In [1]:

```
from statistics import NormalDist
print("Probability distribution algorithm")
print("-----------------------------------------")
print("Probability of any distance")
print("-----------------------------------------")
mean=int(input("enter mean value"))
sigma=int(input("enter standard deviation"))
dist1=int(input("enter distance 1"))
dist2=int(input("enter distance 2"))
nd=NormalDist(mean,sigma)
nd1=nd.cdf(dist1)-nd.cdf(dist2)
if(dist1>dist2):
    print("The positive probability is",nd1)
elif(dist1==0) or (dist2==0):
    print("The probability is 0")
elif(dist1<dist2):
    print("The negative probability is",nd1)
else:
    print("Invalid")
```

```
Probability distribution algorithm
-----------------------------------------
Probability of any distance
-----------------------------------------
enter mean value50
enter standard deviation20
enter distance 155
enter distance 265
The negative probability is -0.17466632194020804
```

In [ ]: