

Contents

1. Introduction
2. Basic Function
3. Proposed System
 - a. Description
 - b. System Requirements
4. System Design
5. Source Code
6. Testing
7. Future scope of project
8. References

INTRODUCTION

Scientific Calculator:

The calculator was written by Rolf Howarth in 1996.

A fully featured scientific calculator with proper operator is implemented including logarithmic, trigonometric functions, Simple Interest, Compound Interest, Addition, Subtraction, Multiplication, Division, Modulo, Power value, Square, Cube, Square root, Cube root, LCM, HCF, Integration, Permutations and Combinations.

The calculator is written in C language for the personal mini-project. In this Calculator we can give our own value and choose the operator we want to do calculation which will give you the perfect result. The libraries used for implementation in project are <stdio.h>, <math.h>

<stdlib.h> and the function used is fact().

Basic Functions

Addition

The addition (Sum function) is used by clicking “+” button, which gives the result as $a + b$.

Subtraction

The subtraction(minus function) is used by clicking “-” button, which gives the result as $a - b$.

Multiplication

The Multiplication (product function) is used by clicking on the “*” button. The function results in $a * b$.

Division

The division(divide function) is used by clicking on the “/” button. The function results in a/b .

Modulo

The modulo function (remainder) is used by clicking on the “%” button. The result of the function is $a \% b$.

LCM

The LCM (Lowest Common Factor) function is used by clicking on the “L” button. The results of the function will be the smallest number that is a multiple of each value.

HCF

The HCF (Highest Common Factor) function is used by clicking on the “H” button. The result of the function will be the highest number that is multiple of each value.

SI

The SI (Simple Interest) function is used by clicking on the “S” button. The result of the function will be $(\text{principle} * \text{rate} * \text{time}) / 100$.

CI

The CI (Compound Interest) function is used by clicking on the “C” button. The result of the function will be $(\text{principle} * (1 + (\text{rate}/100)^{\text{time}}) - \text{principle})$.

Integration

The Integration function is used by clicking on the “I” button. The result of the function will be area of curve in the graph.

Power

The power function is used by clicking on the “^” button. The result of the function will be the a^b .

Square root

The square root function is used by clicking on the “4” button. The result of the function will be the x^2 .

Cube Root

The Cube root function is used by clicking on the “5” button. The result of the function will be the x^3 .

Sine

The Sine function is used by clicking on the “s” button. The result of the function will be the $\sin(a)$, which needs the input in degree.

Cosine

The Cosine function is used by clicking on the “c” button. The result of the function will be the $\cos(a)$, which needs the input in degree.

Tangent

The Tangent function is used by clicking on the “t” button. The result of the function will be the $\tan(a)$.

Cosec

The Cosec function is used by clicking on the “4” button. The result of the function will be $1 / \sin(a)$.

Sec

The Sec function is used by clicking on the “5” button. The result of the function will be $1 / \cos(a)$.

Cot

The Cot function is used by clicking on the “6” button. The result of the function will be $1 / \tan(a)$.

Logarithms

The Logarithms function is used by clicking on the “l” button. The result of the function will be the log a base e.

Permutation

The permutation function is used by clicking on the “p” button. The result of the function will be the $npr = n! / (n-r)!$

Combination

The Combination function is used by clicking on the “b” button. The result of the function will be the $ncr = n! / r! (n - r)!$.

Square

The Square func is used by clicking on the “2”button. The result of the function will be a^2 .

Cube

The Cube func is used by clicking on the “3” button. The result of the function will be a^3 .

Inverse

The Inverse function is used by clicking on the “i” button. The result of the function will be the $1/b$.

Measurement Conversion

There are some conversions in this project are :-

1. Centimeter to Millimeters
2. Millimeter to Centimeter
3. Decimeter to Centimeters
4. Centimeter to Decimeters
5. Meter to Decimeters
6. Decimeter to Meters
7. Decameter to Meters
8. meter to Decameters
9. Hectometer to Decameters
10. Decameter to Hectometers
11. Kilometer to Hectometers
12. Hectometer to Kilometer

Memory Conversion

There are some conversions in this project are : -

1. Byte to Bits
2. Kilobyte to Bytes
3. Megabyte to Kilobytes
4. Gigabyte to Megabytes
5. Terabyte to Gigabytes
6. Petabyte to Terabytes
7. Exabytes to Petabytes
8. Zettabyte to Exabytes
9. Yottabyte to Zetabytes

Currency Conversion

1. Rupees to Dollar
2. Dollar to Rupees
3. Rupees to Euro
4. Euro to Rupees
5. Rupees to Riyal
6. Riyal to Rupees
7. Rupees to Pond
8. Pond to Rupees

PROPOSED SYSTEM

The following documentation is a project the “Name of term paper allotted”. It is a detailed summary of all the drawbacks of the old system and how the new proposed system overcomes these shortcomings. The new system takes into account the various factors while designing a new system. It keeps into account the economical bandwidth available for the new system.

The foremost thing that is taken care is the need and requirements of the user.

Description :

Before developing software we keep following things in mind that we can develop powerful and quality software.

Problem Statement :

Problem statement was to design a module:

- Which is user friendly.
- Which will restrict the user from accessing other user's data.
- Which will help user in viewing his data and privileges.
- Which will help the administrator to handle all the changes.
- Which is multifunctional.

Function to be provided :

The system will be user friendly and completely menu driven so that the users shall have no problem in using all options.

- The system will be efficient and fast in response.
- The system will be customized according to needs.

System Requirement :

