

AI Assisted Coding

AssignmentNumber: 9.3

NAME: N.JYOSHNA SRI

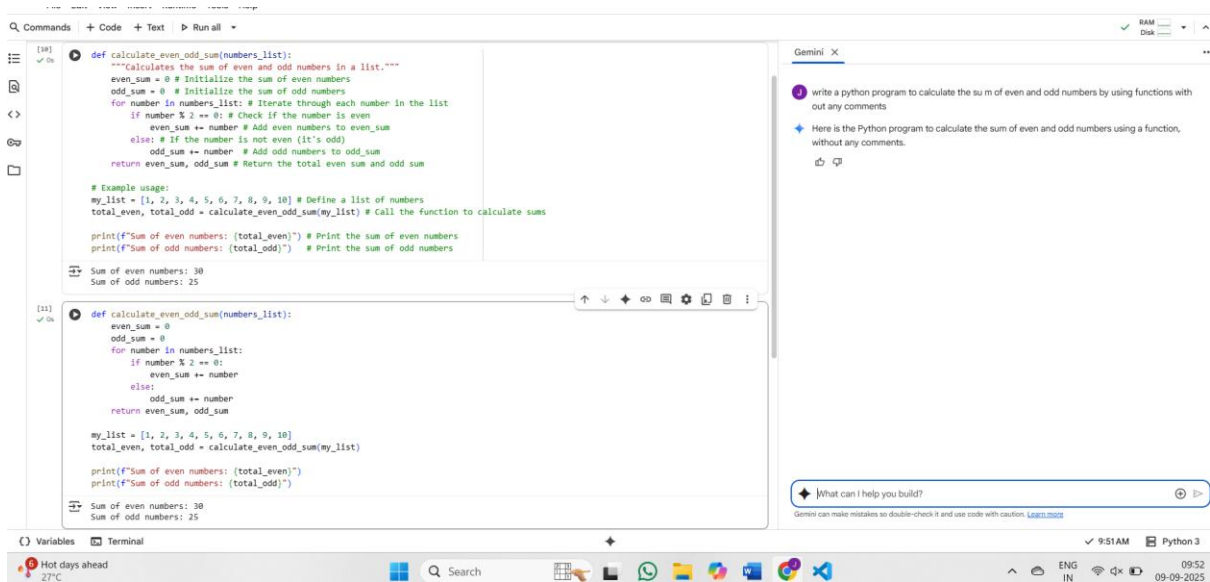
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Task-1:

Task Description#1 Basic Docstring Generation

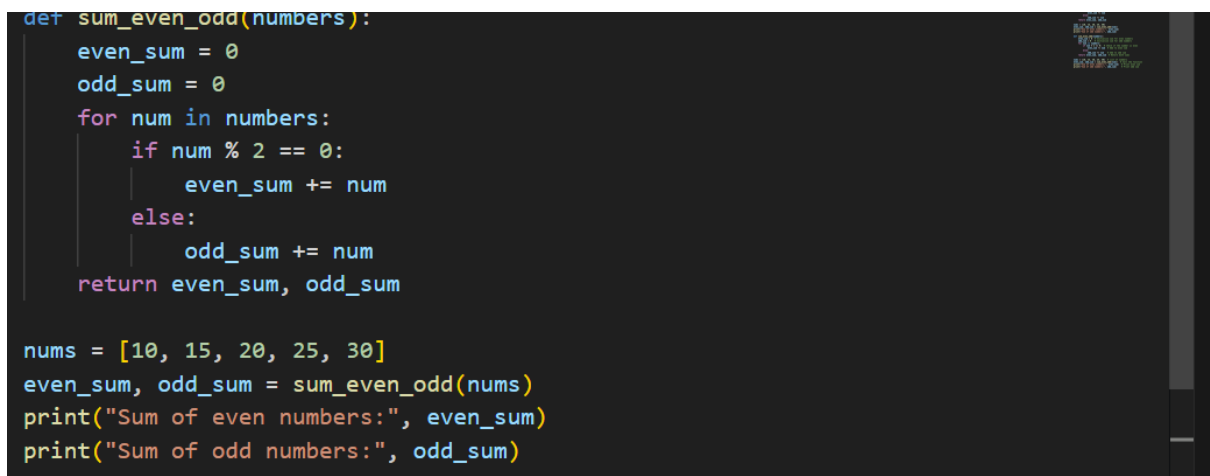
- Write python function to return sum of even and odd numbers in the given list.
- Incorporate manual **docstring** in code with Google Style
- Use an AI-assisted tool (e.g., Copilot, Cursor AI) to generate a docstring describing the function.
- Compare the AI-generated docstring with your manually written one.

