You can find multiple choice review questions in D2L under: `Assessments->Quizzes`

For all questions, unless otherwise specified assume that there are no syntax errors in any programs or program fragments.

Short answer 1 (code writing):

Modify the starting program so that it will display one error message if the age is too low (below MIN_AGE) and a different message if the age is too high above MAX_AGE):

- Too low: Shows the user entered age and how it is below the minimum valid value for age (the latter should use the named constant MIN_AGE).
- Too high: Shows the user entered age and how it is above the maximum valid value for age (the latter should use the named constant MAX_AGE).

When the user entered age is within the valid range then the program should indicate that age is within the valid range.

<< Starting program >>

```
MAX_AGE = 118
MIN_AGE = 0
age = int(input("Enter your age (%d-%d): " %(MIN_AGE,MAX_AGE)))
```

Short answer 2 (code writing):

Modify the starting program (available via the midterm review link: https://pages.cpsc.ucalgary.ca/~tamj/2022/217F/exams/midterm/index.html).

```
print("Tam text editor options")
print("(n)ew text file")
print("(o)pen existing file")
print("(p)rint current file")
print("(s)ave current file")
print("(q)uit program")
selection = input("Enter your selection: ")

if ((selection == "n") or (selection == "N")):
    print("Creating new file")
if ((selection == "o") or (selection == "O")):
    print("Opening file")
if ((selection == "p") or (selection == "P")):
    print("Printing")
if ((selection == "s") or (selection == "S")):
    print("Saving")
if ((selection == "q") or (selection == "Q")):
    print("Quiting")
```

Without modifying the starting program add the ability for the program to detect and display a helpful error message when the user enters an option that isn't listed above. Because the learning objective for this question is to learn when to use an IF-ELIF vs multiple-IFs don't replace the above IF-structure with an IF-ELIF structure.

Short answer 3 (code trace):

Specify the output of the following program:

```
num1 = 12
num2 = 123

print("Trace 1")
if (num2 > 100):
    print("1", end="")
    if (num1 > 100):
        print("2", end="")
    else:
        print("3", end="")
else:
    print("4", end="")
print("5", end="")

print()

print("Trace 2")
if ((num2 > 100) and (num1 > 100)):
    print("1", end="")
else:
    print("2", end="")
print("3", end="")
```