

Assignment 3

Screenshot of source code:

```
1  def main():
2      # Ask user input for starting value
3      starting_value = int(input("Enter the value for start: "))
4
5      # Ask user input for ending value
6      ending_value = int(input("Enter the value for end: "))
7
8      # Check if starting value is less than or equal to ending value
9      if starting_value <= ending_value:
10         # Store the sum value in local variable and print the output with string formatting
11         sum_value = calculate_odd_sum(starting_value, ending_value)
12         # display the output
13         print(
14             f"The sum of all odd numbers between {starting_value} and {ending_value}, is {sum_value}")
15
16     else:
17         print("OOPS !, start value should be less than or equal to end value.")
18
19 # Calculate the sum of odd numbers for the given range of value
20 def calculate_odd_sum(starting_value, ending_value):
21
22     # Declare local variable to store the sum of odd numbers which is later updated from inside the loop
23     sum_value = 0
24     # Iterate through the range of value from starting to the end, ending_value + 1 is used because the range()
25     # function generates a sequence up to, but not including, the ending value.
26     for num in range(starting_value, ending_value + 1):
27         # Check if the current value is even or odd
28         if num % 2 != 0:
29             sum_value += num
30     # Return the sum value after the loop is ended
31     return sum_value
32
33 # execute main method to run the program
34 main()
```

Test case for value range of 1 and 15:

```
assign3.py •
assign3.py > ...
1  def main():
2      # Ask user input for starting value
3      starting_value = int(input("Enter the value for start: "))
4
5      # Ask user input for ending value
6      ending_value = int(input("Enter the value for end: "))
7
8      # Check if starting value is less than or equal to ending value
9      if starting_value <= ending_value:
10         # Store the sum value in local variable and print the output with string formatting
11         sum_value = calculate_odd_sum(starting_value, ending_value)
12         # display the output
13         print(
14             f"The sum of all odd numbers between {starting_value} and {ending_value}, is {sum_value}")
15
16     else:
17         print("OOPS !, start value should be less than or equal to end value.")
18
19 # Calculate the sum of odd numbers for the given range of value
20 def calculate_odd_sum(starting_value, ending_value):
21
22     # Declare local variable to store the sum of odd numbers which is later updated from inside the loop
23     sum_value = 0
24     # Iterate through the range of value from starting to the end, ending_value + 1 is used because the range()
25     # function generates a sequence up to, but not including, the ending value.
26     for num in range(starting_value, ending_value + 1):
27         # Check if the current value is even or odd
28         if num % 2 != 0:
29             sum_value += num
30     # Return the sum value after the loop is ended
31     return sum_value
32
33 # execute main method to run the program
34 main()

COMMENTS  PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

> python3 assign3.py
Enter the value for start: 1
Enter the value for end: 15
The sum of all odd numbers between 1 and 15, is 64
```

Test case for value range of 20 and 100:

```
assign3.py •
assign3.py > ...
1  def main():
2      # Ask user input for starting value
3      starting_value = int(input("Enter the value for start: "))
4
5      # Ask user input for ending value
6      ending_value = int(input("Enter the value for end: "))
7
8      # Check if starting value is less than or equal to ending value
9      if starting_value <= ending_value:
10         # Store the sum value in local variable and print the output with string formatting
11         sum_value = calculate_odd_sum(starting_value, ending_value)
12         # display the output
13         print(
14             f"The sum of all odd numbers between {starting_value} and {ending_value}, is {sum_value}")
15
16     else:
17         print("OOPS !, start value should be less than or equal to end value.")
18
19 # Calculate the sum of odd numbers for the given range of value
20 def calculate_odd_sum(starting_value, ending_value):
21
22     # Declare local variable to store the sum of odd numbers which is later updated from inside the loop
23     sum_value = 0
24     # Iterate through the range of value from starting to the end, ending_value + 1 is used because the range()
25     # function generates a sequence up to, but not including, the ending value.
26     for num in range(starting_value, ending_value + 1):
27         # Check if the current value is even or odd
28         if num % 2 != 0:
29             sum_value += num
30     # Return the sum value after the loop is ended
31     return sum_value
32
33 # execute main method to run the program
34 main()

COMMENTS  PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

> python3 assign3.py
Enter the value for start: 20
Enter the value for end: 100
The sum of all odd numbers between 20 and 100, is 2400
```

Test case for value range of 20 and 10:

```
assign3.py •
assign3.py > main
1 def main():
2     # Ask user input for starting value
3     starting_value = int(input("Enter the value for start: "))
4
5     # Ask user input for ending value
6     ending_value = int(input("Enter the value for end: "))
7
8     # Check if starting value is less than or equal to ending value
9     if starting_value <= ending_value:
10        # Store the sum value in local variable and print the output with string formatting
11        sum_value = calculate_odd_sum(starting_value, ending_value)
12        # display the output
13        print(
14            f"The sum of all odd numbers between {starting_value} and {ending_value}, is {sum_value}")
15
16    else:
17        print("OOPS !, start value should be less than or equal to end value.")
18
19    # Calculate the sum of odd numbers for the given range of value
20    def calculate_odd_sum(starting_value, ending_value):
21
22        # Declare local variable to store the sum of odd numbers which is later updated from inside the loop
23        sum_value = 0
24        # Iterate through the range of value from starting to the end, ending_value + 1 is used because the range()
25        # function generates a sequence up to, but not including, the ending value.
26        for num in range(starting_value, ending_value + 1):
27            # Check if the current value is even or odd
28            if num % 2 != 0:
29                sum_value += num
30        # Return the sum value after the loop is ended
31        return sum_value
32
33    # execute main method to run the program
34    main()

COMMENTS  PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL

> python3 assign3.py
Enter the value for start: 20
Enter the value for end: 10
OOPS !, start value should be less than or equal to end value.
```