

TASK # 1

SCRATCH BLOCK DESCRIPTION

- Go to **Events**

Drag the **green flag** block to the script area.

- Go to **Sensing**

Drag the **ask and wait** block.

Type: *What is your name?*

- Go to **Looks**

Drag the **say for seconds** block.

- Go to **Operators**

Drag a **join** block.

- Place the **join** block inside the **say** block.

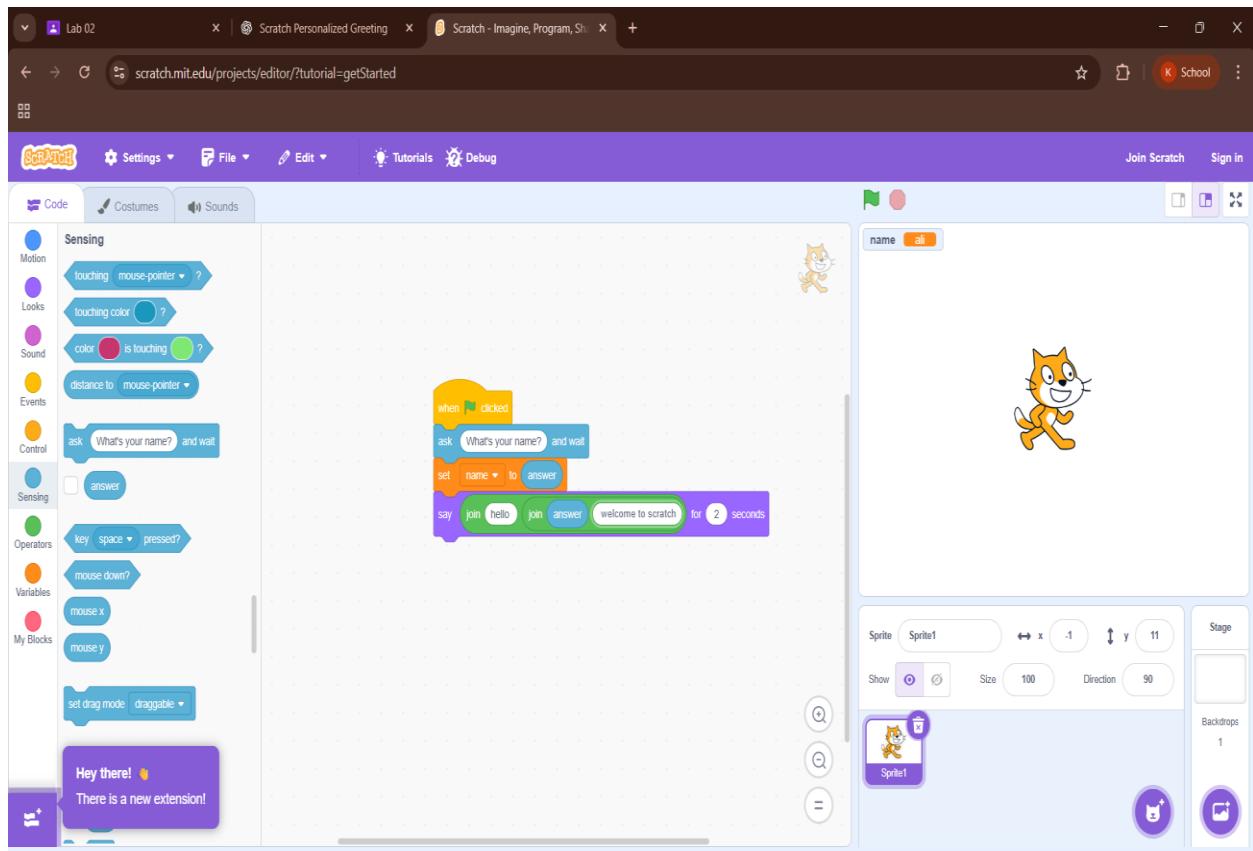
- In the **first space** of the join block, type:

Hello,

- Go back to **Sensing**

Drag the **answer** block.

