AI ASSISTED CODING LAB 7.2

TOPIC: Error Debugging with AI: Systematic approaches to finding and fixing bugs

ENROLLMENT NO: 2403A52006

NAME: MOHAMMED MUSTAFA

COURSE: CSM(AI/ML)

BATCH: 01

DATE: 16-09-2025

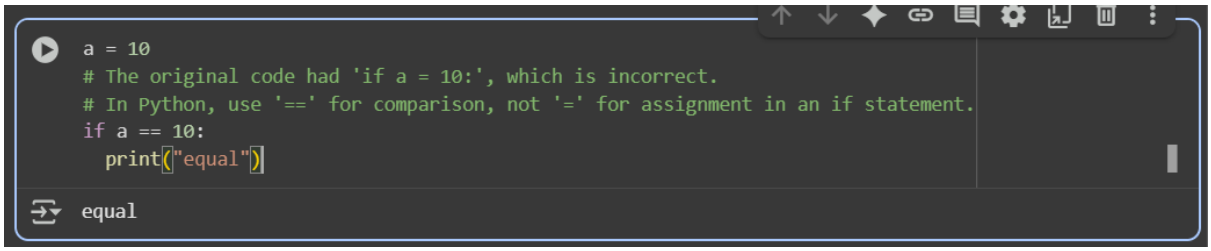
Task 1: Syntax Error in Conditionals

Used Prompt:

```
a = 10
 if a = 10:
print("equal")
```

In the given code, mention the error and give the corrected code

Corrected Code:



Error Explanation:

The error in the code we should use double == not only single = to check equality of a number.

Task 2: Loop Off-By-One Error.

Used prompt:

def sum_upto_n(n):

total = 0

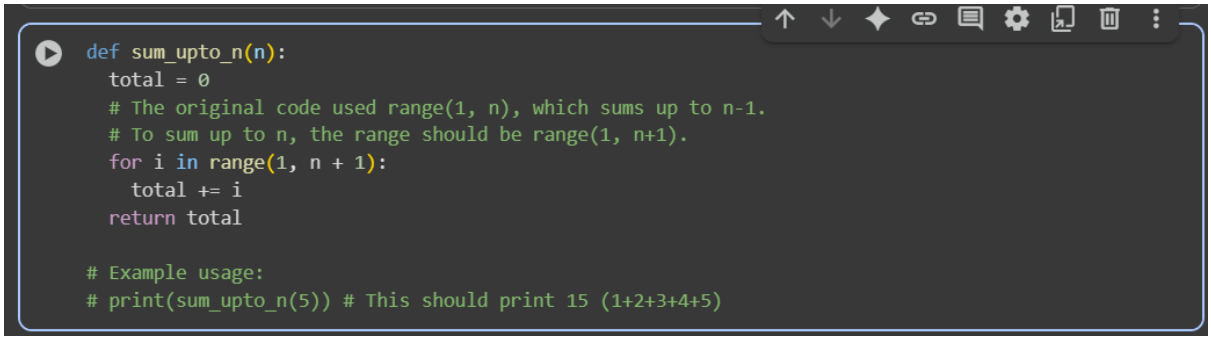
for i in range(1,n):

total +=i

return total

In the given code identify and mention the error like the previous cell and correct the code

Corrected Code:



```python
def sum_upto_n(n):
  total = 0
  # The original code used range(1, n), which sums up to n-1.
  # To sum up to n, the range should be range(1, n+1).
  for i in range(1, n + 1):
    total += i
  return total

# Example usage:
# print(sum_upto_n(5)) # This should print 15 (1+2+3+4+5)
```

Error Explanation:

The error is in the given range(1, n).To calculate the sum, the range used should be range (1, n+1).

TASK 3: Attribute Error

Used Prompt:

class user: def _init_(self,name):

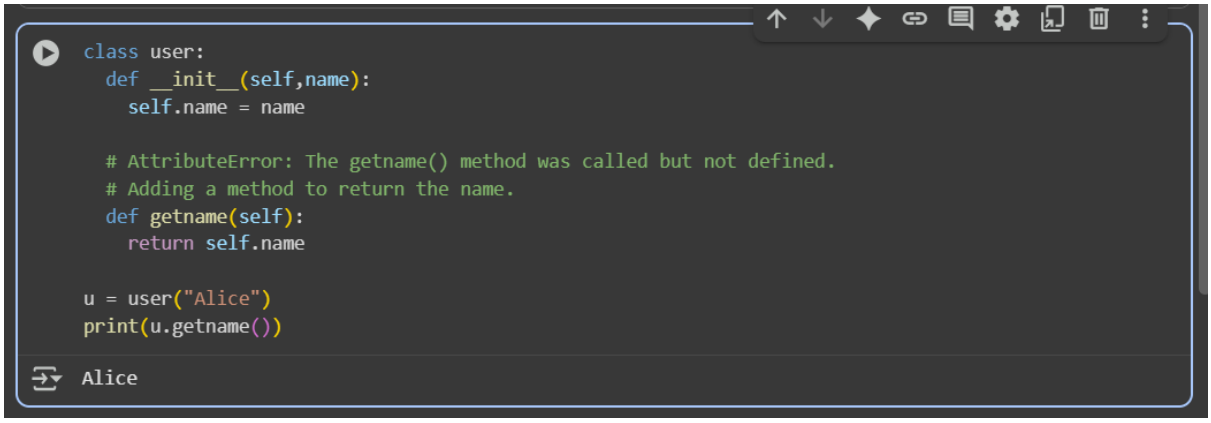
self.name = name

u = user("Alice")

print(u.getname())

