Practical No. 05

Aim : To perform and analysis of T Test parametric Test

In [6]:

```
#Name : Taufiq Rafik Nagori
#Roll no. : 77 (BDA-B77)
#Section : B
#Subject : PE-II
```

T Test A t-test is a type of inferential statistic which is used to determine if there is a significant difference between the means of two groups which may be related in certain features

In [24]:

```
age = [10,20,14,15,12,45,65,35,25,42,6,23,41,25,52,63,36,65,54,12,55,33,64,29,38,37,39,3
```

In [26]:

```
len(age)
```

Out[26]:

```
30
```

In [28]:

```
import numpy as np
age_mean = np.mean(age)
print(age_mean)
```

```
35.36666666666667
```

In [30]:

```
type(age)
```

Out[30]:

```
list
```

In [32]:

```
print (age)
```

```
[10, 20, 14, 15, 12, 45, 65, 35, 25, 42, 6, 23, 41, 25, 52, 63, 36, 65, 54, 12, 55, 33,
64, 29, 38, 37, 39, 38, 47, 21]
```

In [35]:

```
sample_size = (10)
age_sample = np.random.choice(age, sample_size)
```

In [37]:

```
age_sample
```

Out[37]:

```
array([21, 36, 38, 42, 21, 65, 10, 39, 65, 20])
```

In [39]:

```
from scipy.stats import ttest_1samp
```

In [41]:

```
ttest,p_value=ttest_1samp(age_sample,30)
```

In [43]:

```
print(p_value)
```

```
0.3577096558453857
```

In [51]:

```
if p_value < 0.05:
    print("We are Rejecting null hypothesis")
else:
    print("We are Accepting null hypothesis")
```

```
We are Accepting null hypothesis
```