

Selection Basics

1. Draw the flowchart of each of the following Python code segments. Include start and end blocks.

```
x = -3
if x < 0:
    print("negative.")
print("complete.")
```

```
x = +3
if x < 0:
    print("negative.")
else:
    print("positive.")
print("complete.")
```

2a. Write a Python program that inputs an integer from the user that represents a temperature, then reports whether that temperature is “cold”, “cool”, “moderate”, or “warm” based on the table to the right. The code must use a **chained if** statement.

Temperature Range	String to Print
31 and below	cold
32-50	cool
51-70	moderate
71 and above	warm

```
# Get temperature as integer from the user
temp = int(input("Enter the temperature: "))
# Chained if to determine the description
if temp <= 31:
    print("cold")
elif temp <= 50:
    print("cool")
elif temp <= 70:
    print("moderate")
else:
    print("warm")
```

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3. Write a Python program that:

- a) Asks the user what they want to bake: "pancakes", "cookies", or "brownies".
- b) Uses a chained `if` to determine which slices of `ingredients` are needed to get the list of required ingredients:
 - **pancakes:** flour, sugar, butter, eggs, milk
 - **cookies:** flour, sugar, butter, chocolate chips, vanilla extract
 - **brownies:** flour, sugar, butter, eggs, cocoa powder, walnuts

```

0 ingredients = [
1     "flour",
2     "sugar",
3     "butter",
4     "eggs",
5     "milk",
6     "chocolate chips",
7     "vanilla extract",
8     "cocoa powder",
    "walnuts"
]

```

- c) Creates a new list called `required` by concatenating two slices:
- d) Prints out the list of `required` ingredients.
- e) If the user enters any other string, prints: "Sorry, I don't have a recipe for that."

Rules: The program must use list slicing (e.g., `ingredients[start:stop]`) to extract the base and the extra block; it must not access individual list items by index (like `ingredients[0]`), and must not duplicate any of the ingredients in another string (i.e.: don't type out any of the ingredients).

```

choice = input(
    "What do you want to bake? (pancakes, cookies, brownies): ")
choice = choice.lower()
# Chained if to pick the correct ingredients
if choice == "pancakes":
    required = ingredients[:5]
elif choice == "cookies":
    required = ingredients[:3] + ingredients[5:7]
elif choice == "brownies":
    required = ingredients[:4] + ingredients[7:]
else:
    required = []
if required == []:
    print("Sorry, I don't have a recipe for that.")
else:
    print("You'll need:", required)

```