Operating System: Windows XP, Windows 10, Linux, Mac OS

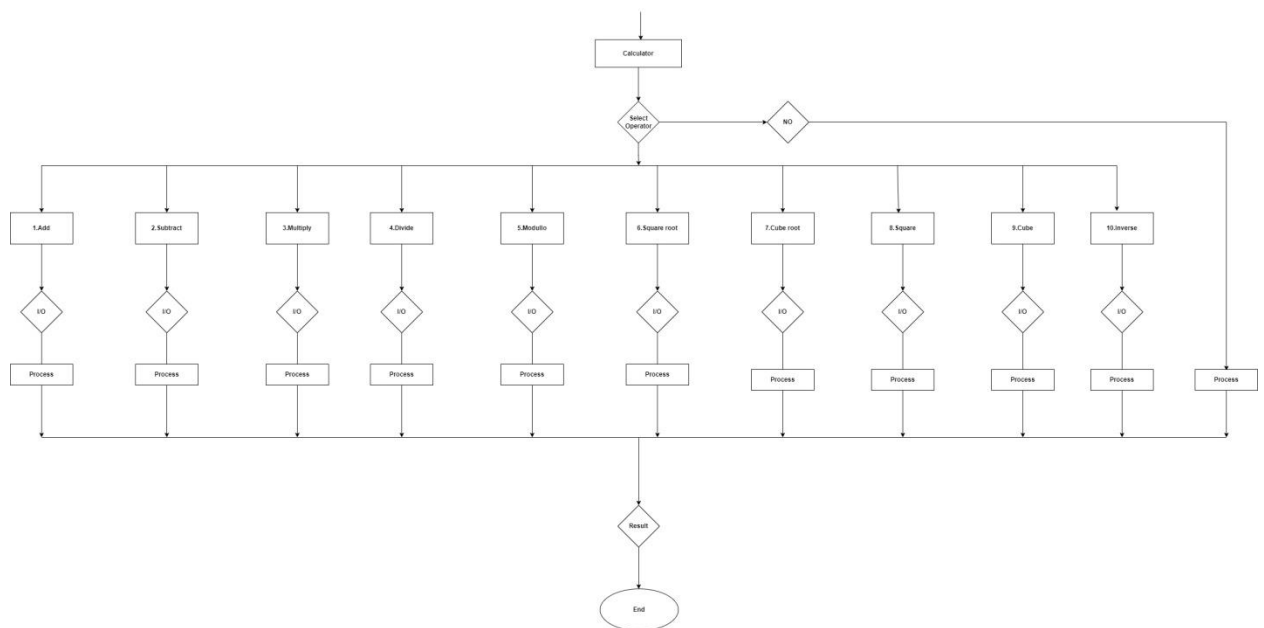
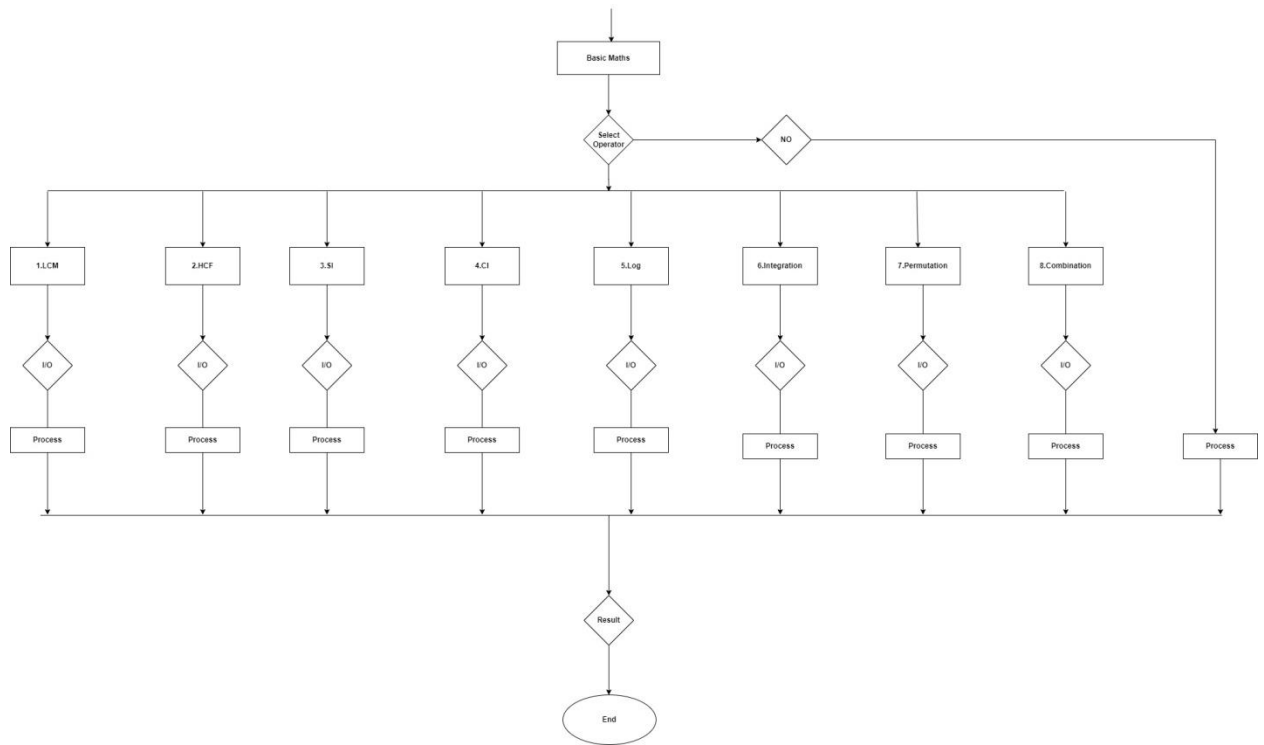
Language: C Language

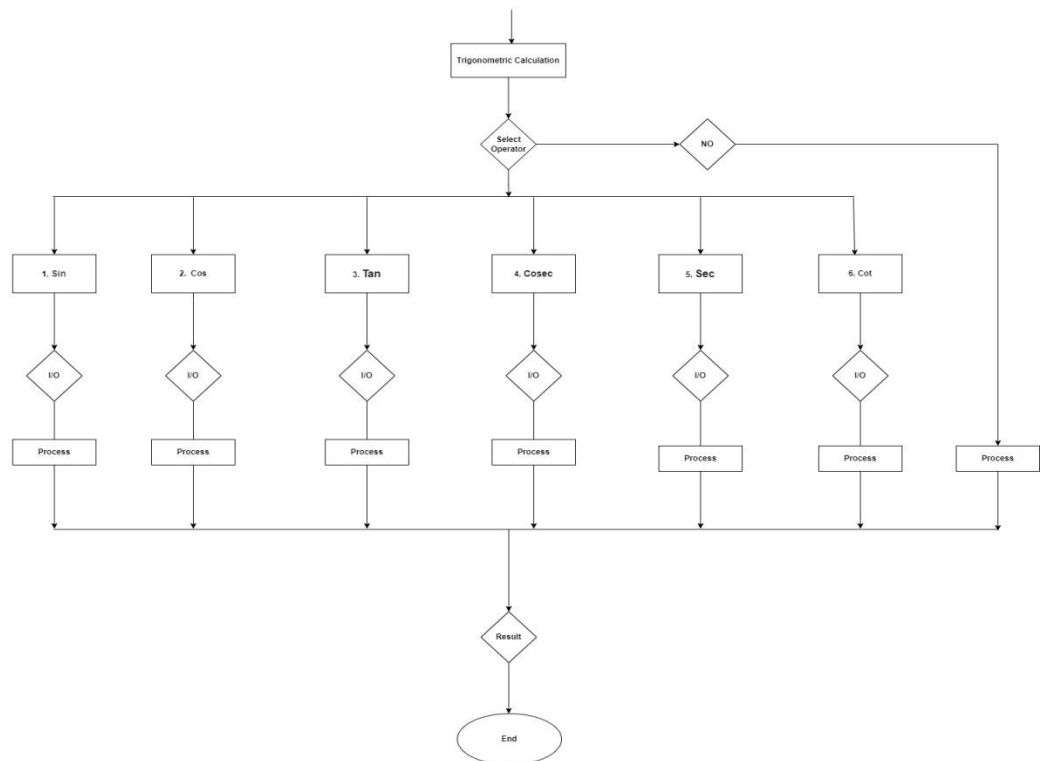
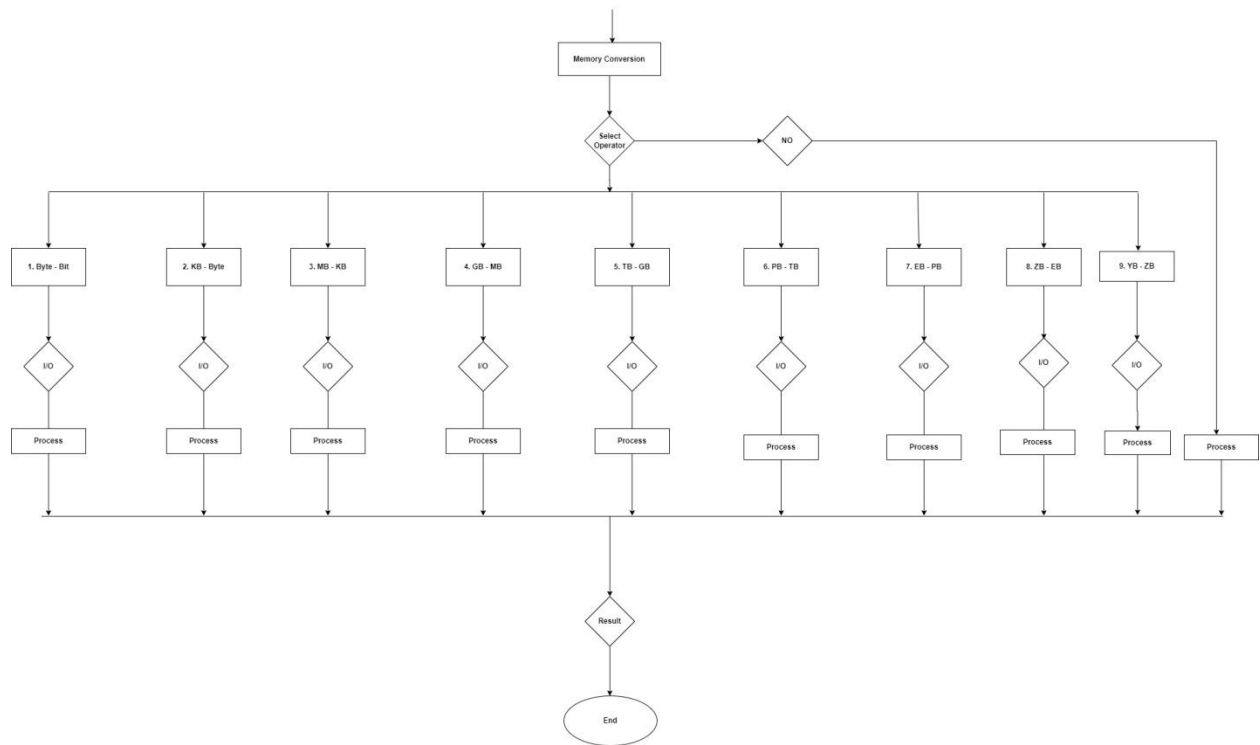
Processor: Pentium IV, Intel core i3, Ryzen, RAM : 512 MB . Hard disk: 2 GB

