

# Statistical description on data

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#Sec: B

#Subject:ET - 1

```
import pandas as pd
```

```
import os
```

```
os.getcwd()
```

```
'C:\\Users\\anush\\OneDrive\\Documents\\Desktop'
```

```
os.chdir("C:\\Users\\anush\\OneDrive\\Documents\\Desktop")
```

```
df=pd.read_csv("diabetes.csv")
```

```
df.head()
```

	Pregnancies	Glucose	BloodPressure	SkinThickness	Insulin	BMI
0	6	148	72	35	0	33.6
1	1	85	66	29	0	26.6
2	8	183	64	0	0	23.3
3	1	89	66	23	94	28.1
4	0	137	40	35	168	43.1

	DiabetesPedigreeFunction	Age	Outcome
0	0.627	50	1
1	0.351	31	0
2	0.672	32	1
3	0.167	21	0
4	2.288	33	1

```
df.tail()
```

	Pregnancies	Glucose	BloodPressure	SkinThickness	Insulin	BMI
763	10	101	76	48	180	32.9
764	2	122	70	27	0	36.8
765	5	121	72	23	112	26.2

766	1	126	60	0	0	30.1
767	1	93	70	31	0	30.4

	DiabetesPedigreeFunction	Age	Outcome
763	0.171	63	0
764	0.340	27	0
765	0.245	30	0
766	0.349	47	1
767	0.315	23	0

*# Range*

```
range_value = df['Glucose'].max() - df['Glucose'].min()
print('Range:', range_value)
```

Range: 199

*# Variance*

```
variance_value = df['Glucose'].var()
print('Variance:', variance_value)
```

Variance: 1022.2483142519557

*# Standard Deviation*

```
std_dev_value = df['Glucose'].std()
print('Standard Deviation:', std_dev_value)
```

Standard Deviation: 31.97261819513622

*# Mean Absolute Deviation*

```
mad_value = (df['Glucose'] - df['Glucose'].mean()).abs().mean()
print('Mean Absolute Deviation:', mad_value)
```

Mean Absolute Deviation: 25.181793212890625