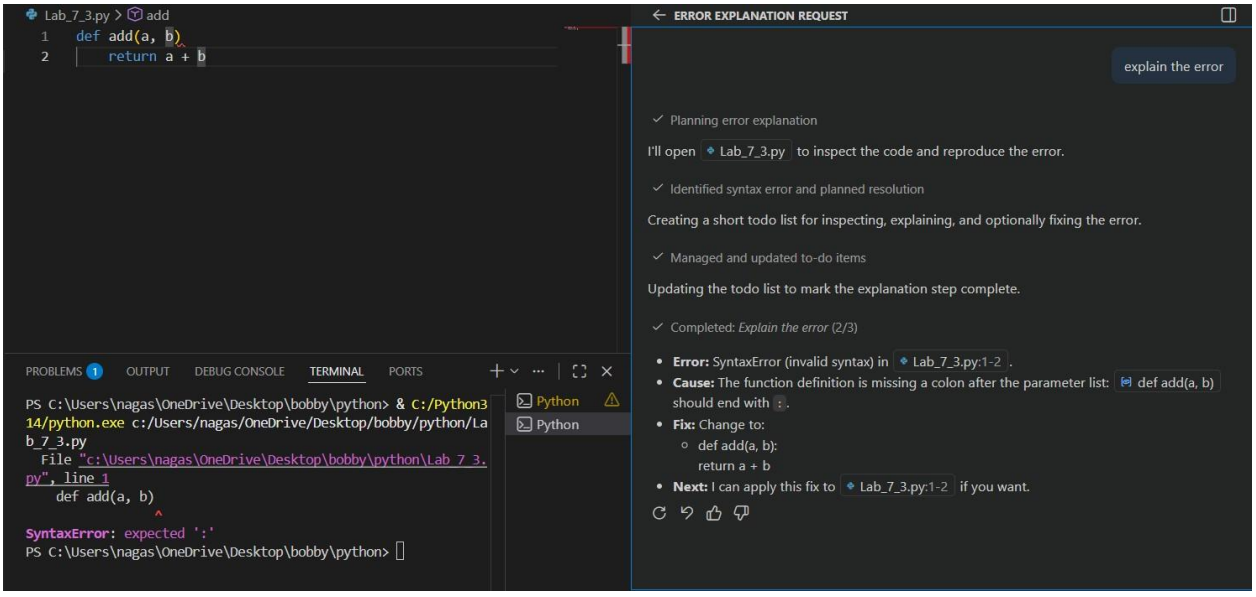
# Assignment - 7.3

Ch .Tejaswi
2303A51944
B - 27

## Task 1: Fixing Syntax Errors

Buggy Code (Before Debugging):

```
def add(a, b)
    return a + b print(add(3,
5))
```

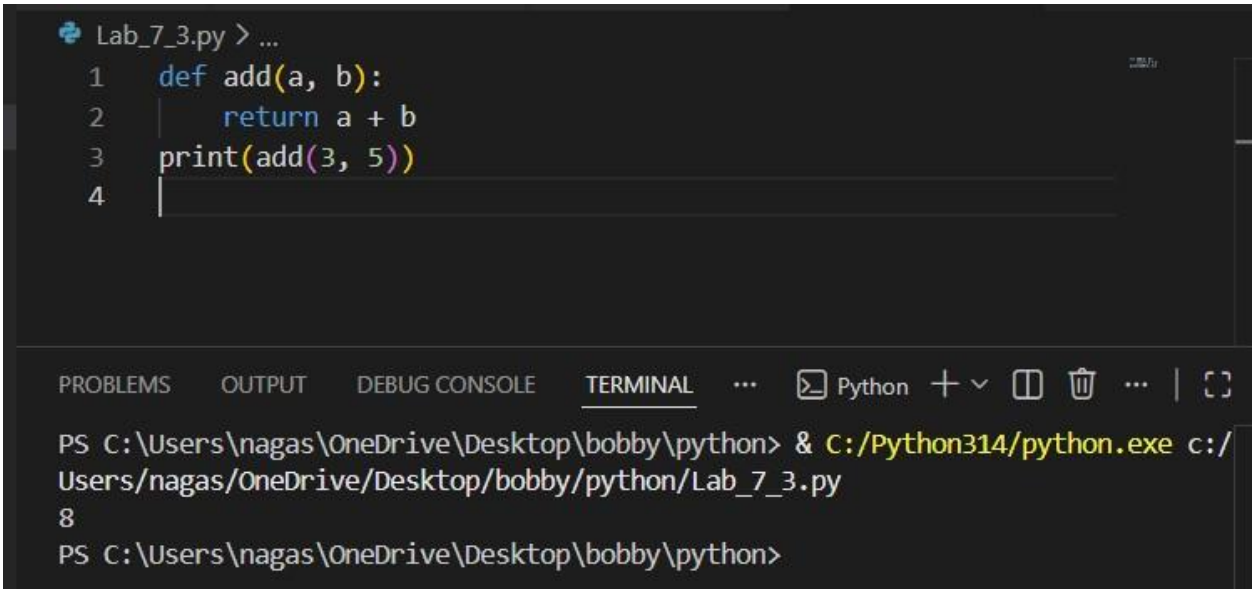



## AI-Detected Issue

- Missing colon (:) at the end of the function definition.
- This causes a **SyntaxError**.

## Corrected Code (After Debugging):

```
def add(a, b):
    return a + b
print(add(3, 5))
```

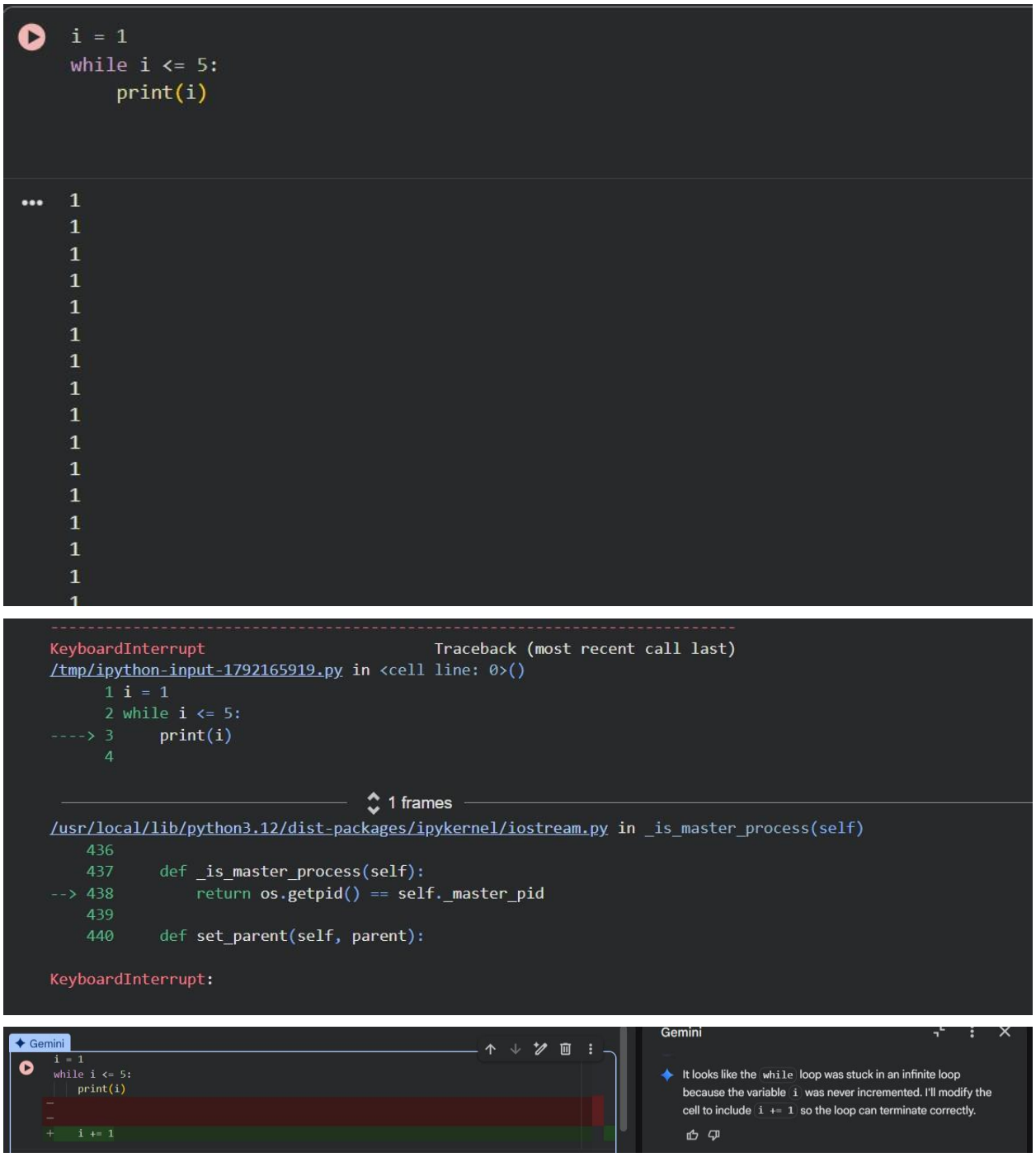



### AI Explanation

In Python, every function definition must end with a colon.
The missing colon caused the syntax error. Adding it fixes the issue.

## Task 2: Debugging Logic Errors in Loops

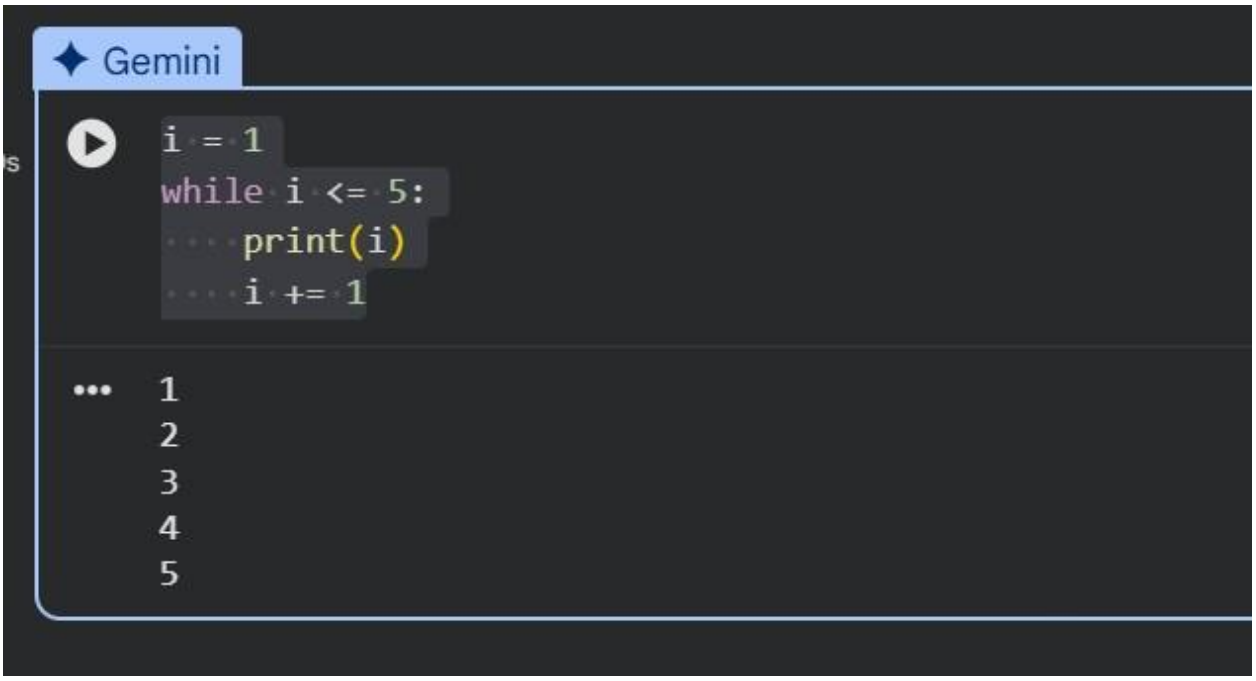
### Buggy Code (Before Debugging):