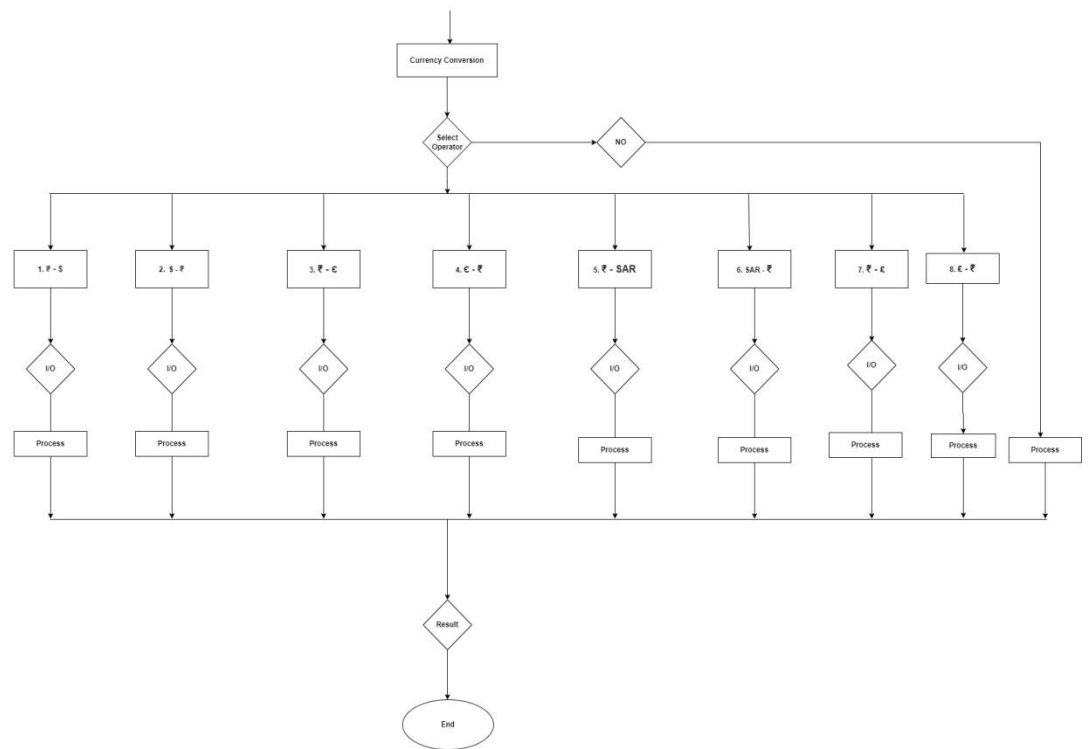
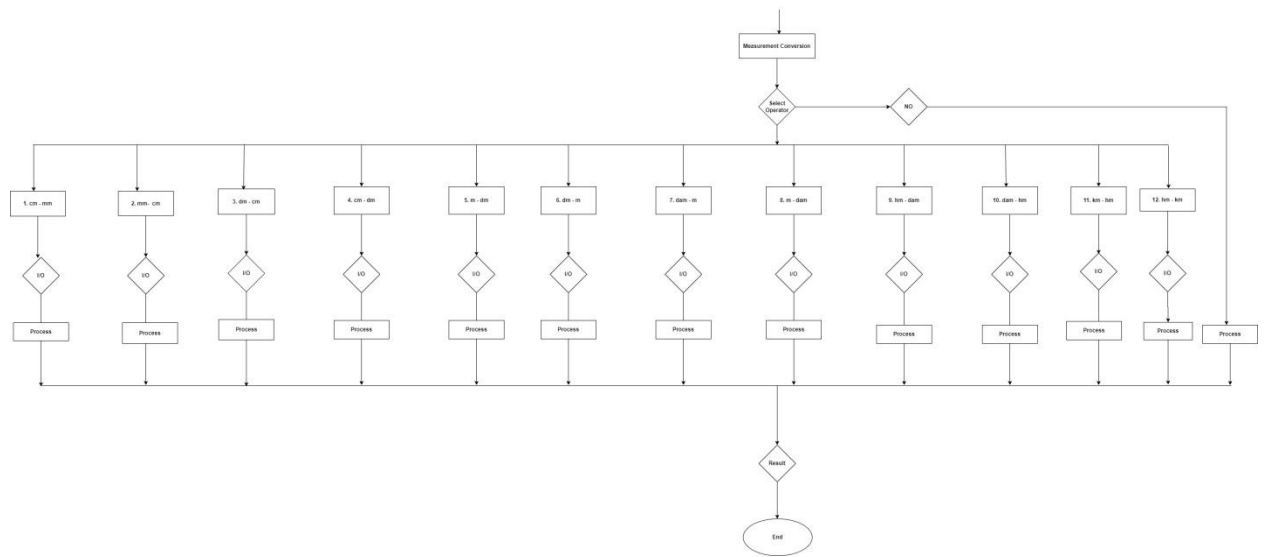
System Design

Then we began with the design phase of the system. System design is a solution of 5W and 1H, “Why” “What”, “Who”, “When”, “Where” and “How to” approach to the creation of a new system. It translates system requirements into ways by which they can be made operational. It is a translational from a user oriented document to a document oriented programmers. For that it provides the understanding and procedural details necessary for the implementation. Here we use Flowchart to supplement the working of the new system. The system thus made should be reliable, durable and above all should have least possible maintenance costs. It should overcome all the drawbacks of the old existing system and most important of all meet the user requirements.

