

```
def calculate_cooling_load(area,no_occu,type_occu,out_temp,in_temp):
```

```
    if(type_occu.lower()=='residential'):
```

```
        cooling_load=100*no_occu
```

```
    elif(type_occu.lower()=='commercial'):
```

```
        cooling_load=150*no_occu
```

```
    else:
```

```
        print("Invalid building type")
```

```
overall_heat_transfer = 30 # W/m^2 degree C
```

```
Q_conduction=overall_heat_transfer*area*(out_temp-in_temp)
```

```
sensible_CL=Q_conduction+cooling_load
```

```
return sensible_CL
```

```
area=int(input("Enter the area of the building(in square meters) : "))
```

```
no_occu=int(input("Enter the number of occupants in the building : "))
```

```
type_occu=input("Enter the type of occupant(residential/commercial) : ")
```

```
out_temp=int(input("Enter the outdoor desire temperature(in Degree Celcius) : "))
```

```
in_temp=int(input("Enter the indoor desire temperature(in Degree Celcius) : "))
```

```
sensible_cooling_load=calculate_cooling_load(area,no_occu,type_occu,out_temp,in_temp)
```

```
print("The final sensible cooling load is : ",sensible_cooling_load, "Watts")
```