

Program for curve fitting using LSE approximation in python.

```
x=[]
```

```
y=[]
```

```
xy=[]
```

```
x2=[]
```

```
coeff=input('Enter x values separated by space ')
```

```
x=list(map(float,coeff.split()))
```

```
coeff=input('Enter y values separated by space ')
```

```
y=list (map(float,coeff.split()))
```

```
n=len(x)
```

```
for i in range(0,n):
```

```
    xy.append(x[i]*y[i])
```

```
    x2.append(x[i]*x[i])
```

```
sum_x=sum(x)
```

```
sum_y=sum(y)
```

```
sum_xy=sum(xy)
```

```
sum_x2=sum(x2)
```

```
b = (n*sum_xy - sum_x*sum_y)/(n*sum_x2 - (sum_x*sum_x));
```

```
a = (sum_y - b*sum_x)/n;
```

```
print("Required Equation is")
```

```
print("y = %0.4f + %0.4fx"%(a,b))
```

Result :

Enter x values separated by space 0 200 300 600 900

Enter y values separated by space 100 185 215 345 459 □ □0

Required Equation is

$y = 102.6000 + 0.3910x$