### CS128 Fall 2021 - Lab 3

# TASK1:

Simulate the roll of a pair of dice by generating two random values between 1 and 6 (inclusive).

Save the random numbers in variables named die1 and die2.

Save the sum of the pair of dice in a variable named sum.

Print the face value of each die along with the sum as shown. The print statement <u>MUST</u> use the format function and pass in three values: die1, die2, sum.

A high roll occurs if the sum exceeds 8. Print whether the roll was low or high.

### SAMPLE OUTPUT FROM MULTIPLE EXECUTIONS:

```
you rolled a 4 and a 3 for a total of 7
low roll

you rolled a 3 and a 1 for a total of 4
low roll

you rolled a 6 and a 5 for a total of 11
high roll
```

# TASK2:

Generate a random integer between -5 and 5 (inclusive).

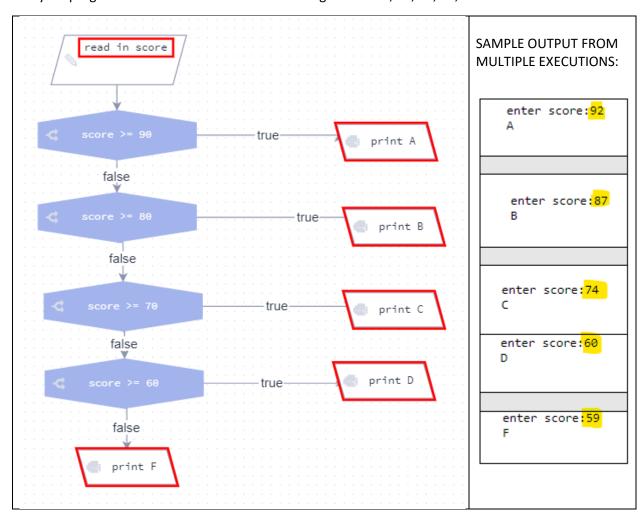
Use a multi-branch if-else statement (if elif else) to print whether the random number is positive, negative, or zero.

# SAMPLE OUTPUT FROM MULTIPLE EXECUTIONS:

-1 is negative		
3 is positive		
0 is zero		

### TASK3:

Implement the program shown in the flow chart below using a chained conditional (if/elif/.../else). Prompt the user for a score, which should be stored as an integer, and then print the resulting grade. Run your program several times to test the following scores: 92, 87, 74, 60, 59



### TASK4:

Prompt the user whether they like ice cream. If they answer 'yes', prompt for their favorite flavor and print that you like that flavor too. If the user answers with any response other than 'yes', prompt for their reason and print a confirmation of the reason.

### SAMPLE OUTPUT FROM MULTIPLE EXECUTIONS:

Do you like ice cream? (yes/no)yes
What is your favorite flavor:mint chocolate chip
I like mint chocolate chip too!

Do you like ice cream? (yes/no)yes
What is your favorite flavor: strawberry
I like strawberry too!

do you like ice cream? (yes/no)no why not?lactose intolerant Your reason: lactose intolerant

Do you like ice cream? (yes/no)not really Why not?cold hurts my teeth
Your reason: cold hurts my teeth

# TASK5a:

The main algorithm creates a 400x400 canvas with horizontal and vertical lines to display the quadrants.

Update the mousedown function to use an if-else to test the mousedown location.

If the user presses the mouse in the top half of the canvas, display the text 'top' in red at the mousedown location, otherwise display the text 'bottom' in blue.

top top	top
bottom	bottom

# TASK5b:

Copy your code from task4a.

Update the mousedown function to <u>add a second if-else</u> to decide whether the user pressed the mouse in the left or right half of the canvas.

Display 'left' in green and 'right' in purple. Show the text 20 pixels below the mousedown location.

NOTE: Use two separate if/else statements: the first to determine top or bottom, the second to determine left or right.

top left	top left top left	top right top right	
bottor	n	bottom	bottom
left		right	right