Flow Chart







Coding :

```
#include
<stdio.h>

#include "Cal.h"
#include "fact.c"

void main()
{
    int Calc;
    float valueOne, valueTwo;
    int operator1;
    int operator2;
    int operator3;
    int operator4;
    int operator5;
    int operator6;
    printf("Enter 1 for Calculator\n");
    printf("Enter 2 for Maths Calculation\n");
    printf("Enter 3 for Trigonometric Calculation\n");
    printf("Enter 4 for Memory Conversion\n");
    printf("Enter 5 for Measurement Conversion\n");
    printf("Enter 6 for Currency Conversion\n");
    scanf("%d",&Calc);
    switch(Calc){
        case 1:
            printf("*** Welcome to Calculator ***\n\n");
            printf("Addition = 1 \n");
            printf("Subtraction = 2 \n");
            printf("Multiplication = 3 \n");
            printf("Division = 4 \n");
            printf("Modulo = 5 \n");
            printf("Square root = 6 \n");
            printf("Cube root = 7 \n");
            printf("Square = 8 \n");
            printf("Cube = 9 \n");
            printf("Inverse = 10 \n");
            printf("Enter the calculation Operator\n");
            scanf("%d", &operator1);
            switch(operator1)
            {
                case 1:
                    // Addition
                    printf("Enter Value 1 and Value 2:\n");
                    scanf("%f %f", &valueOne, &valueTwo);
                    float answer3 = (valueOne)+(valueTwo);
                    printf("Your Result of Addition is : %.2f\n", answer3);
                    break;
                case 2:
                    //Subtraction
                    printf("Enter Value 1 and Value 2:\n");
                    scanf("%f %f", &valueOne, &valueTwo);
```

```

float answer4 = (valueOne)-(valueTwo);
printf("Your Result of Subtraction is : %.2f\n", answer4);
break;
case 3:
    // Multiplication
    printf("Enter Value 1 and Value 2:\n");
    scanf("%f %f", &valueOne, & valueTwo);
    float answer2 = (valueOne)*(valueTwo);
    printf("Your Result of Multiplication is : %.2f\n", answer2);
    break;
case 4:
    //Division
    printf("Enter Value 1 and Value 2:\n");
    scanf("%f %f", &valueOne, & valueTwo);
    float answer1 = (valueOne)/(valueTwo);
    printf("Your Result of division is : %.2f\n", answer1);
    break;
case 5:
    // Modulo
    printf("Enter Value 1 and Value 2:\n");
    scanf("%f %f", &valueOne, & valueTwo);
    int answer7 = (int)valueOne % (int)valueTwo;
    printf("Your Modulo value is : %d\n", answer7);
    break;
case 6:
    // Square root calculation
    printf("Enter value: \n");
    scanf("%f", &valueOne);
    float valTwo = 0.5;
    float ans_square = pow(valueOne, valTwo);
    printf("Your Result of Square Root is : %.2f\n", ans_square);
    break;
case 7:
    // Cube root calculation
    printf("Enter value: \n");
    scanf("%f", &valueOne);
    float valOne = 0.3333;
    float ans_cube = pow(valueOne, valOne);
    printf("Your Result of Cube Root is : %.2f\n", ans_cube);
    break;
case 8:
    // Square calculation
    printf("Enter value: \n");
    scanf("%f", &valueOne);
    float valtwo = 2;
    float ans_square2 = pow(valueOne, valtwo);
    printf("Your Result of Square is : %.2f\n", ans_square2);
    break;
case 9:
    // Cube calculation
    printf("Enter value: \n");

```

```

        scanf("%f", &valueOne);
        float valthree = 3;
        float ans_square3 = pow(valueOne, valthree);
        printf("Your Result of Cube is : %.2f\n", ans_square3);
        break;
    case 10:
        // Inverse calculation
        printf("Enter value: \n");
        scanf("%f", &valueOne);
        float ans_inverse = 1 / valueOne;
        printf("Your Result of Inverse is : %.2f", ans_inverse);
        break;
    default:
        printf("Fail\n");
    }
    break;
//*****
//*****
// Basic Mathematics Calculation:-
//*****
    case 2:
        printf("*** Welcome to Calculator ***\n\n");
        printf("LCM = 1 \n");
        printf("HCF = 2 \n");
        printf("Simple Interest = 3 \n");
        printf("Compound Interest = 4 \n");
        printf("log = 5 \n");
        printf("Integration = 6 \n");
        printf("Permutation = 7 \n");
        printf("Combination = 8 \n");
        // Operator Declaration for the calculation
        printf("Enter the calculation Operator\n");
        scanf("%d", &operator2);
        // Starting of switch case for conditional statements.
        switch(operator2)
        {
            case 1:
                // LCM
                printf("Enter Value 1 and Value 2 for LCM :\n");
                scanf("%f %f", &valueOne, &valueTwo);
                int v1 = (int)valueOne;
                int v2 = (int)valueTwo;
                int max = (v1 > v2) ? v1 : v2;
                while (1) {
                    if (max % v1 == 0 && max % v2 == 0) {
                        printf("The LCM of %d and %d is : %d\n", v1, v2, max);
                        break;
                    }
                    ++max;
                }
                break;

```



```

case 2:
    // HCF
    printf("Enter Value 1 and Value 2 for HCF :\n");
    scanf("%f %f", &valueOne, & valueTwo);
    int i, HCF;
    int val1 = (int)valueOne;
    int val2 = (int)valueTwo;
    for(i=1; i <= val1 && i <= val2; ++i)
    {
        // Checks if i is factor of both integers
        if(val1%i==0 && val2%i==0)
            HCF = i;
    }
    printf("H.C.F of %d and %d is : %d\n", val1, val2, HCF);
    break;
case 3:
    //Simple Interest
    printf("Enter Principle and Rate :\n");
    scanf("%f %f", &valueOne, & valueTwo);
    int t;
    printf("Enter Time:\n");
    scanf("%d",&t);
    float SI = (valueOne * valueTwo * t)/100;
    printf("Your SI is : %.2f\n", SI);
    break;
case 4:
    // Compound Interest
    printf("Enter Principle and Rate :\n");
    scanf("%f %f", &valueOne, & valueTwo);
    int time;
    printf("Enter Time:\n");
    scanf("%d",&time);
    float CI = valueOne * pow((1 + valueTwo / 100), time) - valueOne;
    printf("Your CI is : %.2f\n", CI);
    break;
case 5:
    // log value calculation of base e
    printf("Enter value: \n");
    scanf("%f", &valueOne);
    float ans_log = log(valueOne);
    printf("Your Result of Logarithm is : %.2f\n", ans_log);
    break;
case 6:
    // Definite Integration
    printf("Enter Value 1 and Value 2:\n");
    scanf("%f %f", &valueOne, & valueTwo);
    float j, sum = 0;
    int x, y;
    if (valueOne > valueTwo) {
        j = valueOne;
        valueOne = valueTwo;
    }

```

```

        valueTwo = j;
    }
    for (j = valueOne; j < valueTwo; j += (valueTwo - valueOne) / N) {
        y = x * x + 2 * x - 4;
        sum += y * (valueTwo - valueOne) / N;
    }
    printf("Value of integration is :%.3f\n", sum);
    break;
case 7:
    // Permutation calculation
    printf("Enter Value 1 and Value 2 : \n");
    scanf("%f %f", &valueOne, &valueTwo);
    float npr=fact(valueOne)/fact(valueOne-valueTwo);
    printf("Result of Permutation is %.1f\n: ", npr);
    break;
case 8:
    // Combination calculation
    printf("Enter Value 1 and Value 2 : \n");
    scanf("%f %f", &valueOne, &valueTwo);
    float ncr=fact(valueOne)/(fact(valueTwo)*fact(valueOne-valueTwo));
    printf("Result of Combination is %.1f\n: ", ncr);
    break;
default:
    printf("Fail\n");
}
break;
//*****
//*****
//*****
case 3:
    printf("*** Welcome to Calculator ***\n\n");
    printf("sin = 1\n");
    printf("cos = 2\n");
    printf("tan = 3\n");
    printf("cosec = 4\n");
    printf("sec = 5\n");
    printf("cot = 6\n");
    // Operator Declaration for the calculation
    printf("Enter the calculation Operator\n");
    scanf("%d", &operator3);
    // Starting of switch case for conditional statements.
    switch(operator3)
    {
        case 1:
            // Sin value calculation
            printf("Enter the value of angle in degree : \n");
            scanf("%f",& valueOne);
            float degree1 = (3.14 / 180)*valueOne;
            float s = sin(degree1);
            printf("Sin value is %.2f\n", s);
            break;

```

```

case 2:
    // Cos value calculation
    printf("Enter the value of angle in degree :\n");
    scanf("%f",& valueOne);
    float degree2 = (3.14 / 180)*valueOne;
    float c = cos(degree2);
    printf("Cos value is %.2f\n", c);
    break;
case 3:
    // Tan Value calculation
    printf("Enter the value of angle in degree :\n");
    scanf("%f",& valueOne);
    float degree3 = (3.14 / 180)*valueOne;
    float tanval = tan(degree3);
    printf("Tan value is %.2f\n", tanval);
    break;
case 4:
    // Cosec Value calculation
    printf("Enter the value of angle in degree :\n");
    scanf("%f",& valueOne);
    float degree4 = (3.14 / 180)*valueOne;
    float sinvalue = sin(degree4);
    float cosecval = 1 / sinvalue;
    printf("Cosec value is %.2f\n", cosecval);
    break;
case 5:
    // Sec Value calculation
    printf("Enter the value of angle in degree :\n");
    scanf("%f",& valueOne);
    float degree5 = (3.14 / 180)*valueOne;
    float cosvalue = cos(degree5);
    float secval = 1 / cosvalue;
    printf("Tan value is %.2f\n", secval);
    break;
case 6:
    // Cot Value calculation
    printf("Enter the value of angle in degree :\n");
    scanf("%f",& valueOne);
    float degree6 = (3.14 / 180)*valueOne;
    float tanvalue = tan(degree6);
    float cotval = 1 / tanvalue;
    printf("Tan value is %.2f\n", cotval);
    break;
default:
    printf("Failed for Trigo Calculation\n");
}
break;
//*****
//*****
//*****
case 4:

```

```

printf("*** Welcome to Calculator ***\n\n");
printf("Byte to bit = 1\n");
printf("Kilobyte to byte = 2\n");
printf("Megabyte to Kilobyte = 3\n");
printf("Gigabyte to Megabyte = 4\n");
printf("Terabyte to Gigabyte = 5\n");
printf("Petabyte to Terabyte = 6\n");
printf("Exabyte to Terabyte = 7\n");
printf("Zetabyte to Exabyte = 8\n");
printf("Yottabyte to Zetabyte = 9\n");
// Operator Declaration for the calculation
printf("Enter the calculation Operator\n");
scanf("%d", &operator4);
// Starting of switch case for conditional statements.
switch(operator4)
{
    case 1:
        printf("Enter the value in bits ");
        scanf("%f",&valueOne);
        float mmr1 = valueOne * 1024;
        printf("Your Value is %.1f Byte\n", mmr1);
        break;
    case 2:
        printf("Enter the value in Bytes ");
        scanf("%f",&valueOne);
        float mmr2 = valueOne * 1024;
        printf("Your Value is %.1f kb\n", mmr2);
        break;
    case 3:
        printf("Enter the value in kb ");
        scanf("%f",&valueOne);
        float mmr3 = valueOne * 1024;
        printf("Your Value is %.1f mb\n", mmr3);
        break;
    case 4:
        printf("Enter the value in mb ");
        scanf("%f",&valueOne);
        float mmr4 = valueOne * 1024;
        printf("Your Value is %.1f gb\n", mmr4);
        break;
    case 5:
        printf("Enter the value in gb ");
        scanf("%f",&valueOne);
        float mmr5 = valueOne * 1024;
        printf("Your Value is %.1f tb\n", mmr5);
        break;
    case 6:
        printf("Enter the value in tb ");
        scanf("%f",&valueOne);
        float mmr6 = valueOne * 1024;
        printf("Your Value is %.1f pb\n", mmr6);

```

```

        break;
case 7:
    printf("Enter the value in pb ");
    scanf("%f",&valueOne);
    float mmr7 = valueOne * 1024;
    printf("Your Value is %.1f eb\n", mmr7);
    break;
case 8:
    printf("Enter the value in eb ");
    scanf("%f",&valueOne);
    float mmr8 = valueOne * 1024;
    printf("Your Value is %.1f zb\n", mmr8);
    break;
case 9:
    printf("Enter the value in zb ");
    scanf("%f",&valueOne);
    float mmr9 = valueOne * 1024;
    printf("Your Value is %.1f yb\n", mmr9);
    break;
default:
    printf("Failed for memory conversion\n");
}
break;
//*****
//*****
//*****
case 5:
    printf("*** Welcome to Calculator ***\n\n");
    printf("Centimetre to Millimetre = 1\n");
    printf("Millimetre to Centimetre = 2\n");
    printf("Decimetre to Centimetre = 3\n");
    printf("Centimetre to Decimetre = 4\n");
    printf("Metre to Decimetre = 5\n");
    printf("Decimetre to Metre = 6\n");
    printf("Decametre to Metre = 7\n");
    printf("Metre to Decametre = 8\n");
    printf("Hectometre to Decametre = 9\n");
    printf("Decametre to Hectometre = 10\n");
    printf("Kilometre to Hectametre = 11\n");
    printf("Hectometre to Kilometre = 12\n");
    // Operator Declaration for the calculation
    printf("Enter the calculation Operator\n");
    scanf("%d", &operator5);
    // Starting of switch case for conditional statements.
    switch(operator5)
    {
        case 1:
            printf("Enter the value in cm ");
            scanf("%f",&valueOne);
            float msr1 = valueOne * 10;
            printf("Your Value is %.1f mm\n", msr1);

```

```

        break;
case 2:
    printf("Enter the value in mm ");
    scanf("%f",&valueOne);
    float msr2 = valueOne / 10;
    printf("Your Value is %.1f cm\n", msr2);
    break;
case 3:
    printf("Enter the value in dm ");
    scanf("%f",&valueOne);
    float msr3 = valueOne * 10;
    printf("Your Value is %.1f cm\n", msr3);
    break;
case 4:
    printf("Enter the value in cm ");
    scanf("%f",&valueOne);
    float msr4 = valueOne / 10;
    printf("Your Value is %.1f dm\n", msr4);
    break;
case 5:
    printf("Enter the value in m ");
    scanf("%f",&valueOne);
    float msr5 = valueOne * 10;
    printf("Your Value is %.1f dm\n", msr5);
    break;
case 6:
    printf("Enter the value in dm ");
    scanf("%f",&valueOne);
    float msr6 = valueOne / 10;
    printf("Your Value is %.1f m\n", msr6);
    break;
case 7:
    printf("Enter the value in dam ");
    scanf("%f",&valueOne);
    float msr7 = valueOne * 10;
    printf("Your Value is %.1f m\n", msr7);
    break;
case 8:
    printf("Enter the value in m ");
    scanf("%f",&valueOne);
    float msr8 = valueOne / 10;
    printf("Your Value is %.1f cm\n", msr8);
    break;
case 9:
    printf("Enter the value in hm ");
    scanf("%f",&valueOne);
    float msr9 = valueOne * 10;
    printf("Your Value is %.1f dam\n", msr9);
    break;
case 10:
    printf("Enter the value in dam ");