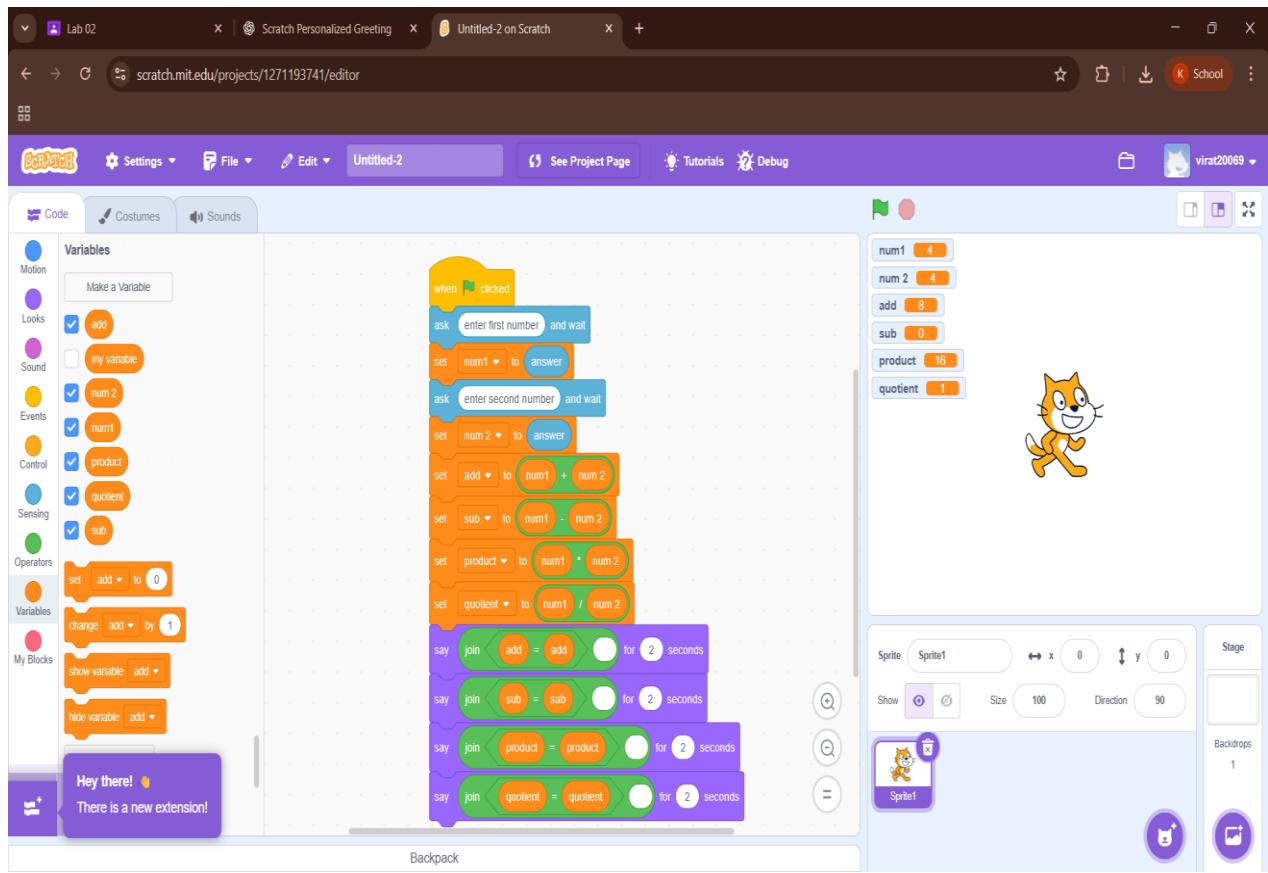
- Put the **answer** block into the **second space** of the join block.



TASK 2

SCRATCH BLOCK DESCRIPTION

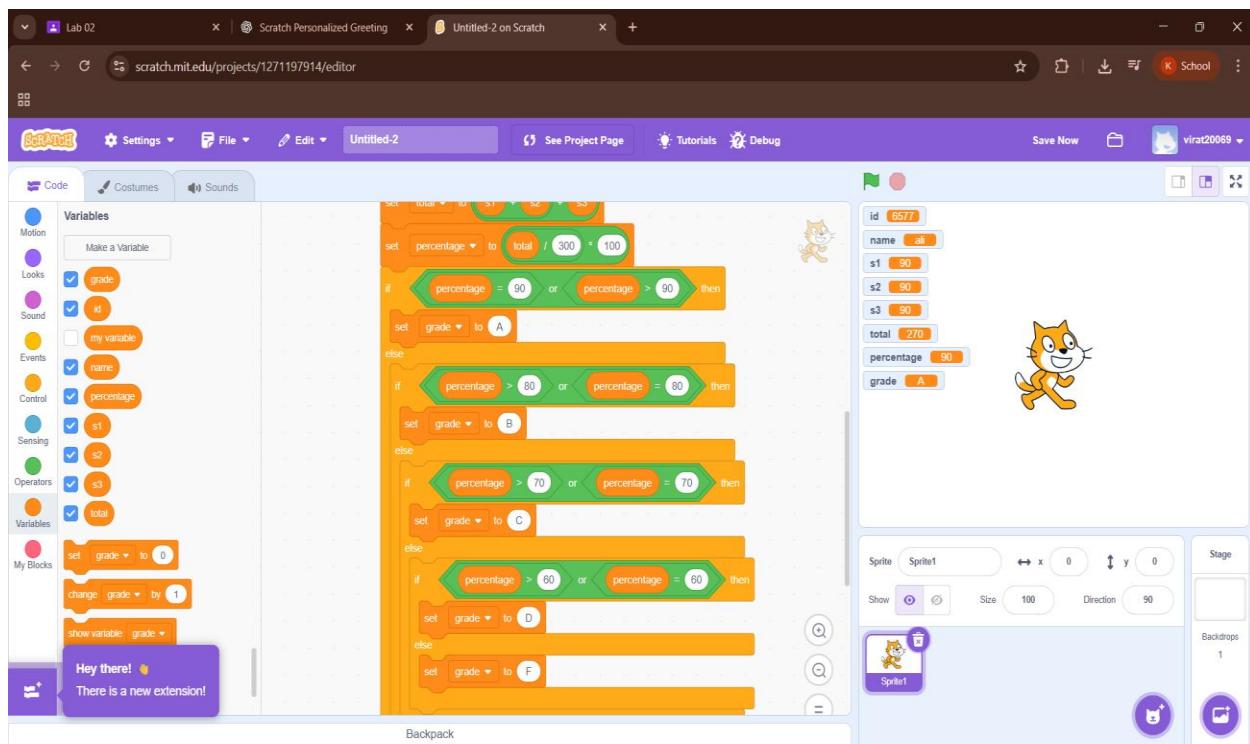
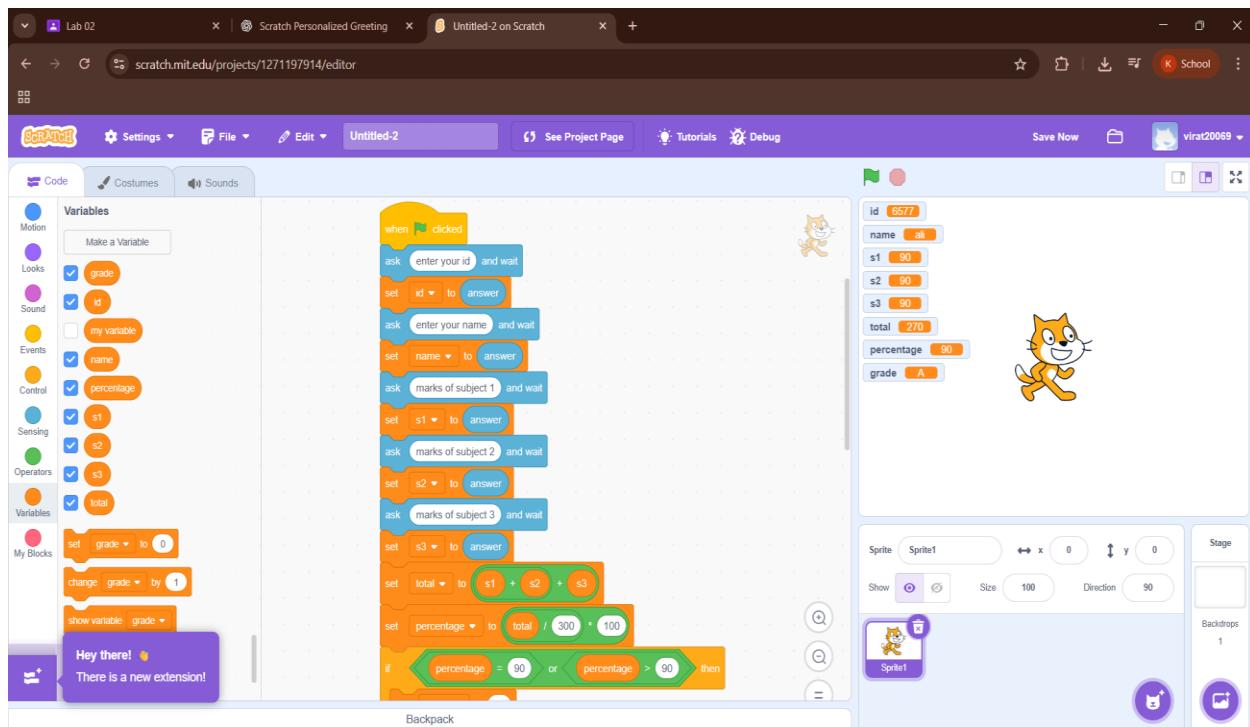
- Go to **Variables** and create two variables: Number1 and Number2.
- Click the **green flag** to start the program.
- Use **ask and wait** to ask for the first number and store it in Number1.
- Use **ask and wait** to ask for the second number and store it in Number2.
- Use **Operators** to:
 - add the two numbers and store the result
 - subtract the second number from the first
 - multiply the two numbers
 - divide the first number by the second
- Use **Looks** to display the results.

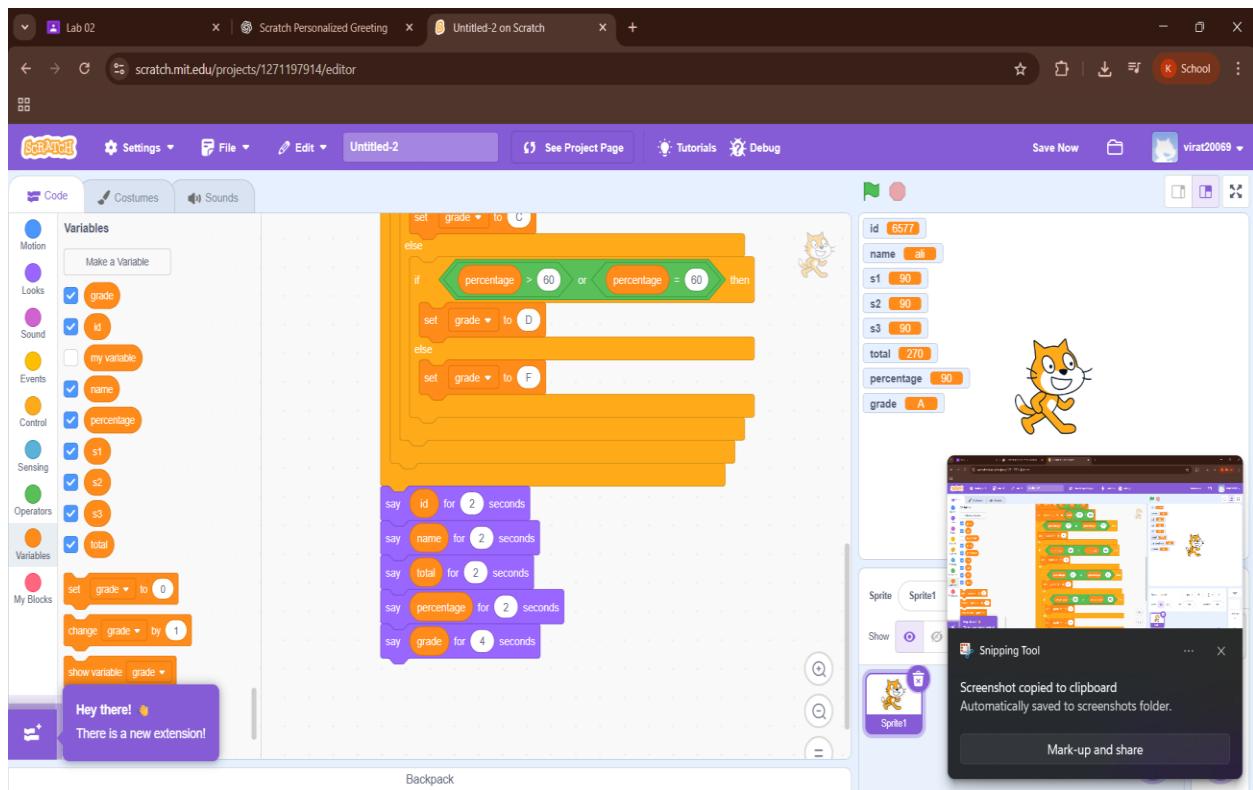


TASK 3

SCRATCH BLOCK DESCRIPTION

1. Create variables: Marks1, Marks2, Marks3, TotalMarks, Percentage, Grade.
2. Ask the user for the three marks and store them.
3. Calculate TotalMarks by adding all three marks.
4. Calculate Percentage = $\text{TotalMarks} \div 300 \times 100$.
5. Use **if / else if** blocks to assign Grade based on percentage:
 - $\geq 90 \rightarrow A$, $\geq 80 \rightarrow B$, $\geq 70 \rightarrow C$, $\geq 60 \rightarrow D$, else $\rightarrow F$.
6. Display TotalMarks, Percentage, and Grade.

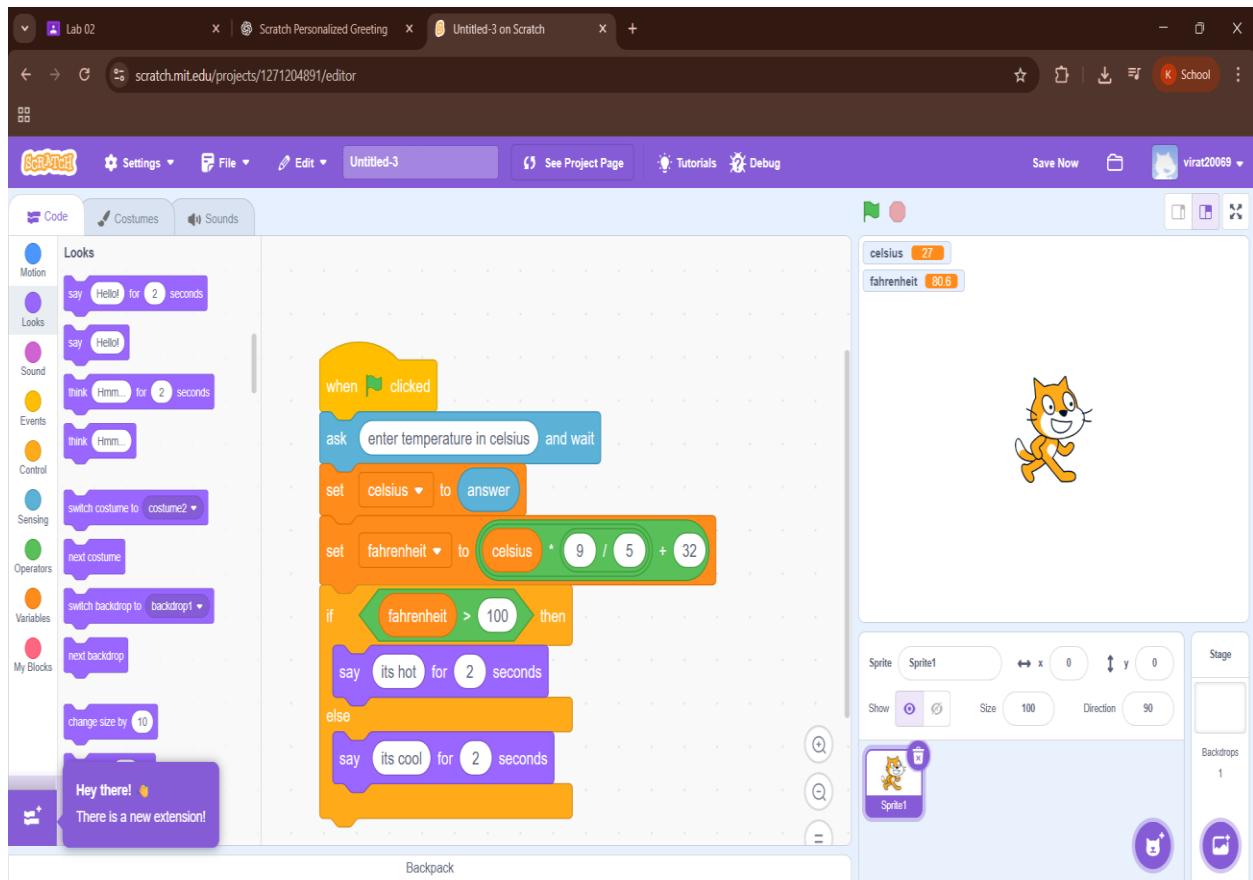




TASK 4

SCRATCH BLOCK DESCRIPTION

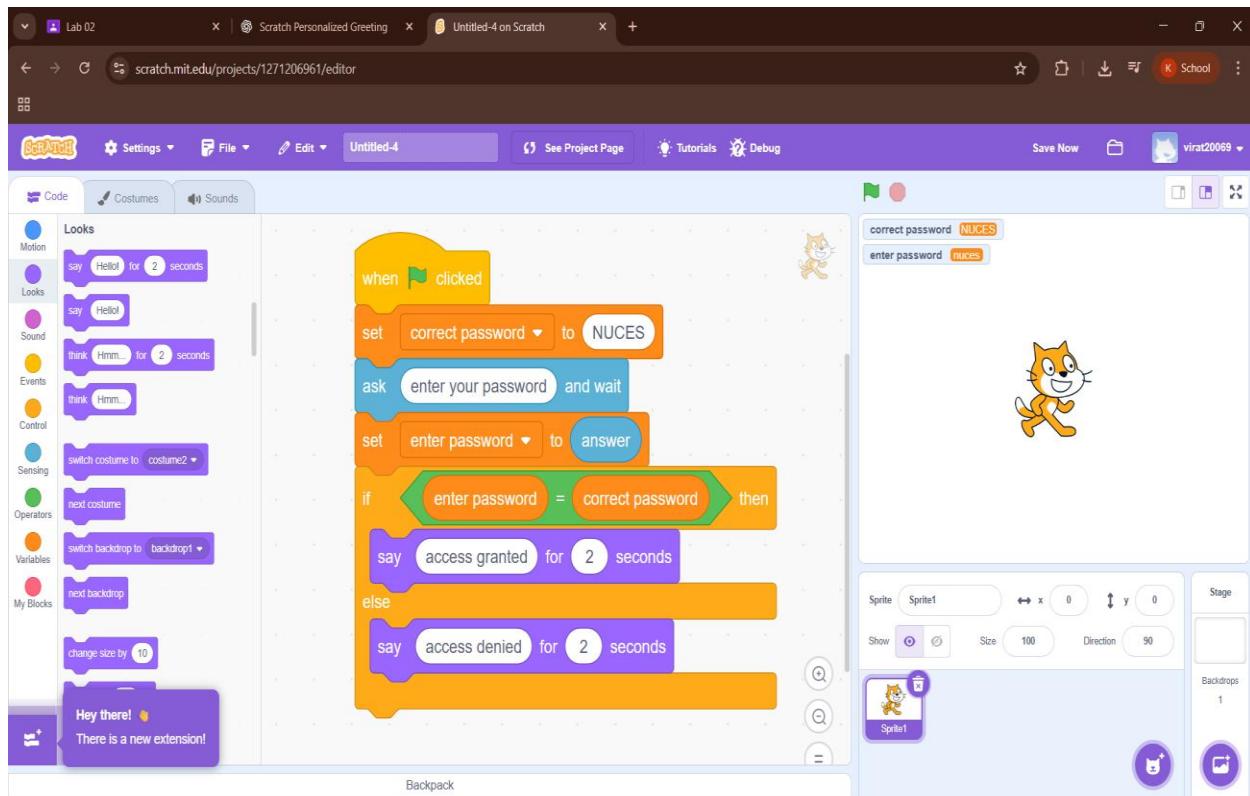
- Create a variable: Celsius and Fahrenheit.
- Ask the user for the temperature in Celsius and store it in Celsius.
- Calculate $\text{Fahrenheit} = (\text{Celsius} \times 9 \div 5) + 32$.
- Use an **if / else** block:
 - If $\text{Fahrenheit} > 100 \rightarrow$ say "It's hot!"
 - Else \rightarrow say "It's cool."



