Assignment-1-Q24 (Basic Statistics Level-1)

In [1]:
```
from scipy import stats
from scipy.stats import norm
```

In [2]:
```
# Assume Null Hypothesis is: Ho = Avg life of Bulb >= 260 days
# Alternate Hypothesis is: Ha = Avg life of Bulb < 260 days
```

In [3]:
```
# find t-scores at x=260; t=(s_mean-P_mean)/(s_SD/sqrt(n))
t=(260-270)/(90/18**0.5)
t
```

Out[3]:-0.4714045207910317

In [4]:
```
# Find P(X>=260) for null hypothesis
```

In [5]:
```
# p_value=1-stats.t.cdf(abs(t_scores),df=n-1)... Using cdf function
p_value=1-stats.t.cdf(abs(-0.4714),df=17)
p_value
```

Out[5]:0.32167411684460556

In [6]:
```
#  OR p_value=stats.t.sf(abs(t_score),df=n-1)... Using sf function
p_value=stats.t.sf(abs(-0.4714),df=17)
p_value
```

Out[6]:0.32167411684460556

In [ ]: