Name: Class:

Task 1

1. Insert the following languages into the correct column in the table:

Java, VB, Assembly code, Python, C++, machine code, C#, PHP

|  |  |
| --- | --- |
| **High-level language** | **Low-level language** |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

2. Write True or False beside each of these statements:

|  |  |  |
| --- | --- | --- |
|  |  | **True or False?** |
| 1. | A programming language which has statements resembling English or Maths is classified as a high-level language |  |
| 2. | A high-level language is closer than a low-level language to the machine code that the computer can execute |  |
| 3. | Assembly code does not have to be translated into machine code before it can be executed |  |
| 4. | An interpreter is a program that translates a high level language into machine code |  |
| 5. | A compiler is a program that translates a high level language into machine code |  |
| 6. | There are different assembly languages for different processor types |  |
| 7. | There are different high-level languages for different processor types |  |

3. Write True or False beside each of these statements:

|  |  |  |
| --- | --- | --- |
|  | **Disadvantages of low-level code** | **True or False?** |
| 1. | An assembly program written for one type of processor will not work on a different type of processor |  |
| 2. | Programs written in assembly will usually execute faster than those written in a high-level language |  |
| 3. | Low level languages cannot control individual components in embedded systems such as those found in washing machines or mobile phones |  |
| 4. | Machine code produced from assembly language will occupy more memory than the machine code from a high level language |  |
| 5. | Assembly language is harder to learn than a high level language |  |

Task 2

The Python code below contains a syntax error and a logic error.

1. # Program to perform a bubble sort
2. userName = ["Carl","Tamsin","Eric","Zoe","Alan","Mark"]
3. print("list of unsorted names: ", userName)
4. #numItems is the length of the list
5. while numItems > 1:
6. for count in range(5):
7. if userName[count] > userName[count + 1]:
8. temp = userName[count + 1]
9. userName[count] = userName[count + 1]
10. userName[count + 1] = temp
11. prnt("count = ",count, "userName[count] = ",~  
     userName[count], "userName[count+1] ="  
     ,userName[count+1])
12. numItems = numItems – 1
13. prnt(userName)

(a) There is a syntax error in line 15. What is the error?

(b) Python programs are interpreted.

What, if anything will be printed when the program is run?

(c) If you have Python installed on your computer, try out the code and see if you are right.

(d) If numItems = 6 is now inserted at line 6, what will happen when the program is run?

(e) When this error is fixed, does the program give the correct result? If not, correct it.