```

```

        scanf("%f",&valueOne);
        float msr10 = valueOne / 10;
        printf("Your Value is %.1f hm\n", msr10);
        break;
case 11:
    printf("Enter the value in km ");
    scanf("%f",&valueOne);
    float msr11 = valueOne * 10;
    printf("Your Value is %.1f hm\n", msr11);
    break;
case 12:
    printf("Enter the value in hm ");
    scanf("%f",&valueOne);
    float msr12 = valueOne / 10;
    printf("Your Value is %.1f km\n", msr12);
    break;
default:
    printf("Failed for measurement conversion\n");
}
break;
//*****
//*****
//*****
case 6:
    printf("*** Welcome to Calculator ***\n\n");
    printf("Rupees to Dollar = 1\n");
    printf("Dollar to Rupees = 2\n");
    printf("Rupees to Euro = 3\n");
    printf("Euro to Rupees = 4\n");
    printf("Rupees to Riyal= 5\n");
    printf("Riyal to Rupees = 6\n");
    printf("Rupees to Pond = 7\n");
    printf("Pond to Rupees = 8\n");
    // Operator Declaration for the calculation
    printf("Enter the calculation Operator\n");
    scanf("%d", &operator6);
    // Starting of switch case for conditional statements.
    switch(operator6)
    {
        case 1:
            printf("Enter the money in RS.");
            scanf("%f",&valueOne);
            float RS1 = valueOne / 75;
            printf("You have : $%.1f\n", RS1);
            break;
        case 2:
            printf("Enter the money in $");
            scanf("%f",&valueOne);
            float RS2 = valueOne * 75;
            printf("You have : RS.%.1f\n", RS2);
            break;
    }

```

```

case 3:
    printf("Enter the money in RS.");
    scanf("%f",&valueOne);
    float RS3 = valueOne / 86;
    printf("You have : Euro %.1f\n", RS3);
    break;
case 4:
    printf("Enter the money in Euro");
    scanf("%f",&valueOne);
    float RS4 = valueOne * 86;
    printf("You have : Rs.%.1f\n", RS4);
    break;
case 5:
    printf("Enter the money in RS.");
    scanf("%f",&valueOne);
    float RS5 = valueOne / 20;
    printf("You have : Riyal %.1f\n", RS5);
    break;
case 6:
    printf("Enter the money in Riyal ");
    scanf("%f",&valueOne);
    float RS6 = valueOne * 20;
    printf("You have : RS.%.1f\n", RS6);
    break;
case 7:
    printf("Enter the money in RS.");
    scanf("%f",&valueOne);
    float RS7 = valueOne / 101;
    printf("You have : Pond %.1f\n", RS7);
    break;
case 8:
    printf("Enter the money in Pond");
    scanf("%f",&valueOne);
    float RS8 = valueOne * 101;
    printf("You have : RS.%.1f\n", RS8);
    break;
default:
    printf("Sorry! You are not dialing right Value as per our system");
}
break;
default:
    printf("Failed for Currecy conversion\n");
}
}

```


APPLICATIONS

In most countries, students use calculators for schoolwork. There was some initial resistance to the idea out of fear that basic arithmetic skills would suffer. There remains disagreement about the importance of the ability to perform calculations "in the head", with some curricula restricting calculator use until a certain level of proficiency has been obtained, while others concentrate more on teaching estimation techniques and problem-solving. Research suggests that inadequate guidance in the use of calculating tools can restrict the kind of mathematical thinking that students engage in. Others have argued that calculator use can even cause core mathematical skills to atrophy, or that such use can prevent understanding of advanced algebraic concepts.

There are other concerns - for example, that a pupil could use the calculator in the wrong fashion but believe the answer because that was the result given. Teachers try to combat this by encouraging the student to make an estimate of the result manually and ensuring it roughly agrees with the calculated result. Also, it is possible for a child to type in -1×-1 and obtain the correct answer '1' without realizing the principle involved. In this sense, the calculator becomes a crutch rather than a learning tool, and it can slow down students in exam conditions as they check even the most trivial result on a calculator.

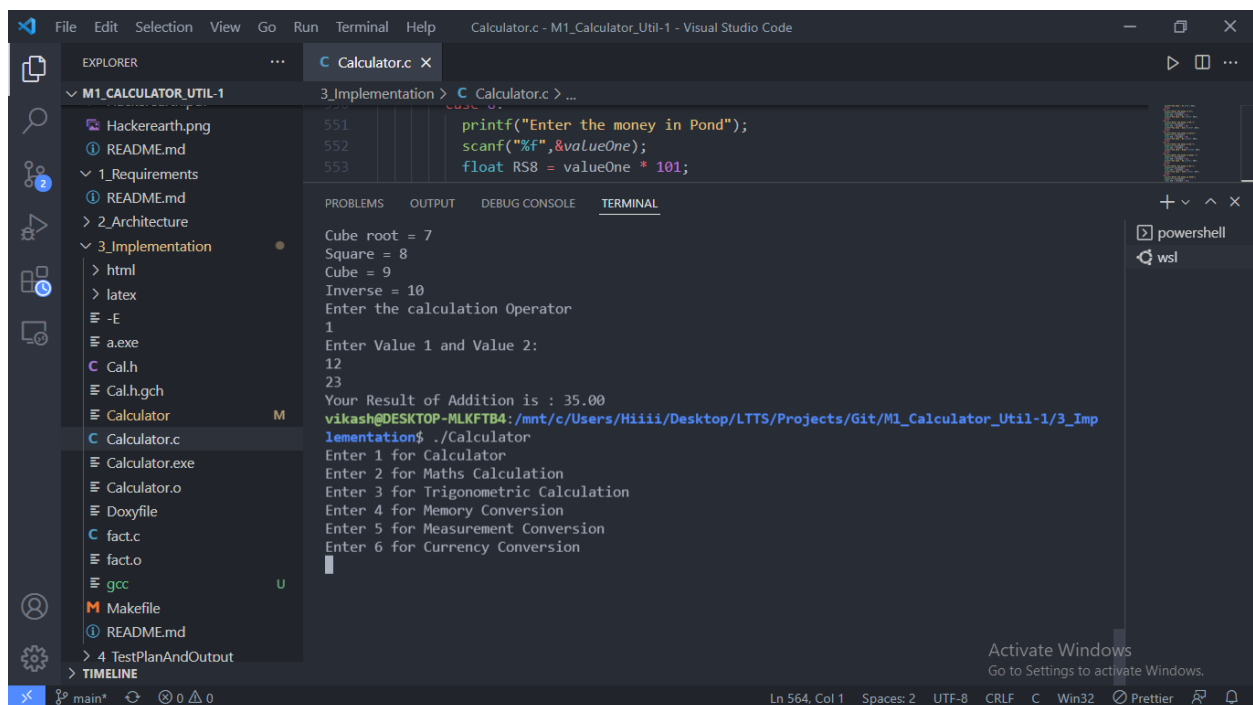
FUTURE SCOPE OF THE PROJECT

Our project will be able to implement in future after making some changes and modifications as we make our project at a very low level. So the modifications that can be done in our project are:

To make it screen touch so no need to touch key buttons and one more change which can we made is to add snaps of the person who use it

TESTING

Testing is the major control measure used during software development. Its basic function is to detect errors in the software. During requirement analysis and design, the output is a document that is usually textual and no executable. After the coding phase, computer programs are available that can be executed for testing purpose. This implies that testing not only, has to uncover errors introduced during coding, but also errors introduced during previous phase. Thus the goal of testing is to uncover the requirements, design and coding errors in the programs. The Source code declared above for the program of Scientific Calculator has been tested and it has been found that the above source code is okay and correct. The program involves much type of conversions. These conversions have to done carefully.



