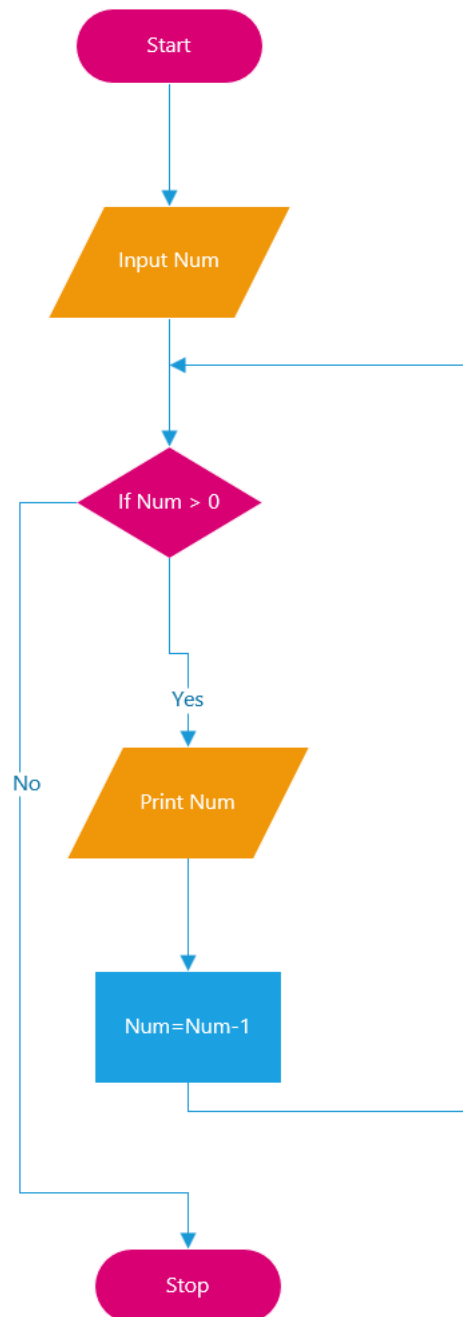


Loops Practical Activities

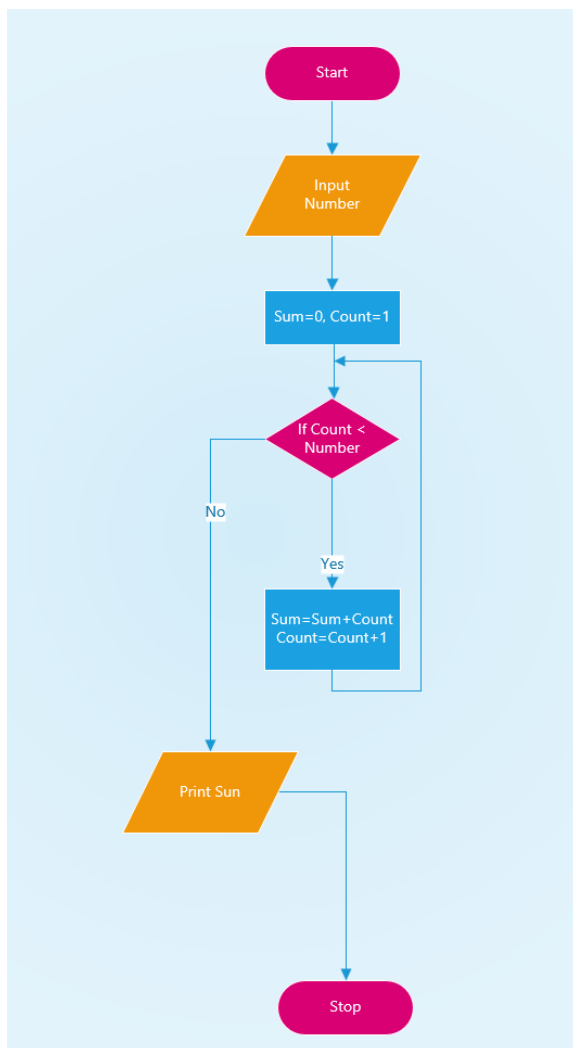
Question 1

Understand the given flowchart and write the corresponding Python program



Question 2

Understand the given flowchart and write the corresponding Python program



Question 3

Write a Python program that takes an integer **row number** as input and prints a right-angled triangle of numbers, where each row contains numbers from 1 to the row number.

Example:

```
Enter the number of rows : 10
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
1 2 3 4 5 6
1 2 3 4 5 6 7
1 2 3 4 5 6 7 8
1 2 3 4 5 6 7 8 9
1 2 3 4 5 6 7 8 9 10
```

Question 4

Analyse the given Python program and explain how the break statement works. Then, run the program and observe its behaviour.

```
while True:
    user_input = input("Enter a word (type 'stop' to exit): ")
    if user_input.lower() == "stop":
        print("Loop terminated.")
        break
    print(f"You entered: {user_input}")
```

- What happens when you enter different words?
- How does the break statement affect the loop execution?
- Why is .lower() used in the condition?

Question 5

Write a Python program that continuously asks for a number until the user enters a negative number.

Question 6

Write a program to find the factorial of a given number using a loop.

Question 7

Write a Python program for a takeaway ordering system that allows customers to select dishes from a menu. The program should:

1. Display a menu with five dishes and their prices.
2. Allow the customer to enter the name of a dish to add it to their order.
3. Use a match-case statement to check the dish name and add its price to the total.
4. Continue taking orders until the customer types "done".
5. Display the total amount the customer needs to pay before exiting.

Ensure that:

- If the customer enters a dish not on the menu, an error message is shown.
- The program stops taking orders when "done" is entered.
- The final bill is displayed before the program ends.

Sample output 1

```
Welcome to the Takeaway!

Menu:
1. Pizza - £8.50
2. Burger - £5.00
3. Pasta - £7.00
4. Fries - £3.00
5. Salad - £4.50

Enter the dish name (or type 'done' to finish): Salad
Salad added to your order.

Enter the dish name (or type 'done' to finish): Burger
Burger added to your order.

Enter the dish name (or type 'done' to finish): Done

Total amount to pay: £9.50
Thank you for your order!
```

Sample output 2

```
Welcome to the Takeaway!

Menu:
1. Pizza - £8.50
2. Burger - £5.00
3. Pasta - £7.00
4. Fries - £3.00
5. Salad - £4.50

Enter the dish name (or type 'done' to finish): Pasta
Pasta added to your order.

Enter the dish name (or type 'done' to finish): Salad
Salad added to your order.

Enter the dish name (or type 'done' to finish): hhh
Sorry, that dish is not on the menu.

Enter the dish name (or type 'done' to finish): done

Total amount to pay: £11.50
Thank you for your order!
```

Question 8

Analyse the Given Flowchart:

- Identify what the flowchart is designed to achieve.
- Determine the input, process, and output involved.

Write a Python Program:

- Implement the logic shown in the flowchart using Python code.

