

**1.Scenario:** A system checks if a user is eligible to vote based on their age.

1. **Ask the user to enter their age using input()**
2. **Convert the input to an integer using int()**
3. **Store the result in a variable called age**
4. **Check if age is greater than or equal to 18 using an if statement**
5. **If the condition is true, print "Eligible"**
6. **If the condition is false, print "Not Eligible"**

**2.Scenario:** A program processes a list of numbers and needs to find the largest value.

1. **Create a list called numbers with values [23, 54, 65, 67, 43]**
2. **Assign the first element of the list (23) to a variable named largest**
3. **Start a for loop to iterate through each number in the list**
4. **Check if the current number is greater than largest using an if statement**
5. **If the condition is true, update largest with the current number**
6. **After the loop ends, print the value of largest**

**3.Scenario:** A company provides employees with a 10% bonus if their salary exceeds \$50,000.

1. **Prompt the user to enter their salary using input()**
2. **Convert the entered value to a float using float()**
3. **Store the result in a variable named salary**
4. **Check if salary is greater than 50,000 using an if statement**
5. **If true, calculate 10% of salary and assign it to bonus**
6. **If false, assign 0 to bonus**
7. **Print the message "Bonus amount:" followed by the value of bonus**

**4.Scenario:** A program evaluates a number to determine if it is even or odd.

1. **Prompt the user to enter a number using input()**
2. **Convert the input to an integer using int()**

3. **Store the result in a variable named number**
4. **Use the modulo operator % to check if number is divisible by 2**
5. **If the result is 0, print that the number is even**
6. **If the result is not 0, print that the number is odd**

**5.Scenario:** A text-processing tool reverses a given word or sentence for formatting purposes.

1. **Prompt the user to enter a sentence using input()**
2. **Convert the input to a string using str()**
3. **Convert the string into a list of characters using list()**
4. **Reverse the list using the .reverse() method**
5. **Join the reversed list back into a string using ".join()"**
6. **Store the result in a variable named reversed\_text**
7. **Print the message "Reversed text:" followed by the reversed string**

**6.Scenario:** A grading system determines whether a student has passed or failed based on their score.

1. **Prompt the user to enter their score using input()**
2. **Convert the input to a float using float()**
3. **Store the result in a variable named score**
4. **Check if score is greater than or equal to 40 using an if statement**
5. **If the condition is true, print "Result: Passed"**
6. **If the condition is false, print "Result: Failed"**

**7.Scenario:** A retail store offers a 20% discount if a customer's total order exceeds \$100.

1. **Prompt the user to enter the order amount using input()**
2. **Convert the input to a float using float()**
3. **Store the result in a variable named order\_amount**
4. **Check if order\_amount is greater than 100 using an if statement**
5. **If true, calculate 20% of order\_amount and assign it to discount**

6. If false, assign 0 to discount
7. Subtract discount from order\_amount and store the result in total\_amount
8. Print the order amount, discount amount, and total amount using an f-string

**8.Scenario:** A banking system processes withdrawal requests and ensures the user has enough balance.

1. Prompt the user to enter their current balance using input()
2. Convert the input to a float using float()
3. Store the result in a variable named balance
4. Prompt the user to enter the withdrawal amount using input()
5. Convert the input to a float and store it in a variable named withdraw
6. Check if withdraw is less than or equal to balance using an if statement
7. If true, subtract withdraw from balance and update the value
8. Print "Withdrawal successful"
9. Print the updated balance
10. If the condition is false, print "Insufficient balance"

**9.Scenario:** A calendar system verifies whether a given year is a leap year based on standard leap year rules.

1. Prompt the user to enter a year using input()
2. Convert the input to an integer using int()
3. Store the result in a variable named year
4. Check if year is divisible by 400 using `year % 400 == 0`
5. If true, print that the year is a leap year
6. If false, check if year is divisible by 100 using `year % 100 == 0`
7. If true, print that the year is not a leap year
8. If false, check if year is divisible by 4 using `year % 4 == 0`

9. **If true, print that the year is a leap year**
10. **If none of the above conditions are true, print that the year is not a leap year**

**10.Scenario:** A program filters out only even numbers from a given list.

Write logic to extract and return only the even numbers from a list.

1. **Create a list named numbers with values [34, 56, 76, 78, 23, 55]**
2. **Create an empty list named even\_numbers to store even values**
3. **Start a for loop to iterate through each number in numbers**
4. **Check if the current number is divisible by 2 using `num % 2 == 0`**
5. **If true, append the number to the even\_numbers list**
6. **After the loop ends, print the list of even numbers using an f-string**