

# Practice Questions for Python Conditionals (if, elif, else)

## Questions

1. Write a function `grade_student(score)` that takes a student's score as input and returns the grade based on the following criteria:

- 90 and above: A
- 80 to 89: B
- 70 to 79: C
- 60 to 69: D
- Below 60: F

**Input:** `grade_student(85)`

**Output:** "B"

2. Write a function `check_sign(num)` that returns whether the number is "Positive", "Negative", or "Zero".

- **Input:** `check_sign(-5)`
- **Output:** "Negative"

3. Write a function `largest_of_three(a, b, c)` that returns the largest of three numbers using conditionals.

- **Input:** `largest_of_three(3, 7, 5)`
- **Output:** 7

4. Write a function `is_leap_year(year)` that returns True if a year is a leap year, and False otherwise.

- Leap year conditions: Divisible by 4 but not by 100, unless divisible by 400.
- **Input:** `is_leap_year(2000)`
- **Output:** True

5. Write a function `temperature_advice(temp)` that returns a suggestion based on the input temperature:
  - `temp > 30`: "It's hot, stay hydrated!"
  - `20 <= temp <= 30`: "It's a nice day!"
  - `10 <= temp < 20`: "It's getting chilly, wear a jacket!"
  - `temp < 10`: "It's cold, bundle up!"
  - **Input**: `temperature_advice(25)`
  - **Output**: "It's a nice day!"
6. Write a function `is_divisible(a, b)` that checks if `a` is divisible by `b` and returns "Divisible" or "Not Divisible".
  - **Input**: `is_divisible(10, 2)`
  - **Output**: "Divisible"
7. Write a function `compare_numbers(a, b)` that compares two numbers and returns one of the following:
  - "a is greater than b"
  - "a is less than b"
  - "a is equal to b"
  - **Input**: `compare_numbers(5, 7)`
  - **Output**: "a is less than b"
8. Write a function `traffic_light(color)` that takes a string `color` as input and returns:
  - "Go" for "green"
  - "Wait" for "yellow"
  - "Stop" for "red"
  - "Invalid color" for any other input.
  - **Input**: `traffic_light("red")`
  - **Output**: "Stop"
9. Write a function `number_classification(n)` that classifies a number as:
  - "Even and Positive" for positive even numbers.
  - "Odd and Positive" for positive odd numbers.
  - "Even and Negative" for negative even numbers.
  - "Odd and Negative" for negative odd numbers.
  - "Zero" for zero.
  - **Input**: `number_classification(-3)`
  - **Output**: "Odd and Negative"