Code output screenshots in gemini:



Code output screenshots by using copilot:

With out comments:



With comments:

```
def sum_even_odd(numbers):
    even_sum = 0 # Initialize sum for even numbers
    odd_sum = 0 # Initialize sum for odd numbers
    for num in numbers:
        if num % 2 == 0: # Check if the number is even
            even_sum += num # Add to even sum
        else:
            odd_sum += num # Add to odd sum
    return even_sum, odd_sum # Return both sums

nums = [10, 15, 20, 25, 30] # List of numbers
even_sum, odd_sum = sum_even_odd(nums) # Call the function
print("Sum of even numbers:", even_sum) # Print even sum
print("Sum of odd numbers:", odd_sum) # Print odd sum
```

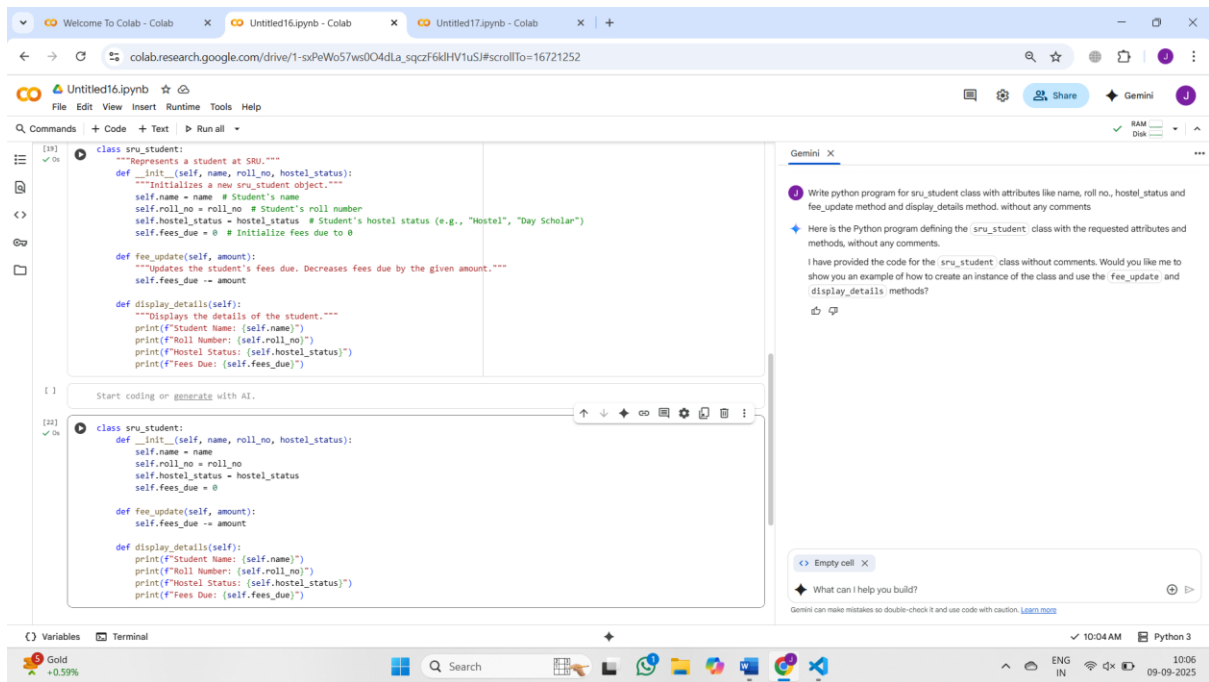
Output :

```
Sum of even numbers: 60
Sum of odd numbers: 40
PS C:\Users\HP\OneDrive\Desktop\html>
```

Task – 2: Automatic Inline Comments

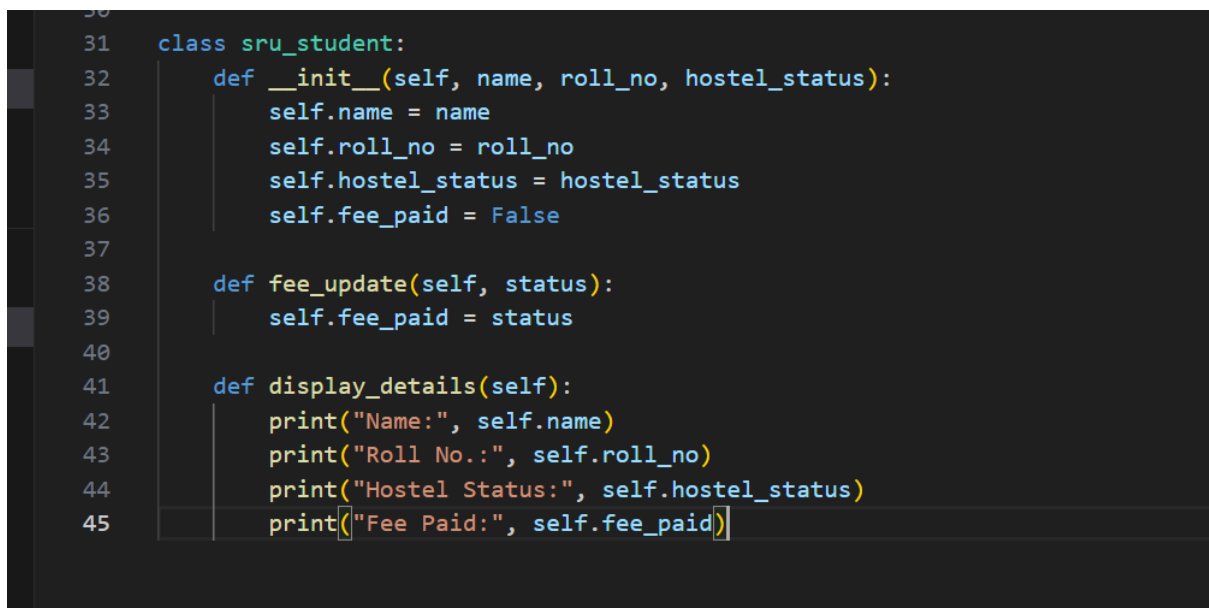
- Write python program for **sru_student** class with attributes like name, roll no., hostel_status and **fee_update** method and **display_details** method.
- Write comments manually for each line/code block
- Ask an AI tool to add inline comments explaining each line/step.
- Compare the AI-generated comments with your manually written one.

Code output screenshots by using gemini:



Code output screenshots by using copilot:

With out comments:



With comments:

```

47     class Student:
48         def __init__(self, name, roll_no, hostel_status):
49             # Initialize the student's name, roll number, and hostel status
50             self.name = name
51             self.roll_no = roll_no
52             self.hostel_status = hostel_status
53             self.fee_paid = False # Track if the fee has been paid
54
55         def fee_update(self, status):
56             # Update the fee payment status
57             self.fee_paid = status
58
59         def display_details(self):
60             # Display all details of the student
61             print("Name:", self.name)
62             print("Roll No.:", self.roll_no)
63             print("Hostel Status:", self.hostel_status)
64             print("Fee Paid:", self.fee_paid)

```

TASK-3:

- Write a Python script with 3–4 functions (e.g., calculator: add, subtract, multiply, divide).
- Incorporate manual **docstring** in code with NumPy Style
- Use AI assistance to generate a module-level docstring + individual function docstrings.
- Compare the AI-generated docstring with your manually written one.

Code output screenshots by using copilot:

A screenshot of a mobile application interface. The screen is mostly white with a vertical grey scrollbar on the right side. At the top, there is a purple header bar with a white letter 'J' and the word 'give' next to it. Below this, there is a blue bar with a white diamond icon and the word 'Sun'. Further down, there is a list of items: 'I ha', 'Woi', and 'WI'. At the bottom right, there is a black icon of a person's head and shoulders.



Without comments:

```
[ ] def add(x, y):
    """
    Adds two numbers.

    Parameters
    -----
    x : float or int
        The first number.
    y : float or int
        The second number.

    Returns
    -----
    float or int
        The sum of x and y.
    """
    return x + y

def subtract(x, y):
    """
    Subtracts the second number from the first.

    Parameters
    -----
    x : float or int
        The first number.
    y : float or int
        The second number.

    Returns
    -----
    float or int
        The difference between x and y.
    """
    return x - y

[ ] def multiply(x, y):
    """
    Multiplies two numbers.

    Parameters
    -----
    x : float or int
        The first number.
    y : float or int
        The second number.

    Returns
    -----
    float or int
        The product of x and y.
    """
    return x * y

def divide(x, y):
    """
    Divides the first number by the second.

    Parameters
    -----
    x : float or int
        The dividend.
    y : float or int
        The divisor.

    Returns
    -----
    float or str
        The quotient of x and y, or an error message if y is zero.
    """
    if y == 0:
        return "Error: Division by zero"
    return x / y
```