## AI-Detected Issue

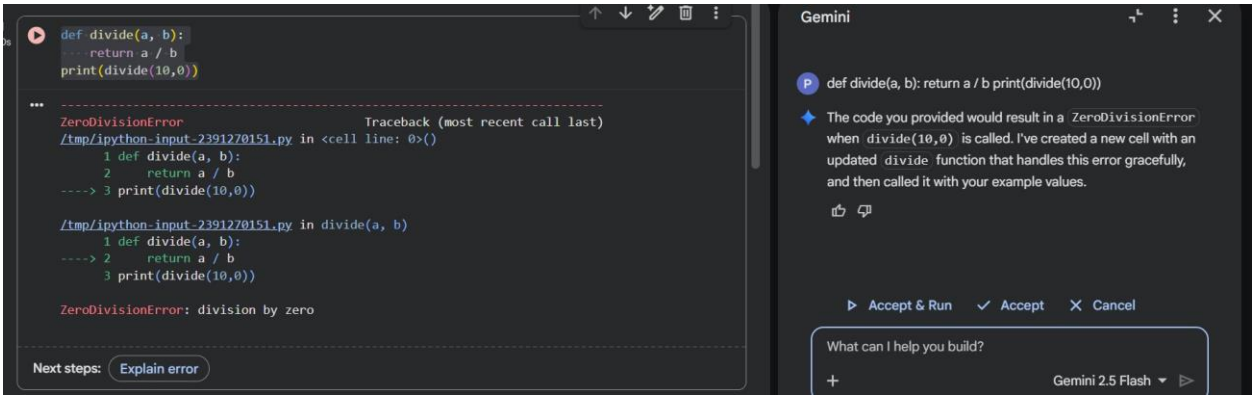
- The loop variable i is never incremented.
- This causes an **infinite loop**.

### Corrected Code (After Debugging)




## Task 3: Handling Runtime Errors (Division by Zero) Buggy

### Code (Before Debugging):




### AI-Detected Issue

- If b is zero, the program crashes with **ZeroDivisionError**.

### Corrected Code (After Debugging):

```
def divide(a, b):
    try:
        return a / b
    except ZeroDivisionError:
        return "Error: Cannot divide by zero"

print(divide(10,0))
```

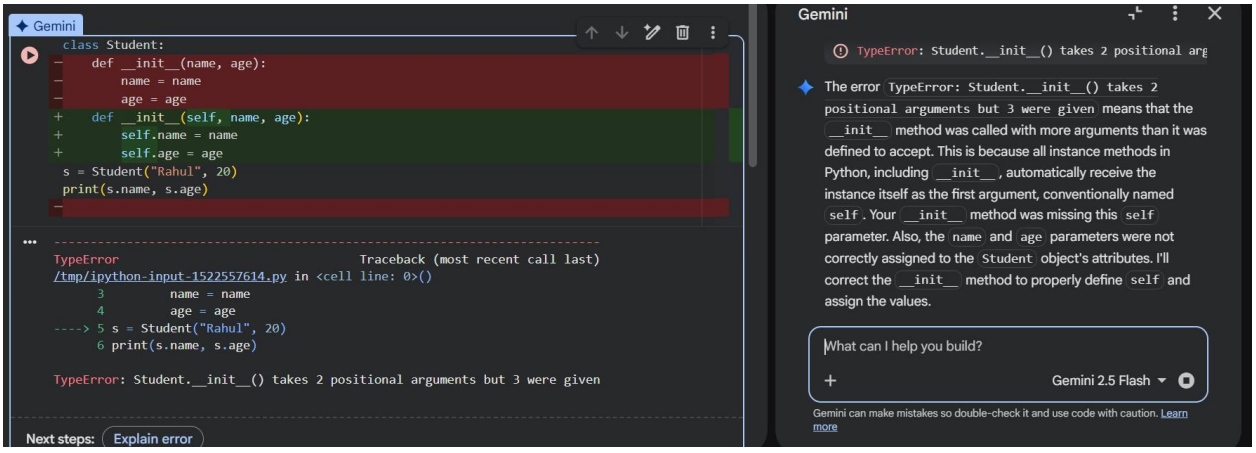
```
Error: Cannot divide by zero
```

### AI Explanation

The AI used a try-except block to handle runtime errors safely.
This prevents the program from crashing.

