Data Science   Assignment- 4

Create Data Frame

```python
import pandas as pd
students = pd. Dataframe ({
    'Name': ['Alice','Bob', 'Charlie',' David', 'Eva'],
    'Age': [25,30,22,35,28],
    'Grade': [88,75,92,68,90]
})
print (students)
```

2. Drop entry (David)

```python
students_drop= students [students ['Name'] != 'David']
print (students_drop)
```

3. Select Name & Grade where Age ≥ 25

```python
selected= students.loc [students['Age']>25,
    ['Name', 'Grade']]
print (selected)
```

4. Add Grade_Squared column

```python
students ['Grade_Sqared'] = students ['Grade'] ** 2
print (students)
```

Q5: Sort by Grade (Descending)

sorted_students = students.sort_values (by = Gr
ascending = False)
print (sorted_students)

Q6: Descriptive Statistics

mean_val = students ["Grade"].mean()
std_val = students ['Grade'].std()
skew_val = students ['Grade'].skew()
kurt_val = students ['Grade'].kurt()

print ("Mean:", mean_val)
print ("Standard Deviation", std_val)
print ("Skewness:", skew_val)
print ("Kurtosis", kurt_val)

Q7: Unique Values & Counts

unique_ages = students ['Age'].unique(
age_counts = students ['Age'].value_count

print ("Unique Ages:", unique_ages)
print ("Age Counts:\n", age_counts)

8 Membership (Check if Alice is present,
is_alice_present = 'Alice' in students['Name']

values

print (is_alice_present)

Q9: Write Dataframe to CSV

students.to_csv ("student_data.csv", index =
false)

print ("Data written to student_data.csv")

Q10: Read Dataframe from CSV

read_students = pd.read_csv ("student_data.csv)

print (read_students)