

# Smart Property Tax Bill Generator

## 01.RESEARCH(Understanding the topic)

### Introduction:

Property Tax, also sometimes known as House Tax, is the tax imposed on real estate owners by the municipal authorities like panchayat, municipality or municipal corporation. It is used for maintenance and upkeep of the local civic amenities of the area, like roads, sewage system, lighting, parks, and other infrastructure facilities. It is

usually levied on all real estate, including buildings (residential or commercial), attached land, and improvements made to the land, but not on vacant plots of land with no adjoining building.



### Procedure:

How is property tax calculated?

Property tax is calculated in India by following way:

The formula used for calculating property tax is given below:

Property tax = base value × built-up area × Age factor × type of building × category of use × floor factor.

Property tax in India depends on the location of a property in question, with taxes varying from state to state. Different civic corporations use different methods to calculate tax, but the general overview of such calculations remains the same and is explained below.

An assessment of the property is first carried out by determining the following:

- Area it is in
- Occupancy status (whether it is self-occupied or rented out)
- Type of property (residential, commercial or land)
- Amenities provided (car park, rainwater harvesting, store, etc.)
- Year of construction
- Type of construction (multi-storied/ single floor/ pukka or kutcha structure, etc.)
- Floor space index
- Carpeted square area of the property.

## Sources:

[https://en.wikipedia.org/wiki/Property\\_tax](https://en.wikipedia.org/wiki/Property_tax)

<https://www.investopedia.com/terms/p/propertytax.asp>

<https://www.hdfc.com/blog/home-finance/what-property-tax-and-how-it-calculated>

## 02. Analysis (Breaking down the problem)

# Understanding the problem:

We need to design a system which generates a bill that takes the customer's area of living and calculates the tax on the basis of carpet size(sq.m) and displays the calculated tax using C-programming language.

## Key Requirements:

**Input:** Customer details and his area of living on the basis of Grade and Carpet area

**Process:** Calculate the bill using formula and display the property tax bill

**Output :**Property Tax Bill

**Input and Output:**

**Input:**Customer details and His area of living using Grade and Carpet area

**Output:**Property Tax Bill

## Pseudocode:

START

READ property\_id

READ owner\_name

READ property\_type

READ area

IF property\_type is R or r THEN rate = 5



```
ELSE rate = 10

tax = area * rate

PRINT property_id

PRINT owner_name

PRINT property_type

PRINT area

PRINT tax

STOP
```

## 03.Ideate (Planning our solution):

### Approach & Description:

The approach is simply yet effective as we have to calculate the property tax using C-programming. Using C-programming , we can generate bills by taking input from customers and processing it using formulas and display the output as a property tax bill.

### Own Thoughts:

Calculating the property tax on the basis of class of living area and its carpet size is a very fair and measurable approach. It also ensures that the people living in A+ graded areas are financially rich and they have to pay more tax and people living in B graded areas are financially stable and have to pay less tax.

## Sources:

Own understanding of topic

Research on taxation in India and C programming language.

## 04.Build(Understanding the program)

```
#include <stdio.h>
```

```
int main() {
```

```
    char name[50], type;
```

```
    int area, rate, tax;
```

```
    printf("=====\n");
```

```
    printf(" PROPERTY TAX BILL SYSTEM    \n");
```

```
    printf("=====\n");
```

```
    printf("Enter Owner Name      : ");
```

```
    scanf("%s", name);
```

```
    printf("Enter Property Type (R/C) : ");
```

```
    scanf(" %c", &type);
```

```
    printf("Enter Area in sq.ft    : ");
```

```
    scanf("%d", &area);
```

```
    if (type == 'R' || type == 'r')
```

```
        rate = 10;
```

```
    else
```

```
        rate = 20;
```

```

    tax = area * rate;

    printf("\n-----\n");

    printf("        PROPERTY TAX BILL        \n");

    printf("-----\n");

    printf("Owner Name    : %s\n", name);

    printf("Property Type : %c\n", type);

    printf("Area (sq.ft)  : %d\n", area);

    printf("Rate per sq.ft : %d\n", rate);

    printf("-----\n");

    printf("TOTAL TAX      : %d\n", tax);

    printf("-----\n");

    return 0;
}

```

## 05.Testing:

Input name	Type(R/C)	Area(in <u>sq.ft</u> )	Expected Tax	Result
Rahul	R	600	6000	Pass
Sachin	C	750	15000	Pass
Mohan	C	900	18000	Pass
Raghav	R	1200	12000	Pass

## 06.Conclusion:

This program successfully calculates property tax using basic C programming statements. All test cases were verified and the output was accurate

It is simple, easy to understand, and useful for beginners.

Overall, the project meets its objective effectively.

## 07.Implementation:

<https://github.com/P1010-dotcom/Property-Tax-Bill-Generator.git>

