

In [2]:

```
import matplotlib.pyplot as plt
import numpy as np
import pandas as pd
```

In [3]:

```
#Menampilkan semua data awal
data = pd.read_csv('C:\\Users\\Ezi\\Tugas-Dasar-Pemrograman\\UAS\\student_grade.csv')
data
```

Out[3]:

	student number	name	subject	grade
0	101	Andi	Programming Basic	80
1	102	Budi	Programming Basic	90
2	103	Cika	Programming Basic	100
3	104	Dedi	Programming Basic	100
4	105	Eka	Programming Basic	50
5	106	Feri	Programming Basic	40
6	107	Galih	Programming Basic	70
7	108	Huda	Programming Basic	70
8	109	Intan	Programming Basic	60
9	101	Andi	Web Programming	70
10	102	Budi	Web Programming	80
11	103	Cika	Web Programming	80
12	104	Dedi	Web Programming	90
13	105	Eka	Web Programming	90
14	106	Feri	Web Programming	60
15	107	Galih	Web Programming	95
16	108	Huda	Web Programming	85
17	109	Intan	Web Programming	90

In [4]:

```
#Menampilkan semua data dengan menambah kolom baru
data['description'] = ''
data.loc[data['grade'] >= 70, 'description'] = 'PASS'
data.loc[data['grade'] <= 70, 'description'] = 'FAIL'
data
```

Out[4]:

	student number	name	subject	grade	description
0	101	Andi	Programming Basic	80	PASS
1	102	Budi	Programming Basic	90	PASS
2	103	Cika	Programming Basic	100	PASS
3	104	Dedi	Programming Basic	100	PASS
4	105	Eka	Programming Basic	50	FAIL
5	106	Feri	Programming Basic	40	FAIL
6	107	Galih	Programming Basic	70	FAIL
7	108	Huda	Programming Basic	70	FAIL
8	109	Intan	Programming Basic	60	FAIL
9	101	Andi	Web Programming	70	FAIL
10	102	Budi	Web Programming	80	PASS
11	103	Cika	Web Programming	80	PASS
12	104	Dedi	Web Programming	90	PASS
13	105	Eka	Web Programming	90	PASS
14	106	Feri	Web Programming	60	FAIL
15	107	Galih	Web Programming	95	PASS
16	108	Huda	Web Programming	85	PASS
17	109	Intan	Web Programming	90	PASS

In [5]:

```
#Menampilkan kolom student number, name dan mean(rata-rata)
data_group= data.groupby(['student number','name']).mean().astype(int)
data_group = data_group[['grade']].rename(columns={'grade':'mean'})
data_group
```

Out[5]:

			mean
student number	name		
101	Andi		75
102	Budi		85
103	Cika		90
104	Dedi		95
105	Eka		70
106	Feri		50
107	Galih		82
108	Huda		77
109	Intan		75

In [6]:

```
#menampilkan visualisasi

data_group.plot(kind='bar')
plt.xlabel('Name')
plt.ylabel('Grade')
plt.title('Mean of Final Exam Values')

plt.show()
```