## Task 4: Debugging Class Definition Errors

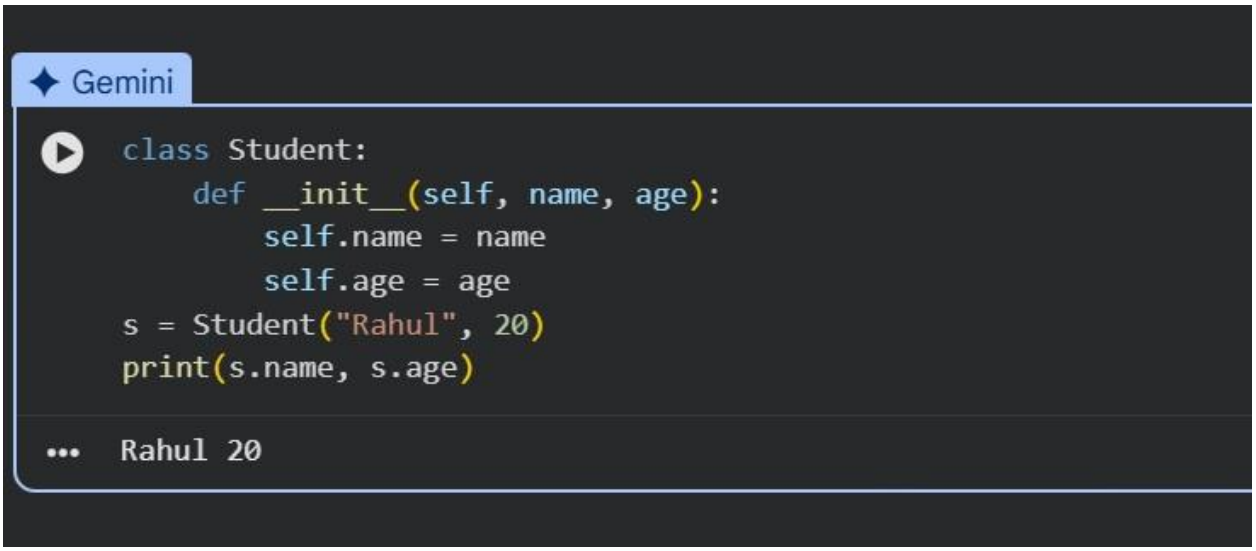
### Buggy Code (Before Debugging):




### AI-Detected Issue

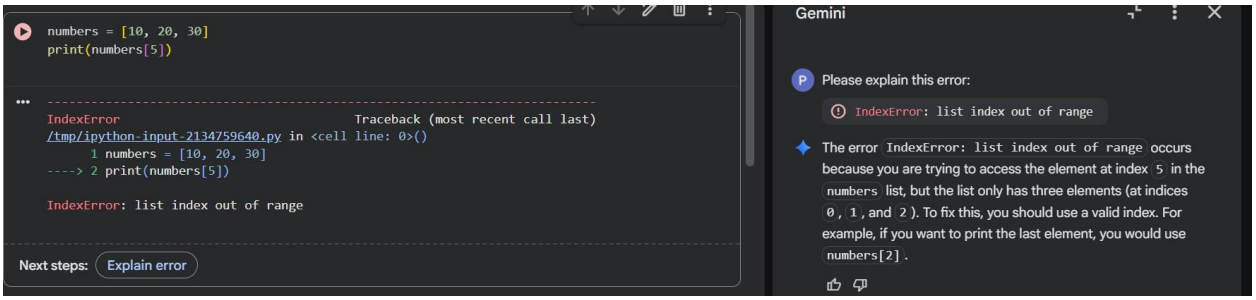
- Missing self parameter in the constructor.
- Instance variables are not assigned correctly.

### Corrected Code (After Debugging):




# Task 5: Resolving Index Errors in Lists Buggy

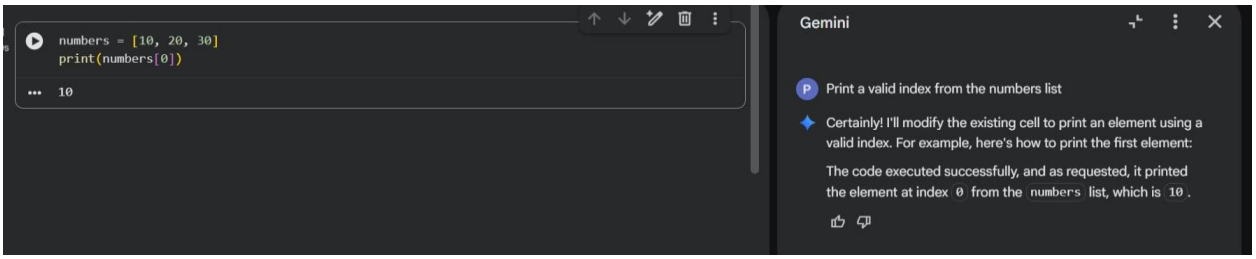
## Code (Before Debugging):




## AI-Detected Issue

- Index 5 does not exist in the list.
- Causes an **IndexError**.

## Corrected Code (After Debugging):


numbers = [10, 20, 30]
print(numbers[0])
10
Gemini
Print a valid index from the numbers list
Certainly! I'll modify the existing cell to print an element using a valid index. For example, here's how to print the first element:
The code executed successfully, and as requested, it printed the element at index 0 from the numbers list, which is 10.