Questions

1. Are boolean values and a boolean expressions the same thing?

2. What is the result of each of the following boolean expressions?

   1. True and True
   2. True or False
   3. False or False
   4. False and False
   5. not ( True )
   6. not ( False )
   7. not ( False and True )
   8. not ( False or True )
   9. 6 or 7

3. List the six comparison operators and describe what each does?

   1.
   2.
   3.
   4.
   5.
   6.
4. What is the result of each of the following comparisons?
   1. \(6 > 7\)
   2. \(6 \leq 7\)
   3. \(\text{not} (\ 6 < 7\ )\)
   4. \(6 == 7\)
   5. \(6 != 7\)
   6. \(\text{not} (6 == 7)\)

5. Use parenthesis to show the order of operations:
   \[7 != 4 / 6 + 3 \text{ or } 3 + 6 ** 7 == 3 \text{ and } 3 * 4 \% 2 != 1\]

6. What is the syntax for an if statement?

7. How many else-blocks can correspond to an if-block?

8. How many if-blocks can be nested inside an if-block?

9. If there are multiple elif statements in which order are they checked?
Exercises

1. These similar programs use the same conditions and code blocks, which code blocks will be executed when the listed conditions are true?

<table>
<thead>
<tr>
<th>Program 1</th>
<th>Program 2</th>
<th>Program 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>if condition 1:</td>
<td>if condition 1:</td>
<td>if condition 1:</td>
</tr>
<tr>
<td>code block A</td>
<td>code block A</td>
<td>code block A</td>
</tr>
<tr>
<td>if condition 2:</td>
<td>elif condition 2:</td>
<td>elif condition 2:</td>
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<tr>
<td>code block B</td>
<td>code block B</td>
<td>code block B</td>
</tr>
<tr>
<td>if condition 3:</td>
<td>elif condition 3:</td>
<td>elif condition 3:</td>
</tr>
<tr>
<td>code block C</td>
<td>code block C</td>
<td>code block C</td>
</tr>
<tr>
<td>if condition 4:</td>
<td>elif condition 4:</td>
<td>elif condition 4:</td>
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<td>code block D</td>
<td>code block D</td>
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<td>else:</td>
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<tr>
<td>code block E</td>
<td>code block E</td>
<td>code block E</td>
</tr>
</tbody>
</table>

- 1 and 3
- 2 and 4
- 1 and 2
- 3 and 4
2. Write a program that asks the user for a number and prints whether that number is divisible by six.

3. Write a program that asks the user for their first, middle, and last names. Print a sentence telling them which name is the longest.

4. Write a program that asks the user to choose a number between one and ten then prints a different word (of your choosing) depending on the number that they entered.