Question **1**

Correct

Mark 1.00 out of 1.00

Problem Description:

Develop a Python program that safely calculates the square root of a number provided by the user. Handle exceptions for negative inputs and non-numeric inputs.

Input Format:

User inputs a number.

Output Format:

Print the square root of the number or an error message if an exception occurs.

For example:

Input	Result
16	The square root of 16.0 is 4.00
-4	Error: Cannot calculate the square root of a negative number.
rec	Error: could not convert string to float

Answer: (penalty regime: 0 %)

```
try:
    n=float(input())
    if n>=0:
        print(f"The square root of {n} is {n**.5:.2f}")
    else:
        print("Error: Cannot calculate the square root of a negative number.")
except ValueError:
    print("Error: could not convert string to float")
```

	Input	Expected	Got	
✔	16	The square root of 16.0 is 4.00	The square root of 16.0 is 4.00	✔
✔	0	The square root of 0.0 is 0.00	The square root of 0.0 is 0.00	✔
✔	-4	Error: Cannot calculate the square root of a negative number.	Error: Cannot calculate the square root of a negative number.	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **2**

Correct

Mark 1.00 out of 1.00

Problem Description:

Write a Python script that asks the user to enter a number within a specified range (e.g., 1 to 100). Handle exceptions for invalid inputs and out-of-range numbers.

Input Format:

User inputs a number.

Output Format:

Confirm the input or print an error message if it's invalid or out of range.

For example:

Input	Result
1	Valid input.
101	Error: Number out of allowed range
rec	Error: invalid literal for int()

Answer: (penalty regime: 0 %)

```
try:
    n=int(input())
    if n>=1 and n<=100:
        print("Valid input.")
    else:
        print("Error: Number out of allowed range")
except ValueError:
    print("Error: invalid literal for int()")
```

	Input	Expected	Got	
✔	1	Valid input.	Valid input.	✔
✔	100	Valid input.	Valid input.	✔
✔	101	Error: Number out of allowed range	Error: Number out of allowed range	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **3**

Correct

Mark 1.00 out of 1.00

Write a Python program that performs division and modulo operations on two numbers provided by the user. Handle division by zero and non-numeric inputs.

Input Format:

Two lines of input, each containing a number.

Output Format:

Print the result of division and modulo operation, or an error message if an exception occurs.

For example:

Input	Result
10 2	Division result: 5.0 Modulo result: 0
7 3	Division result: 2.3333333333333335 Modulo result: 1
8 0	Error: Cannot divide or modulo by zero.

Answer: (penalty regime: 0 %)

```
try:
    n=int(input())
    d=int(input())
    div=n/d
    mod=n%d
    print("Division result:",div)
    print("Modulo result:",mod)
except ZeroDivisionError:
    print("Error: Cannot divide or modulo by zero.")
except ValueError:
    print("Error: Non-numeric input provided.")
```

	Input	Expected	Got	
✔	10 2	Division result: 5.0 Modulo result: 0	Division result: 5.0 Modulo result: 0	✔
✔	7 3	Division result: 2.3333333333333335 Modulo result: 1	Division result: 2.3333333333333335 Modulo result: 1	✔
✔	8 0	Error: Cannot divide or modulo by zero.	Error: Cannot divide or modulo by zero.	✔
✔	abc 5	Error: Non-numeric input provided.	Error: Non-numeric input provided.	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **4**

Correct

Mark 1.00 out of 1.00

Write a Python program that asks the user for their age and prints a message based on the age. Ensure that the program handles cases where the input is not a valid integer.

Input Format: A single line input representing the user's age.

Output Format: Print a message based on the age or an error if the input is invalid.

For example:

Input	Result
twenty	Error: Please enter a valid age.
25	You are 25 years old.
-1	Error: Please enter a valid age.

Answer: (penalty regime: 0 %)

```
try:
    n=int(input())
    if n>=0:
        print("You are",n,"years old.")
    else:
        print("Error: Please enter a valid age.")
except ValueError:
    print("Error: Please enter a valid age.")
except Exception as e:
    print("Error: Please enter a valid age.")
```

	Input	Expected	Got	
✔	twenty	Error: Please enter a valid age.	Error: Please enter a valid age.	✔
✔	25	You are 25 years old.	You are 25 years old.	✔
✔	-1	Error: Please enter a valid age.	Error: Please enter a valid age.	✔
✔	150	You are 150 years old.	You are 150 years old.	✔
✔		Error: Please enter a valid age.	Error: Please enter a valid age.	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

Question **5**

Correct

Mark 1.00 out of 1.00

Develop a Python program that safely performs division between two numbers provided by the user. Handle exceptions like division by zero and non-numeric inputs.

Input Format: Two lines of input, each containing a number.

Output Format: Print the result of the division or an error message if an exception occurs.

For example:

Input	Result
10 2	5.0
10 0	Error: Cannot divide or modulo by zero.
ten 5	Error: Non-numeric input provided.

Answer: (penalty regime: 0 %)

```
try:
    n=float(input())
    m=float(input())
    div=n/m
except ZeroDivisionError:
    print("Error: Cannot divide or modulo by zero.")
except ValueError:
    print("Error: Non-numeric input provided.")
else:
    print(div)
```

	Input	Expected	Got	
✔	10 2	5.0	5.0	✔
✔	10 0	Error: Cannot divide or modulo by zero.	Error: Cannot divide or modulo by zero.	✔
✔	ten 5	Error: Non-numeric input provided.	Error: Non-numeric input provided.	✔

Passed all tests! ✔

Correct

Marks for this submission: 1.00/1.00.

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