

Ad.Python Practical

5. Process Result.txt file having data in the format (Format: EnrollmentNumber, Name, Sub1_marks,

Sub2_Marks, Sub3_marks, sub4_Marks) and generate analysis in following format

a. Print Marksheet (Design your own format)

b. Generate Student Summary (Enrollment Number, Name, Marks Obtained, Pass/Fail)

c. Grade wise Summary

Define a function to calculate grades based on marks

```
def calculate_grade(marks):
```

```
    if marks >= 90:
```

```
        return 'A+'
```

```
    elif marks >= 80:
```

```
        return 'A'
```

```
    elif marks >= 70:
```

```
        return 'B'
```

```
    elif marks >= 60:
```

```
        return 'C'
```

```
    elif marks >= 50:
```

```
        return 'D'
```

```
    else:
```

```
        return 'F'
```

Read data from Result.txt file

```
with open('Result.txt', 'r') as file:
```

```
    lines = file.readlines()
```

Process data and generate results

```
for line in lines:
```

```
    data = line.strip().split(',')
```

```
enrollment_number, name, sub1_marks, sub2_marks, sub3_marks, sub4_marks = data
```

Convert marks to integers

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```
sub1_marks, sub2_marks, sub3_marks, sub4_marks = map(int, [sub1_marks,
sub2_marks, sub3_marks, sub4_marks])

# Calculate total marks and grade

total_marks = sub1_marks + sub2_marks + sub3_marks + sub4_marks

grade = calculate_grade(total_marks)

# Print Marksheet

print(f"Enrollment Number: {enrollment_number}")

print(f"Name: {name}")

print(f"Subject 1 Marks: {sub1_marks}")

print(f"Subject 2 Marks: {sub2_marks}")

print(f"Subject 3 Marks: {sub3_marks}")

print(f"Subject 4 Marks: {sub4_marks}")

print(f"Total Marks: {total_marks}")

print(f"Grade: {grade}")

print("=" * 100)

# Generate Student Summary

result = "Pass" if grade != 'F' else "Fail"

print(f"Enrollment Number: {enrollment_number}")

print(f"Name: {name}")

print(f"Marks Obtained: {total_marks}")

print(f"Result: {result}")

print("=" * 100)

# Grade wise Summary

grade_summary = {'A+': 0, 'A': 0, 'B': 0, 'C': 0, 'D': 0, 'F': 0}

for line in lines:
```

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```
data = line.strip().split(',')
_, _, sub1_marks, sub2_marks, sub3_marks, sub4_marks = data
sub1_marks, sub2_marks, sub3_marks, sub4_marks = map(int, [sub1_marks,
sub2_marks, sub3_marks, sub4_marks])
total_marks = sub1_marks + sub2_marks + sub3_marks + sub4_marks
grade = calculate_grade(total_marks)
grade_summary[grade] += 1
print("Grade Wise Summary:")
for grade, count in grade_summary.items():
    print(f"Grade {grade}: {count}")
```