Output screenshots by using copilot:

```
def add(a, b):
    """Add two numbers.

    Parameters
    -----
    a : float or int
        First number.
    b : float or int
        Second number.

    Returns
    -----
    float or int
        The sum of a and b.
    """
    return a + b

def subtract(a, b):
    """Subtract one number from another.

    Parameters
    -----
    a : float or int
        Number to subtract from.
    b : float or int
        Number to subtract.

    Returns
    -----
    float or int
        The result of a minus b.
    """
    return a - b

def multiply(a, b):
    """Multiply two numbers.

    Parameters
    -----
    a : float or int
        First number.
    b : float or int
        Second number.

    Returns
    -----
    float or int
        The product of a and b.
    """
    return a * b
```

```
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83 def subtract(a, b):
84     """Subtract one number from another.
85
86     Parameters
87     -----
88     a : float or int
89         Number to subtract from.
90     b : float or int
91         Number to subtract.
92
93     Returns
94     -----
95     float or int
96         The result of a minus b.
97     """
98     return a - b
99
100 def multiply(a, b):
101     """Multiply two numbers.
102
103     Parameters
104     -----
105     a : float or int
106         First number.
107     b : float or int
108         Second number.
109
110     Returns
111     -----
112     float or int
113         The product of a and b.
114     """
115     return a * b
```




```
ar assis.py / add
100 def multiply(a, b):
101     """
102     float or int
103     |
104     The product of a and b.
105     """
106     return a * b
107
108 def divide(a, b):
109     """Divide one number by another.
110
111     Parameters
112     -----
113     a : float or int
114     |
115     Numerator.
116     b : float or int
117     |
118     Denominator.
119
120     Returns
121     -----
122     float
123     |
124     The result of a divided by b.
125     """
126     return a / b
```


PROBLEMS 5 OUTPUT DEBUG CONSOLE TERMINAL PORTS

powerh...


With comments:

i assis.py >  divide

```
def add(a, b):  
    """Add two numbers.  
  
    Parameters  
    -----  
    a : float or int  
        First number.  
    b : float or int  
        Second number.  
  
    Returns  
    -----  
    float or int  
        The sum of a and b.  
    """  
    # Return the sum of a and b  
    return a + b  
  
def subtract(a, b):  
    """Subtract one number from another.  
  
    Parameters  
    -----  
    a : float or int
```

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```
83  
84 def subtract(a, b):  
85     """Subtract one number from another.  
86  
87     Parameters  
88     -----  
89     a : float or int  
90         Number to subtract from.  
91     b : float or int  
92         Number to subtract.  
93  
94     Returns  
95     -----  
96     float or int  
97         The result of a minus b.  
98     """  
99     # Return the result of a minus b  
100     return a - b  
101  
102 def multiply(a, b):  
103     """Multiply two numbers.  
104  
105     Parameters  
106     -----  
107     a : float or int
```

PROBLEMS  OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
ai assis.py > divide
101
102 def multiply(a, b):
103     """Multiply two numbers.
104
105     Parameters
106     -----
107     a : float or int
108         First number.
109     b : float or int
110         Second number.
111
112     Returns
113     -----
114     float or int
115         The product of a and b.
116     """
117     # Return the product of a and b
118     return a * b
119
120 def divide(a, b):
121     """Divide one number by another.
122
123     Parameters
124     -----
125     a : float or int
126
127     Returns
128     -----
129     float
130         The result of a divided by b.
131     """
132     # Return the result of a divided by b
133     return a / b
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PROBLEMS 5 OUTPUT DEBUG CONSOLE TERMINAL PORTS

IndentationError: expected an indented block after class definition on line 47

PS C:\Users\HP\OneDrive\Desktop\html>

Ln 135, Col 1 Spaces: 4 UTF-8 Python

Snipping Tool

Screenshot copied

Automatically saved

```
ai assis.py > divide
def divide(a, b):
    """Divide one number by another.

    Parameters
    -----
    a : float or int
        Numerator.
    b : float or int
        Denominator.

    Returns
    -----
    float
        The result of a divided by b.
    """
    # Return the result of a divided by b
    return a / b
```