



Assignment: Conditionals and Booleans in Python

Part 1: Basics (Warm-up)

1. Write a program that checks if a number is **positive, negative, or zero**.
 2. Take a user's age as input. If the age is:
 - Less than 13 → print `"Child"`
 - Between 13 and 19 → print `"Teenager"`
 - 20 or above → print `"Adult"`
 3. Write a program that checks whether a given number is **even or odd**.
 4. Ask the user to enter a password. If the password matches `"Python123"`, print `"Access Granted"`, otherwise `"Access Denied"`.
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Part 2: Working with Booleans

1. Store a temperature value. If the temperature is **above 30**, print `"It's hot"`. Otherwise, print `"It's normal"`.
 2. Take two boolean variables: `is_raining` and `has_umbrella`.
 - If it is raining **and** you have an umbrella → print `"You can go outside"`.
 - If it is raining **and not** you don't have an umbrella → print `"Stay inside"`.
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Part 3: Elif and Nested Conditionals

1. Write a program to simulate a **grading system**:
 - 90+ → `"A"`
 - 80–89 → `"B"`
 - 70–79 → `"C"`
 - 60–69 → `"D"`

- Below 60 → "F"
2. Create a simple **traffic light system**:
 - If the light is "Red" → print "Stop".
 - If the light is "Yellow" → print "Get Ready".
 - If the light is "Green" → print "Go".
 - Otherwise → print "Invalid light color".
 3. Write a program that takes an integer from the user and:
 - If it's divisible by both 3 and 5 → print "FizzBuzz".
 - If it's divisible by only 3 → print "Fizz".
 - If it's divisible by only 5 → print "Buzz".
 - Otherwise → print the number itself.
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Part 4: Real-Life Scenarios

1. ATM Simulation:
 - If balance \geq withdrawal amount → print "Transaction successful".
 - Else → print "Insufficient balance".
 1. Login System:
 - Ask for a username and password.
 - If both match your predefined values → print "Login successful".
 - If username is wrong → print "Invalid username".
 - If password is wrong → print "Invalid password".
 1. Write a program to check if a person is eligible to:
 - Vote (age \geq 18)
 - Drive (age \geq 16)
 - Drink alcohol (age \geq 21)
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Part 5: Challenge (For Extra Practice 🚀)

1. Create a program for a **rock-paper-scissors** game between the user and the computer.
 - User inputs `rock`, `paper`, or `scissors`.
 - Computer randomly chooses one.
 - Apply conditional statements to decide the winner.
1. Build a small **quiz game**:
 - Ask 3 questions.
 - If the user answers correctly, give them 1 point.
 - After 3 questions, print their total score.