

35/100

Question 1

A

Firstly for a function name "InputCostsProcessAndOutputResult" is very long and would be annoying and inefficient to use. The programmer should try and create a shorter and more simplistic name that won't cost as much time when coding. This will not only look more professional and well thought through but it makes the programmers life a lot easier when coding. Another reason why the programmer has not given much attention to the name and structure of the code would be the way the function is named. The programmer used the word "and" meaning the function has multiple uses. By doing this it may confuse the user as there could be multiple answers such as the input cost or the output result. The programmer should create separate functions rather than creating one with the word "and".

B

List of Problems:

- The program doesn't state what currency is being used which have an impact on the calculation of the profit
- What happens if one of the numbers that you are subtracting are negative when doing the calculation, does the application still work?
- Is there a price limit on possible profit made?
- If the user accidentally enters an inappropriate answer will application resume as normal
- Or will they receive an error message telling them to enter an appropriate value
- When entering a username and password is the program case sensitive
- What happens if the user forgets their username or password
- Does the program provide the security administrators details in case the user forgets their username/password

does not
do the
logic.

3 attempts to log in?

C

- The first test I would use to confirm the program is running correctly would be entering a negative value to the cost of product, to see if the program allows the calculation to continue or to see if it correctly displays an error message telling the user to enter an appropriate value
- The next test I would use would be entering a value with a decimal to the cost of product, to see if the program would still continue or if the program would fail as it was not prepared to take values with decimal places
- The next test I would use would be to enter a stupidly high number to the cost of product to test whether the program has a limit that the user cannot exceed
- The next test I would use would enter a string value such as a word like "forty five" to see if the program would display an error message telling you to enter an appropriate value
- The next test I would use would be entering one of the characters in my username with a different case to see if the program is case sensitive

- The next test I would use would be to enter the username and password incorrectly three times to see what display message the program provides and does it give you access to the security administrator contact details in case of an accident ✓
- After entering the incorrect details three times I would close the program down and restart it to see if the program permanently bans you from entering a login or is it only temporary

specific numbers?

6

Question 2

A

- Firstly the way you work out the BMI is the user's weight divided by their height² x
- When you run the program the user should be asked their name
- After the user has entered their name they should also be asked to enter their height and weight
- The program should be able to work out the user's BMI by using a calculation such as Weight / Height²
- The program should use if statements to determine the user's description
- For example the first if statement should be if the user has a BMI less than 18.5 they should receive a message saying that they are underweight
- The next if statement should be if the user has a BMI between 18.51 and 25 they should receive a message saying that they are normal
- The third if statement should be if the user has a BMI between 25.1 and 30 they should receive a message saying that they are Overweight
- The fourth if statement should be if the user has a BMI of 30.1 and over they are obese
- For each of the questions asked to the user they should only be allowed to enter an appropriate value for that question, for example, when asking the user their name they should only be allowed to enter a string value
- The program shouldn't allow the user to enter negative values when asked their height or weight
- The program also shouldn't allow the user to enter stupid values such as being 3 meters tall

15

Question 3

A

- What happens if you enter a negative value when entering a value for the height and width of a rectangle
- What happens if you enter a value with a decimal when entering a value for the height and width of a rectangle
- What happens if you enter a value that is stupidly high such as 300000 when entering a value for the height and width of a rectangle
- Does an error message display telling the user to enter an appropriate value
- When entering a value for the radius can the value be negative?
- What happens if the user enters an appropriately large value for the radius
- Will the user receive an error messages if doing something incorrectly
- Or does the program simply not respond

- Can the user choose option 2 after selecting option 1
- Or must they exit the program and restart it
- What happens if you do not select rectangle or circle and exit before even starting the program properly
- Does the user have to enter the correct units after their values such as centimetres
- Or will the program automatically provide you with the units after you've entered your chosen values
- What happens when both the rectangle and circle have been calculated but the user doesn't exit the program

6

Not designing the logic.


```

1  using System;
2  //morgan jones
3  namespace Question_2
4  {
5      class Program
6      {
7          static void Main(string[] args)
8          {
9              Console.WriteLine("Hello there, what is your name?");
10             String name;
11             name = (Console.ReadLine());
12
13             Console.WriteLine("Hello " + name + " How much do you weigh? (in
14             kg)");
15             double weight;
16             weight = double.Parse(Console.ReadLine());
17
18             Console.WriteLine("Great! Finally how tall are you? (in meters)");
19             double height;
20             height = double.Parse(Console.ReadLine());
21
22             if (weight / height > 18.5) <
23             {
24                 Console.WriteLine("You are underweight");
25             }
26
27             if (weight / height > 25)
28             {
29                 Console.WriteLine("You are normal");
30             }
31
32             if (weight / height > 30)
33             {
34                 Console.WriteLine("You are overweight");
35             }
36
37             if (weight / height < 30.1)
38             {
39                 Console.WriteLine("You are obese");
40             }
41         }
42     }
43 }

```

validation?

18.5 and less than 25

25 - 30

3

incorrect calculation of BMI
incorrect display of results.


```
1  using System; //Morgan Jones
2
3  namespace Q3
4  {
5      class Program
6      {
7          static void Main(string[] args)
8          {
9              Console.WriteLine("Hello World!");
10         }
11     }
12 }
13
```



