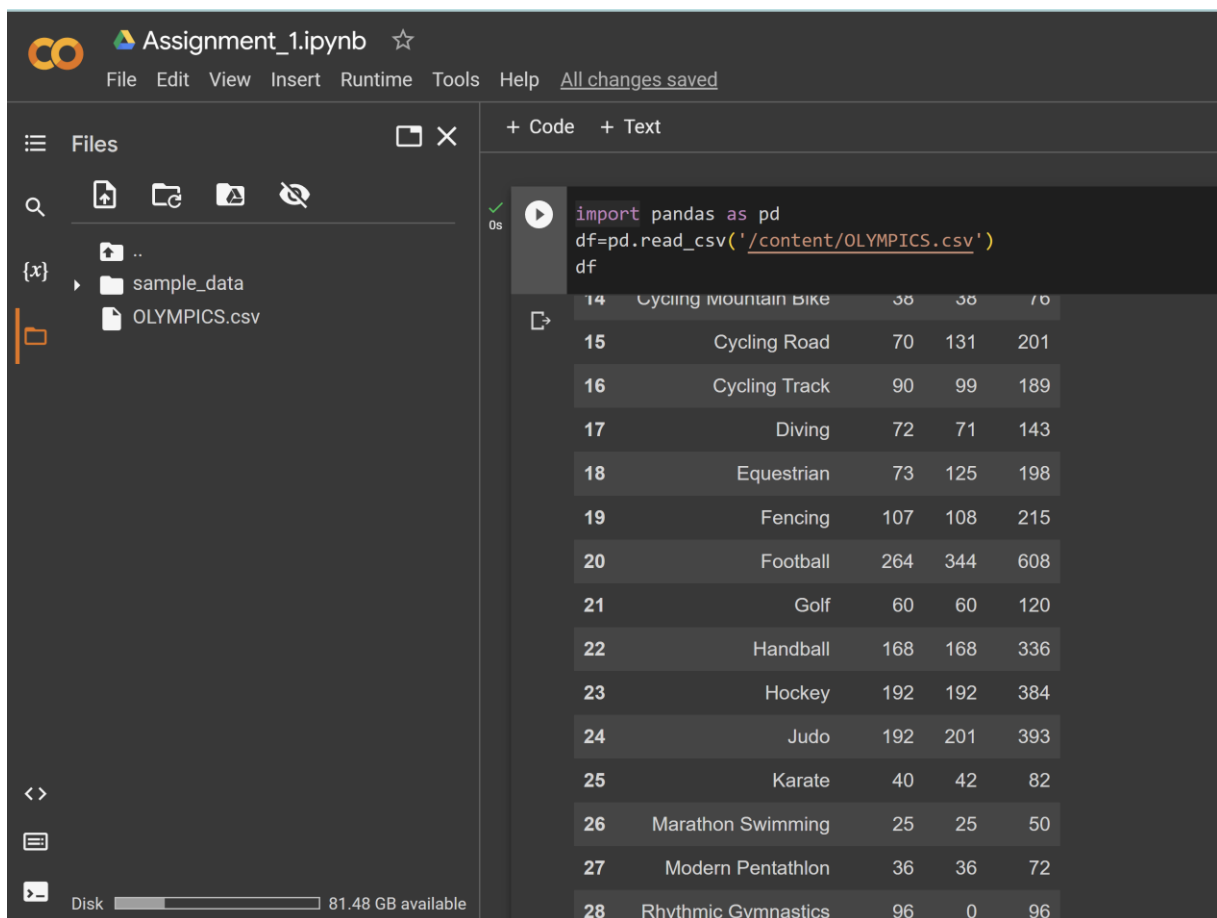# ASSIGNMENT 1

Siddharth Bhardwaj

21BCE2001

Git Link:

https://github.com/siDarth0803/AI_ML/blob/main/assignment_1.ipynb

Task - 1 Create a pandas dataframe (DataFrame name as 'df')

```
df.tail(10)
```

	Play	Female	Male	Total
36	Swimming	361	418	779
37	Table Tennis	86	86	172
38	Taekwondo	65	65	130
39	Tennis	94	97	191
40	Trampoline Gymnastics	16	16	32
41	Triathlon	55	55	110
42	Volleyball	144	144	288
43	Water Polo	122	146	268
44	Weightlifting	98	99	197
45	Wrestling	96	193	289

```
[3]  df.shape
```

```
(46, 4)
```

```
[5]  df.Female.mean()
```

```
118.08695652173913
```

```
[6]  df.Male.mode()
```

```
0    144
Name: Male, dtype: int64
```

Task- 2 Check the info of 'df'

```
df.info()
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 46 entries, 0 to 45
Data columns (total 4 columns):
 #   Column  Non-Null Count  Dtype
---  ------  --------------  -----
 0   Play    46 non-null     object
 1   Female  46 non-null     int64
 2   Male    46 non-null     int64
 3   Total   46 non-null     int64
dtypes: int64(3), object(1)
memory usage: 1.6+ KB
```

Task 3- Check the descriptive statistics of 'df'

```
df.describe()
```

	Female	Male	Total
count	46.000000	46.000000	46.00000
mean	118.086957	127.913043	246.00000
std	147.169717	166.900746	312.46134
min	10.000000	0.000000	19.00000
25%	42.750000	40.250000	85.50000
50%	90.000000	97.500000	190.00000
75%	138.750000	149.750000	288.75000
max	969.000000	1072.000000	2041.00000

Task 4- check the 4th index observation with 'loc' slicing operator.

```
[9] df.loc[4]

    Play        Athletics
    Female            969
    Male             1072
    Total            2041
    Name: 4, dtype: object
```

Task 5 - Check the null values in your 'df'

```
df.isnull().any()

Play      False
Female    False
Male      False
Total     False
dtype: bool
```