y;  x = 5;  y = x;  console.log(y); | Declare variables x & y  X takes the value 5  Y takes the value of x  Display 5 |
| (c) | var x, y;  y = x;  console.log(y); | Declare variables x & y  Y takes the value of x  Display undefined |
| (d) | var x, y, z;  z = 2;  y = z;  x = y;  console.log('z'); | Declare variables x, y & z  Z takes the value of 2  Y takes the value of Z  X takes the value of Y  Display z since it is a string |

5) Without using Visual Studio, write a program using only 1 **console.log** to output the following program below:

|  |
| --- |
| Module Code\Name: ST0502\"Fundamentals of Programming"  CA 1 :40%  CA 2 :20%  EXAM :40%  Total---------->:100%  Console.log(“Module code\\Name: ST0502\\\”Fundamentals of Programming\”\n CA 1 :40%\n CA 2 :20%\n EXAM :40%\n Total---->:100%”)  console.log("Module code\\Name: ST0502\\\"Fundamentals of Programming\"\n  'CA 1'      :40%\n  'CA 2'     :20%\n  'EXAM'     :40%\n  'Total'---->:100%") |

**-- End --**