

AI ASSISTED CODING

LAB ASSIGNMENT -7.2

Program	: B-TECH
Specialization	: AIML
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TASK DESCRIPTION-1

Task -1 – Syntax Error in Conditionals

PROMPT:

Correct the syntactical error from the code

```
a=10
```

```
if a = 10:
```

```
print("Equal")
```

GENERATED CODE:

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

Output:-

 Equal

OBSERVATION:

The code is simple, and it can be done by manually also. but the code generated is just a basic python syntax rule and it is corrected by the gemini simply.

2)

Task -2:

Loop Off-By-One Error.

PROMPT :

Correct the mistake in the code, loop-off-by-one Error.

```
def sum_upto_n(n):  
    total=0  
    for i in range(1,n):  
        total +=i  
    return total. The n value should be user-defined
```

CODE:

```
def sum_upto_n(n):  
    total = 0  
    for i in range(1, n + 1):  
        total += i  
    return total  
  
# Example usage:  
# You can uncomment the line below to prompt for user input  
# n_value = int(input("Enter a positive integer for n: "))  
n_value = 5 # You can change this value to test  
print(f"The sum of numbers up to {n_value} is: {sum_upto_n(n_value)}")
```

OUTPUT:

```
The sum of numbers up to 5 is: 15
```

OBSERVATION:

it's just a matter of small changes, but it can change the entire code. I asked it to identify the

error, and it gave me the correct code. It provided the working code after debugging.

3) TASK-3

Error: AttributeError

PROMPT:

Fix the increment and decrement errors in the code.

```
class User:
    def __init__(self, name):
        self.name=name
u = User("Alice")
print(u.getName()).
```

And the error is an attribute error

CODE:

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

u = User("Alice")
print(u.name)
```

OUTPUT:

↔ Alice

OBSERVATION:

I see the `AttributeError`. The `User` class doesn't have a method called `getName()`. You can access the `name` attribute directly using dot notation. Also, there are some indentation issues in the provided code. Here is the corrected code:

Excellent! The corrected code ran without errors and printed the user's name.

4)

TASK-4:

Incorrect Class Attribute Initialization.

PROMPT:

correct the incorrect attribute initialization

```
class Car:
```

```
    def start():
```

```
        print("car started")
```

```
mycar = Car()
```

mycar.start().detect the missing self and initialize attributes properly.


GENERATED CODE:

```
▶ class Car:
    def __init__(self, make, model):
        self.make = make
        self.model = model

    def start(self):
        print(f"{self.make} {self.model} started")

mycar = Car("Toyota", "Camry")
mycar.start()
```

OUTPUT:

 Toyota Camry started

OBSERVATION: Car: def start(): print("car started")
mycar = Car() mycar.start() Detect the missing self and initialize attributes properly.

You're right, the start method is missing the self parameter. Also, to initialize attributes like make and model, we need to add an `__init__` method. Here is the corrected code with proper attribute initialization and the self parameter in the start method.

5)

TASK-5:

Conditional Logic Error in Grading System

PROMPT:

correct the conditional Logic Error in grading system from the the code

```
def grade_student(score):  
    if score < 40:  
        return "A"  
    elif score < 70:  
        return "B"  
    else:  
        return "c"
```

GENERATED CODE:

```
def grade_student(score):  
    if score >= 70:  
        return "A"  
    elif score >= 40:  
        return "B"  
    else:  
        return "C"  
  
# Example usage:  
print(f"Score 85: {grade_student(85)}")  
print(f"Score 55: {grade_student(55)}")  
print(f"Score 30: {grade_student(30)}")
```

OUTPUT:

```
Score 85: A  
Score 55: B  
Score 30: C
```


OBSERVATION:

I see the conditional logic error in the grading system. The current logic has overlapping conditions and doesn't represent a typical grading scale. I'll correct it to a more standard system where:

- Scores 70 and above get an "A"
- Scores between 40 and 69 get a "B"
- Scores below 40 get a "C"

THANKYOU