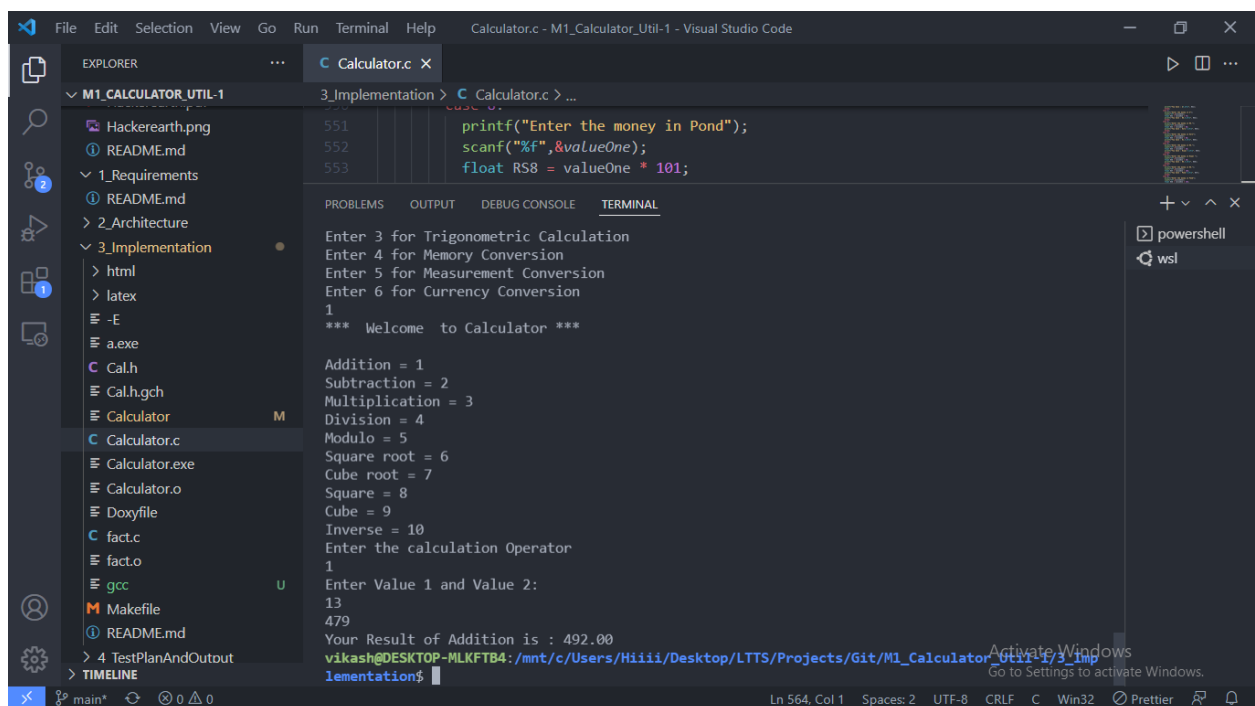
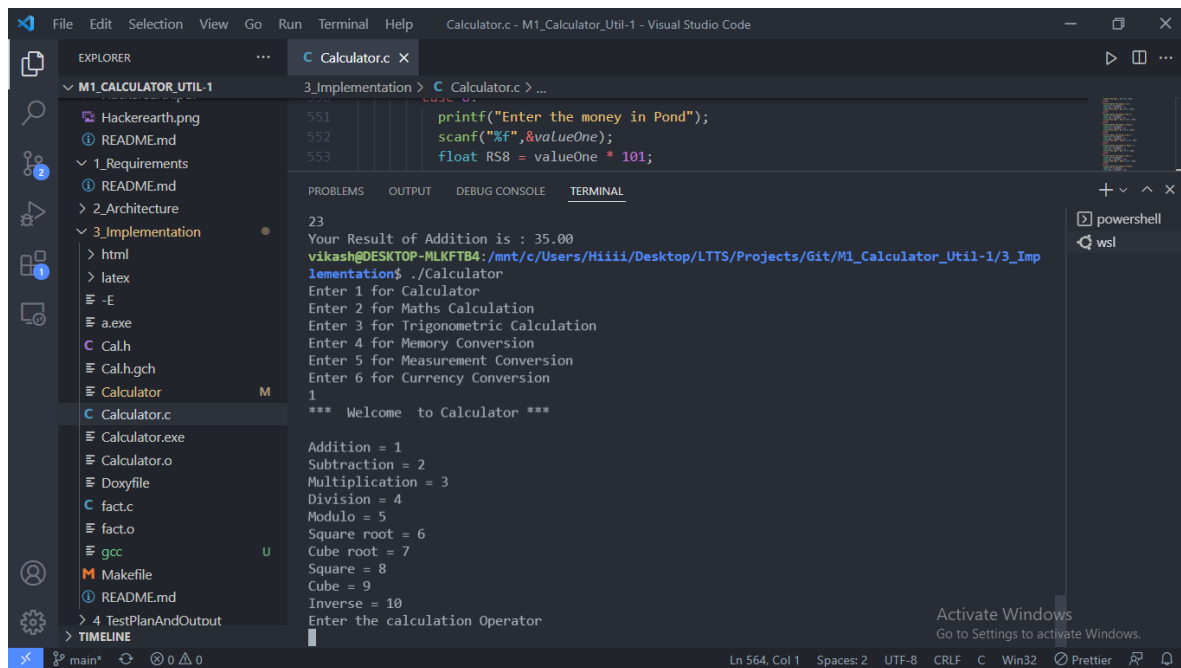
```
File Edit Selection View Go Run Terminal Help Calculator.c - M1_Calculator_Util-1 - Visual Studio Code

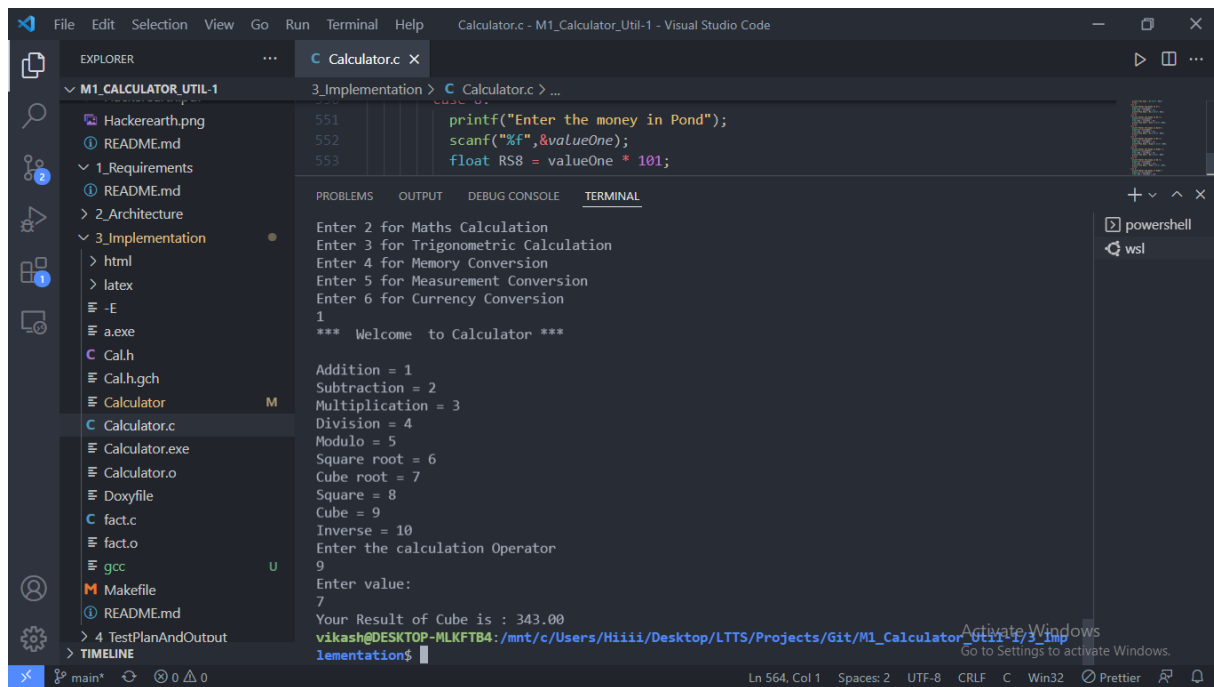
EXPLORER
M1_CALCULATOR_UTIL-1
  Hackerearth.png
  README.md
  1_Requirements
  2_Architecture
  3_Implementation
    html
    latex
    -E
    a.exe
    Cal.h
    Cal.h.gch
    Calculator
    Calculator.c
    Calculator.exe
    Calculator.o
    Doxyfile
    fact.c
    fact.o
    gcc
    Makefile
    README.md
  4_TestPlanAndOutput
  TIMELINE

Calculator.c
551 printf("Enter the money in Pond");
552 scanf("%f",&valueOne);
553 float RS8 = valueOne * 101;

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Cube root = 7
Square = 8
Cube = 9
Inverse = 10
Enter the calculation Operator
1
Enter Value 1 and Value 2:
12
23
Your Result of Addition is : 35.00
vikash@DESKTOP-MLKFTB4:/mnt/c/Users/Hiiii/Desktop/LTTS/Projects/Git/M1_Calculator_Util-1/3_Implementation$ ./Calculator
Enter 1 for Calculator
Enter 2 for Maths Calculation
Enter 3 for Trigonometric Calculation
Enter 4 for Memory Conversion
Enter 5 for Measurement Conversion
Enter 6 for Currency Conversion

Activate Windows
Go to Settings to activate Windows.
Ln 564, Col 1 Spaces: 2 UTF-8 CRLF C Win32 Prettier
```





```
File Edit Selection View Go Run Terminal Help Calculator.c - M1_Calculator_Util-1 - Visual Studio Code
```

