**Matching Questions**

1. In each row in the following table determine if the variable name is a valid Python variable name and if it follows the Mixed-Case style convention. **[4 Marks]**

|  |  |  |
| --- | --- | --- |
| **Variable Name** | **Valid in Python (answer Yes / No)** | **Valid Mixed Case Style (answer Yes / No)** |
| number |  |  |
| StudentNumber |  |  |
| number3 |  |  |
| 1number |  |  |

1. In each row in the following table determine the Python data type corresponding to each variable. **[4 Marks]**

|  |  |
| --- | --- |
| **Variable Assignment** | **Data Type of Variable**  **(Choices: int, float, str, Boolean, list)** |
| var1 = 3.0 |  |
| Var2 = True |  |
| Var3 = 3 |  |
| Var4 = “three” |  |

1. Match the type of error (A,B,C) to the error descriptions provided in the table below.

**[3 Marks]**

|  |  |
| --- | --- |
| **Error Description** | **Type of Error** |
| 1. A missing quotation mark (“) is a \_\_\_\_\_\_\_ | A: Syntax Error |
| 1. Index range error (i.e. “hello”[9]) is a \_\_\_\_\_\_\_ | B: Logic Error |
| 1. An Infinite Loop is a \_\_\_\_\_\_ | C: Run-Time Error |

1. Match the Python control structure (A,B,C,D) to the function descriptions provided in the table below. **[4 Marks]**

|  |  |
| --- | --- |
| **Function Description** | **Control Structure** |
| 1. Repeats a block of code until a condition becomes False \_\_\_\_\_\_ | A: Conditional Loop |
| 1. Provides two alternatives depending on the result of a condition \_\_\_\_\_\_\_ | B: Counted Loop |
| 1. Provides multiple alternatives depending on the result of more than one condition \_\_\_\_\_\_\_ | C: If-else Statement |
| 1. Repeats a block of code for a range of values \_\_\_\_\_\_ | D: If-elif Statement |

1. Draw a flow chart diagram for an While-Loop statement. Provide your diagram below.

**[2 Marks]**

**Short Answer Questions**

1. Write a block of Python code to do the following. (Provide your answer below) **[3 Marks]**
   1. Asks the user to input a favorite colour
   2. Assigns the user’s answer to a variable use to store favorite colours
   3. Prints out an message including the value of the variable for the favorite colour

1. Write a block of Python code to do the following. (Provide your answer below) **[2 Marks]**
   1. Demonstrates the use of a line comment
   2. Demonstrates the use of a block comment (multi-line comment)

1. Write a block of that demonstrates the use of an ***if-elif-else*** statement. (Provide your answer below) **[2 Marks]**

1. Write a block of that demonstrates the use of ***conditional loop***. (Provide your answer below) **[2 Marks]**

1. Write a short program to do the following. (Provide your answer below) **[5 Marks]**
   1. Generates a random number and stores it as an index variable
   2. Defines a list of at least 5 favorite colours
   3. Has a loop that repeats for the number of colours in the list
   4. Prints out the name of the favorite colour that has the same index as the random number
   5. Breaks out of (ends) the loop when the colour is found