Python program to implement One Sample T-test

```
In [1]:
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#Year : 3rd year
#Section : B
#Roll No : 55
#Date : 08/02/2024
```

```
In [2]:
ages=[10,30,32,40,35,54,53,67,27,98,89,76,65,52,99,97,96,95,94,42,22,33,22,49,48,56,88,34,
```

```
In [3]:
len(ages)
```

```
Out[3]: 36
```

```
In [4]:
import numpy as np
ages_mean=np.mean(ages)
print(ages_mean)
```

```
49.27777777777778
```

```
In [5]:
## Lets take sample
sample_size=10
age_sample=np.random.choice(ages,sample_size)
```

```
In [6]:
print(age_sample)
```

```
[17 17 67 94 54 32 65 32 40 53]
```

```
In [7]:
age_sample
```

```
Out[7]: array([17, 17, 67, 94, 54, 32, 65, 32, 40, 53])
```

```
In [8]:
from scipy.stats import ttest_1samp
```

```
In [9]:
ttest,p_value=ttest_1samp(age_sample,30)
```

```
In [10]:
print(p_value)
```

```
0.053147305735980976
```

```
In [12]:
if p_value < 0.05:
    print("we are rejecting null hypothesis")
else:
    print("we are accepting null hypothesis")
```

```
we are accepting null hypothesis
```

In [ ]: