ASSIGNMENT - 9.1

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Batch No : 02

Course Title : AI Assisted Coding

Instructor's Name : Mr. S Naresh Kumar

Problem - 1:

```
# Calculate average score of a student
def calc_average(marks):
    total = 0
    for m in marks:
        total += m
    average = total / len(marks)
    return average # Fixed typo here
marks = [85, 90, 78, 92]
print("Average Score is ", calc_average(marks)) # Added missing parenthesis here
```

Problem - 2 :

```
def area_of_rectangle(length, breadth):
    """Calculate the area of a rectangle."""
    return length * breadth

print(area_of_rectangle(10, 20))
```

Problem - 3:

```python
# Calculate the percentage of a given value
def calculate_percentage(value, percentage):
    """Calculate the percentage of a given value."""
    return value * percentage / 100

# Define the amount and percentage to calculate
amount = 200
percentage = 15
result = calculate_percentage(amount, percentage)
print(f"{percentage}% of {amount} is {result}.")
```

Problem - 4:

```python
def welcome_students(students):
    for student in students:
        print(f"Welcome {student}")

students = ["Alice", "Bob", "Charlie"]
welcome_students(students)
```

Problem - 5:

```python
# Find squares of numbers using list comprehension for better performance.

nums = [i for i in range(1, 1000000)]
squares = [n**2 for n in nums]  # Using list comprehension for faster execution
print(len(squares))
```

Problem - 6:

```python
def grade(score):
    if score >= 90:
        return "A"
    elif score >= 80:
        return "B"
    elif score >= 70:
        return "C"
    elif score >= 60:
        return "D"
    else:
        return "F"

# Example usage
print(grade(95))  # Output: A
print(grade(85))  # Output: B
print(grade(75))  # Output: C
print(grade(65))  # Output: D
print(grade(55))  # Output: F
```