

Source Code:

```
#include <stdio.h>

#include <math.h>

// Function to round off float to int
int fround(float x) {
    int a;
    x = x + 0.5;
    a = (int)x;
    return a;
}

// Function to calculate parameters of Basic COCOMO
void calculate(float table[][4], char mode[][15], int size) {
    float effort, time, staff;
    int model;

    // Check the mode according to size
    // organic
    if (size >= 2 && size <= 50)
        model = 0;
    // semi-detached
    else if (size > 50 && size <= 300)
        model = 1;
    // embedded
    else if (size > 300)
        model = 2;

    printf("The mode is %s\n", mode[model]);

    // Calculate Effort
    effort = table[model][0] * pow(size, table[model][1]);

    // Calculate Time
    time = table[model][2] * pow(effort, table[model][3]);

    // Calculate Persons Required
    staff = effort / time;

    // Output the values calculated
```

```

printf("Effort = %.2f Person-Month\n", effort);
printf("Development Time = %.2f Months\n", time);
printf("Average Staff Required = %d Persons\n", fround(staff));
}

int main() {
    float table[3][4] = {{2.4, 1.05, 2.5, 0.38},
                          {3.0, 1.12, 2.5, 0.35},
                          {3.6, 1.20, 2.5, 0.32}};

    char mode[3][15] = {"Organic", "Semi-detached", "Embedded"};
    int size;

    // Taking input from the user for size of project in Kilo Lines of Code

    printf("Enter Kilo Lines of Code: ");

    scanf("%d", &size);

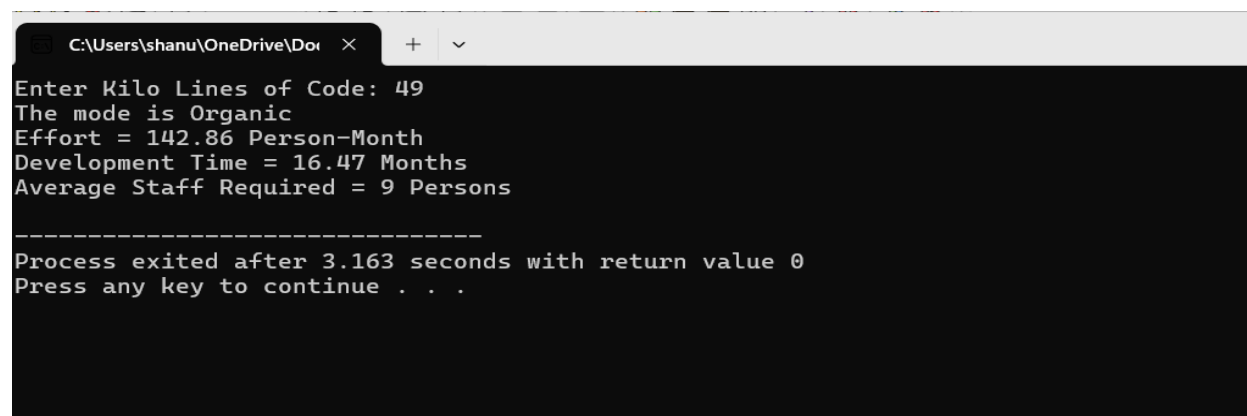
    // Calculate parameters

    calculate(table, mode, size);

    return 0;
}

```

Output:



```

C:\Users\shanu\OneDrive\Doi >
Enter Kilo Lines of Code: 49
The mode is Organic
Effort = 142.86 Person-Month
Development Time = 16.47 Months
Average Staff Required = 9 Persons

-----
Process exited after 3.163 seconds with return value 0
Press any key to continue . . .

```

```
C:\Users\shanu\OneDrive\Doc  X + v
Enter Kilo Lines of Code: 200
The mode is Semi-detached
Effort = 1133.12 Person-Month
Development Time = 29.30 Months
Average Staff Required = 39 Persons

-----
Process exited after 4.59 seconds with return value 0
Press any key to continue . . . |
```

```
C:\Users\shanu\OneDrive\Doc  X + v
Enter Kilo Lines of Code: 350
The mode is Embedded
Effort = 4066.16 Person-Month
Development Time = 35.72 Months
Average Staff Required = 114 Persons

-----
Process exited after 7.372 seconds with return value 0
Press any key to continue . . .
```