TASK 5

SCRATCH BLOCK DESCRIPTION

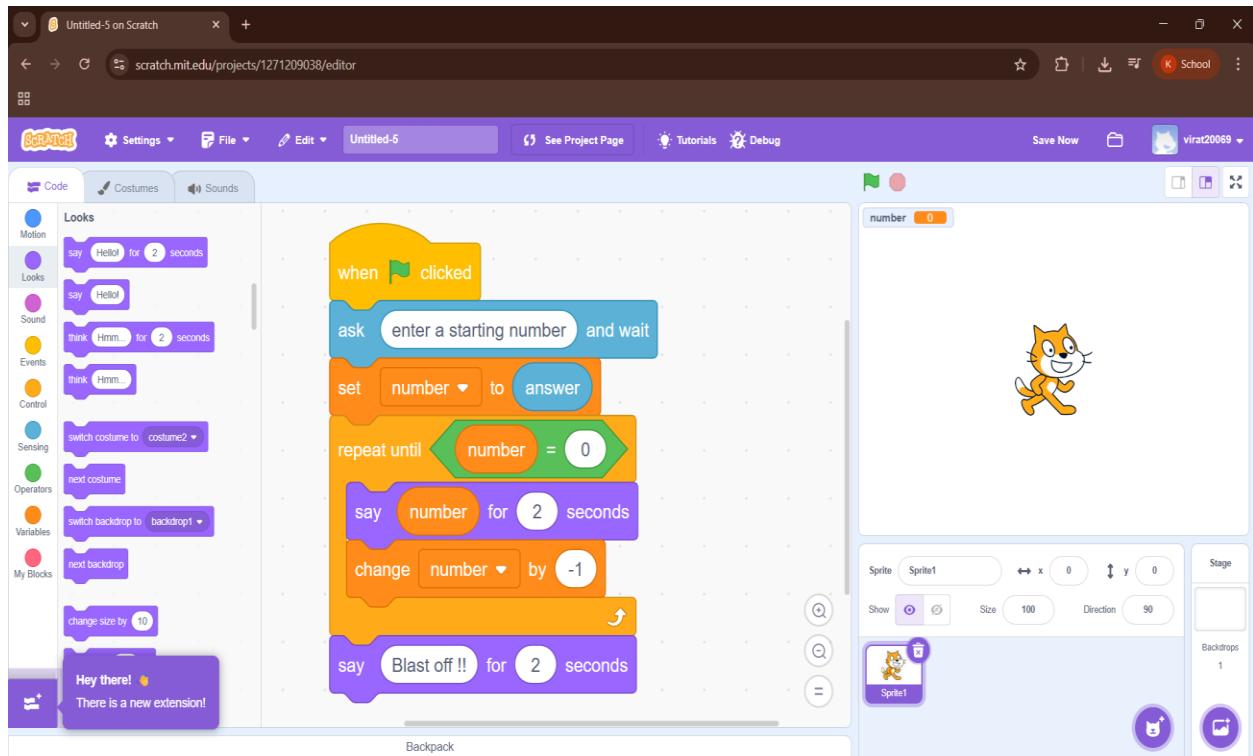
- Create a variable: Password.
- Set Password to the correct value (e.g., "NUCES").
- Ask the user to enter a password and store it in Answer.
- Use an **if / else** block:
 - If Answer = Password → say "Access Granted"
 - Else → say "Access Denied"



TASK 6

SCRATCH BLOCK DESCRIPTION

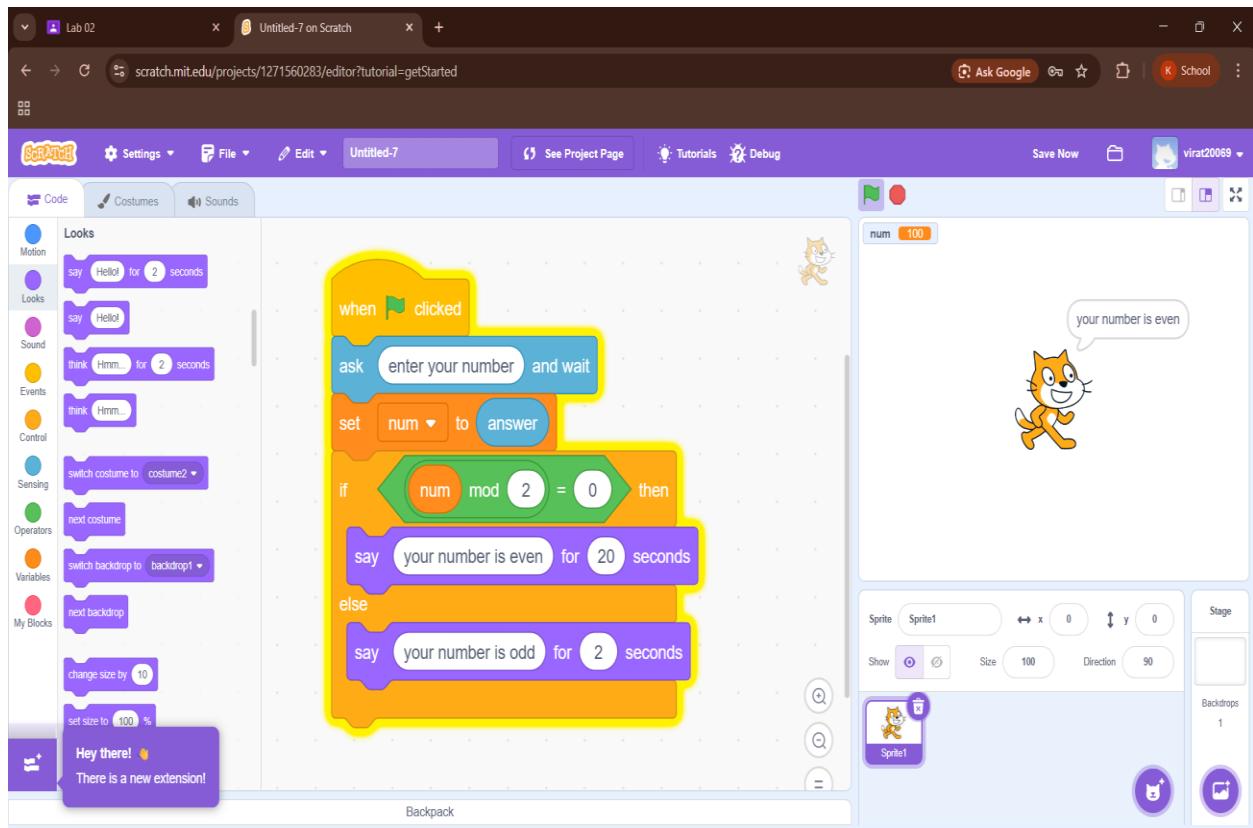
- Ask the user for a starting number and store it in Number.
- Use a **repeat until** loop:
 - Repeat until Number = 0
 - Inside the loop:
 - Say Number for 1 second
 - Change Number by -1
- After the loop ends, say "Blast Off!"



TASK 7

SCRATCH BLOCK DESCRIPTION

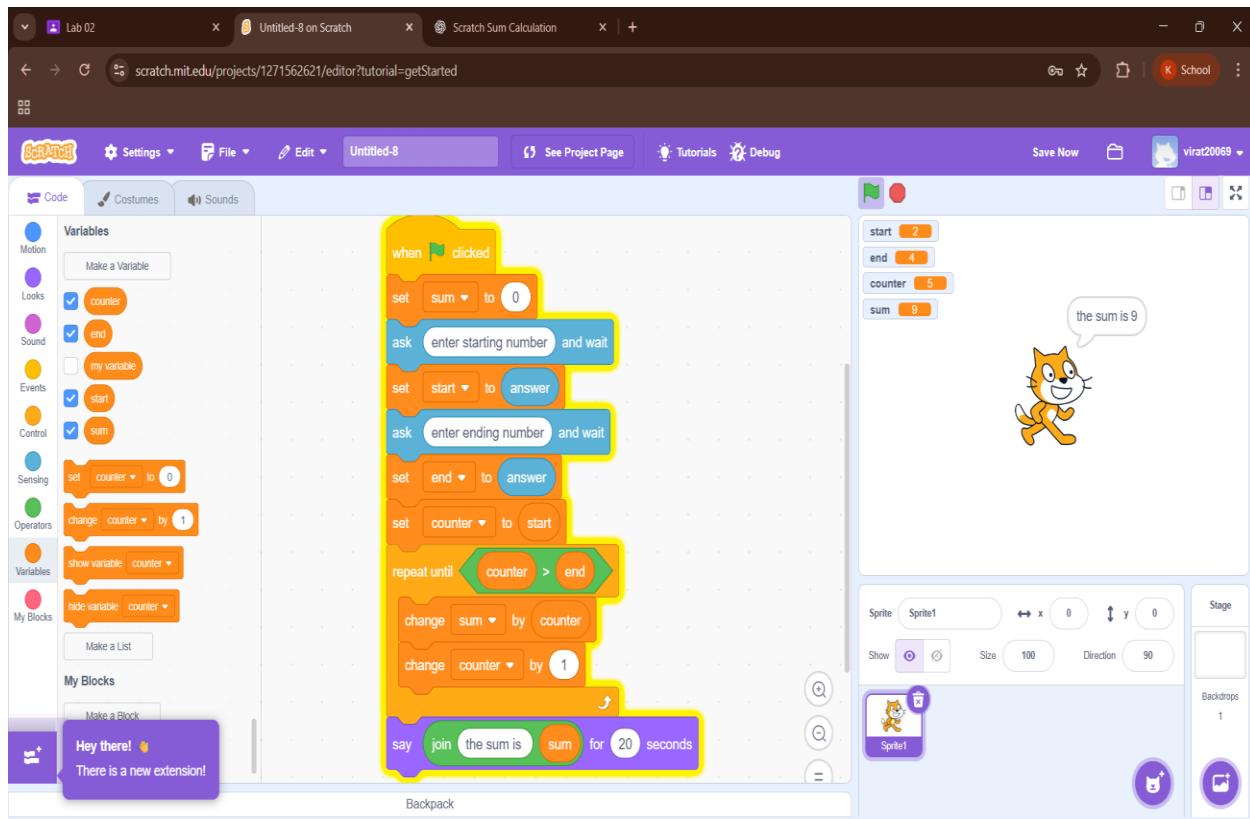
- Ask the user for a number and store it in Number.
- Use an **if / else** block:
 - If Number mod 2 = 0 → say "Your number is even"
 - Else → say "Your number is odd"



