1.Check if x is greater than 5. If true, it prints the message.

x = 10

if x > 5:

print("x is greater than 5")

*Explanation:* This checks if x is greater than 5. If true, it prints the message.

2. Checks if x is greater than 5. If not, it prints a different message.

x = 3

if x > 5:

print("x is greater than 5")

else:

print("x is not greater than 5")

*Explanation:* This checks if x is greater than 5. If not, it prints a different message.

3. Temperature Check for Weather App:

temperature = 30

if temperature > 25:

print("It's hot outside. Wear light clothing.")

elif temperature > 15:

print("It's warm outside. A jacket should be enough.")

else:

print("It's cold outside. Dress warmly.")

Explanation: This example adjusts clothing recommendations based on the temperature.

4. Discount Eligibility

total\_purchase = 120

is\_member = True

if total\_purchase > 100 or is\_member:

print("You qualify for a discount!")

else:

print("No discount available.")

Explanation: This gives a discount if the total purchase is over $100 or if the customer is a member.

5. Product Availability Check

product\_stock = 3

order\_quantity = 5

if product\_stock >= order\_quantity:

print("Order can be fulfilled.")

else:

print("Not enough stock to fulfill the order.")

Explanation: This checks if there’s enough stock to fulfill an order.

6. Flight Check-In

age = 70

is\_vip = True

if age >= 65 or is\_vip:

print("You can use the priority check-in lane.")

else:

print("Please use the regular check-in lane.")

Explanation: This allows priority check-in for seniors or VIPs.

7. Student Eligibility for Scholarship

gpa = 3.8

extracurricular\_activities = True

if gpa >= 3.5 and extracurricular\_activities:

print("You are eligible for the scholarship.")

else:

print("You do not qualify for the scholarship.")

Explanation: This checks if a student qualifies for a scholarship based on GPA and extracurricular activities.

8. Delivery Status Based on Order Time

order\_time = 19 # 24-hour format

delivery\_time = 21

if order\_time < delivery\_time:

print("Order will be delivered today.")

else:

print("Order will be delivered tomorrow.")

Explanation: This determines the delivery day based on the order time.

9. Check if entered number is even or odd

number=22

if number%2==0:

    print(number, " is even number")

else:

    print(number, " is odd number")

10.ATM cash withdrawal example:

# Predefined account balance

account\_balance = 5000.00

# Input from the user

withdrawal\_amount = float(input("Enter the amount you wish to withdraw: "))

pin = input("Enter your PIN: ")

# Assuming a correct PIN for simplicity

correct\_pin = "1234"

# ATM withdrawal logic

if pin == correct\_pin and withdrawal\_amount > 0:

if withdrawal\_amount <= account\_balance:

account\_balance -= withdrawal\_amount

print(f"Withdrawal successful! Your new balance is: ${account\_balance:.2f}")

else:

print("Insufficient balance.")

else:

if pin != correct\_pin:

print("Incorrect PIN.")

elif withdrawal\_amount <= 0:

print("Invalid withdrawal amount.")

**How the Code Works:**

1. **Predefined Variables:**
   * account\_balance is set to 5000.00 (representing the initial balance in the account).
   * correct\_pin is set to "1234" (representing the correct PIN for the account).
2. **User Input:**
   * The user is prompted to enter the amount they wish to withdraw.
   * The user is also prompted to enter their PIN.
3. **First if-else Condition:**
   * The program first checks if the entered PIN matches the correct PIN and if the withdrawal amount is greater than 0.
   * If both conditions are true, it proceeds to the next if-else block.
4. **Second if-else Condition:**
   * If the withdrawal amount is less than or equal to the account balance, the amount is subtracted from the balance, and a success message is displayed with the updated balance.
   * If the withdrawal amount is greater than the account balance, it prints "Insufficient balance."
5. **Else Block:**
   * If the PIN is incorrect, it prints "Incorrect PIN."
   * If the withdrawal amount is 0 or less, it prints "Invalid withdrawal amount."