Homework

Task 1 .

Read the Python programs below. They are almost identical, except for the fact that the program on the left uses consecutive if statements, whereas the program on the right uses a single if, elif statement.

|  |  |  |
| --- | --- | --- |
| 1  2  3  4  5  6  7 | number = 13:  if number < 10:  print("small")  **if** number < 100:  print("medium")  **if** number < 1000:  print("large") | number = 13:  if number < 10:  print("small")  **elif** number < 100:  print("medium")  **elif** number < 1000:  print("large") |

**Question 1**

When the program on the left is executed, what will be displayed on the screen?

* 1. small
  2. medium
  3. large
  4. medium

large

**Question 2**

When the program on the right is executed, what will be displayed on the screen?

* 1. small
  2. medium
  3. large
  4. medium

large

Task 2 .

**Rearrange** the lines in the Python program below, so that you have a runnable program that simulates the rolling of two dice and displays a message that informs the user of the ‘value’ of the roll.

If the two dice reveal different faces, the value of the roll is the sum of the faces. Otherwise, the value of the roll is four times the (common) face.

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8 | if dice1 == dice2:  print(value)  dice1 = randint(1,6)  from random import randint  value = dice1 + dice2  value = 4 \* dice1  dice2 = randint(1,6)  else: |

Write your rearranged program below. You may also indent any of the lines, if you think that it is necessary.

|  |  |
| --- | --- |
|  |  |

Task 3 .

The **incomplete** program below is supposed to read two numbers that the user types on the keyboard and display the value of the largest one, or a message if they are equal.

|  |  |
| --- | --- |
| 1  2  3  4  5  6  7  8  9 | print("Enter two integers:")  num1 = int(input())  num2 = int(input())  if :  print("The largest of the two is", num1)  elif :  print("The largest of the two is", num2)  elif :  print("These numbers are equal") |

**Step 1**

**Fill in** the conditions in lines 4, 6, and 8 so that the program behaves as specified.

**Step 2**

Is it really necessary to check the condition in line 8 or could the elif statement be replaced with an else statement? Justify your answer.

|  |
| --- |
|  |

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