TASK 8

SCRATCH BLOCK DESCRIPTION

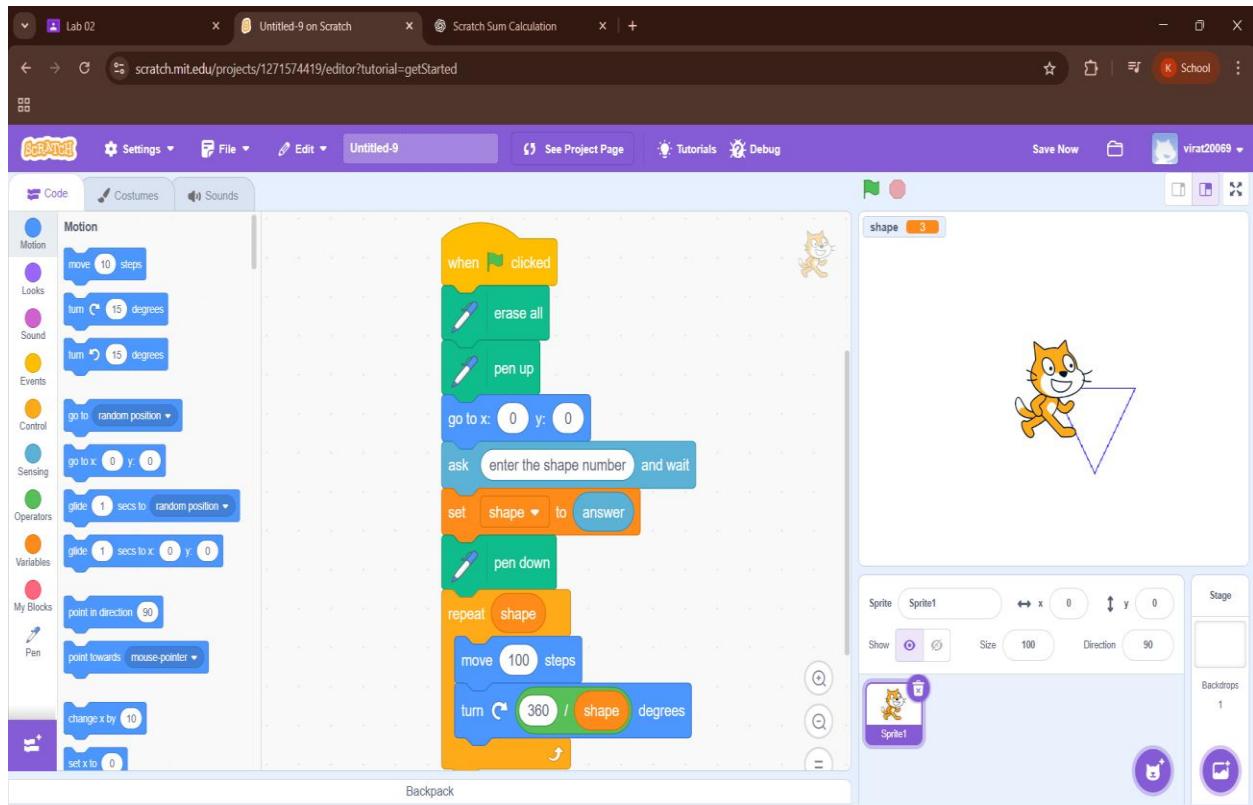
- Ask the user for a **starting number** and store it in Start.
- Ask the user for an **ending number** and store it in End.
- Create a variable Sum and set it to 0.
- Use a **repeat until** loop:
 - Repeat until Start > End
 - Inside the loop:
 - Change Sum by Start
 - Change Start by 1
- After the loop, say Sum.



TASK 9

SCRATCH BLOCK DESCRIPTION

- Ask the user for the **number of sides** and store it in `Sides`.
- Put the **pen down**.
- Use a **repeat** loop `Sides` times:
 - Move a certain number of steps
 - Turn $360 \div \text{Sides}$ degrees
- Lift the **pen up** (optional)



TASK 10

SCRATCH BLOCK DESCRIPTION

- Create a variable SecretNumber and set it to pick random 1 to 10.
- Create a variable Guess.
- Use a **repeat until** loop:
 - Ask the user to guess a number and store it in Guess.
 - If Guess > SecretNumber → say "Too high!"
 - Else if Guess < SecretNumber → say "Too low!"
 - Else → say "Correct!"