In the given code identify the error, mention it and correct the code

Corrected Code:



```
class user:
  def __init__(self,name):
    self.name = name

  # AttributeError: The getname() method was called but not defined.
  # Adding a method to return the name.
  def getname(self):
    return self.name

u = user("Alice")
print(u.getname())
```

```
Alice
```

Error Explanation:

The getname() method is called, but not defined in the user class.

TASK 4: Incorrect Class Attribute Initialization

Used Prompt:

class Car:

def start():

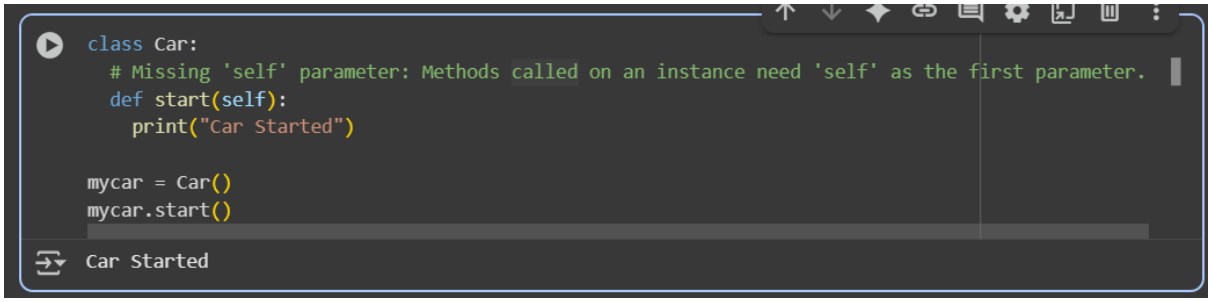
print("Car Started")

mycar = Car()

mycar.start()

in the given code identify the error in the code mention it and give the corrected code

Corrected Code:



Error Explanation:

When defining a method in a class that will be called on an instance of the class (like mycar), the first parameter of the method should be self, which refers to the instance itself.

TASK 5: Conditional Logic Error in Grading System

Used Prompt:

def grade_student(score):

if score < 40:

return "A"

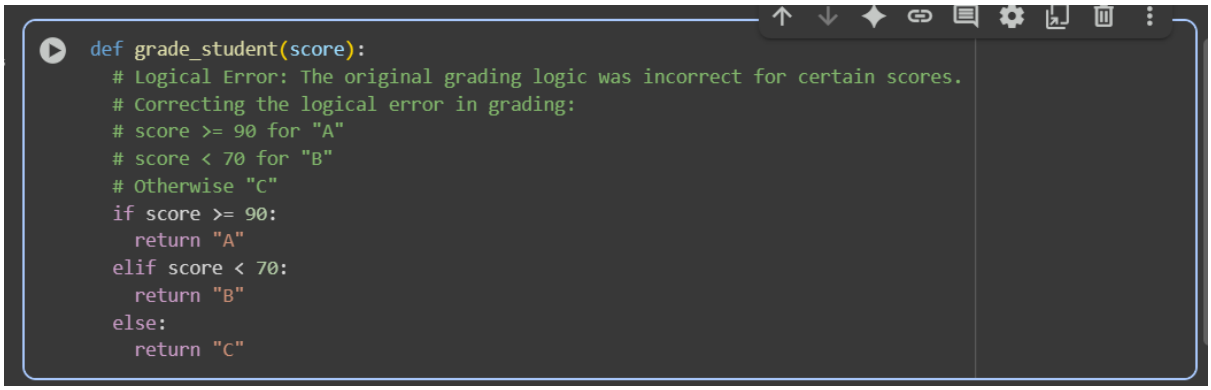
elif score < 70:

return "B"

else: return "C"

in this code, make changes that if score >:= 90 return A if score < 70 return B else return C

Corrected Code:



```
def grade_student(score):
  # Logical Error: The original grading logic was incorrect for certain scores.
  # Correcting the logical error in grading:
  # score >= 90 for "A"
  # score < 70 for "B"
  # Otherwise "C"
  if score >= 90:
    return "A"
  elif score < 70:
    return "B"
  else:
    return "C"
```

Error Explanation:

In this code we have a logical error. The corrected logic is that if score >=90 return A, if score > 70 return B and if score < 40 return C