EXPLORER

- M1_CALCULATOR_UTIL-1
 - Hackerearth.png
 - ① README.md
 - ① 1.Requirements
 - ① README.md
 - > 2.Architecture
 - 3.Implementation
 - > html
 - > latex
 - Calculator
 - Calculator.c
 - Calculator.exe
 - Calculator.o
 - Doxyfile
 - fact.c
 - fact.o
 - gcc
 - Makefile
 - ① README.md
 - > 4 TestPlanAndOutout

3.Implementation > Calculator.c > ...

```
551 printf("Enter the money in Pond");
552 scanf("%f",&valueOne);
553 float RS8 = valueOne * 101;
```

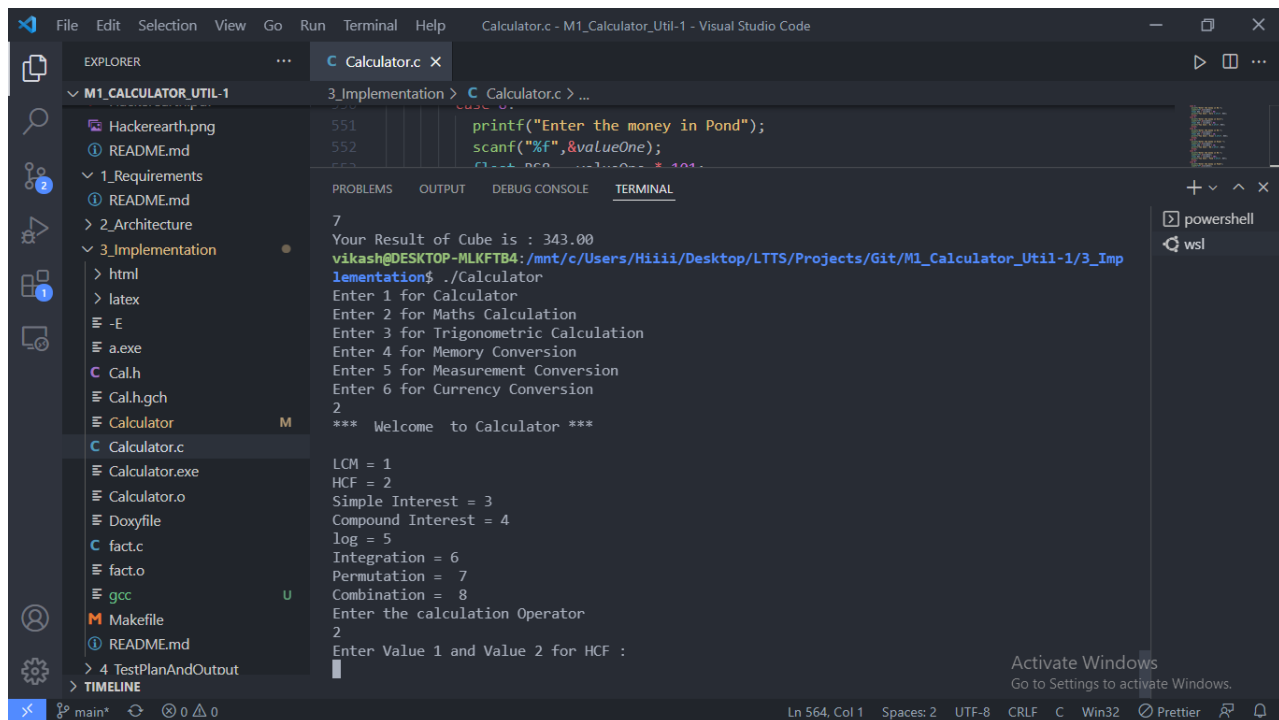
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
Enter 2 for Maths Calculation
Enter 3 for Trigonometric Calculation
Enter 4 for Memory Conversion
Enter 5 for Measurement Conversion
Enter 6 for Currency Conversion
1
*** Welcome to Calculator ***

Addition = 1
Subtraction = 2
Multiplication = 3
Division = 4
Modulo = 5
Square root = 6
Cube root = 7
Square = 8
Cube = 9
Inverse = 10
Enter the calculation Operator
9
Enter value:
7
Your Result of Cube is : 343.00
vikash@DESKTOP-MLKFTB4: /mnt/c/Users/Hiiii/Desktop/LTTS/Projects/Git/M1_Calculator_Util-1/3_Implementation$
```

Activate Windows
Go to Settings to activate Windows.

Ln 564, Col 1 Spaces: 2 UTF-8 CRLF C Win32 Prettier



```
File Edit Selection View Go Run Terminal Help Calculator.c - M1_Calculator_Util-1 - Visual Studio Code
```

EXPLORER

- M1_CALCULATOR_UTIL-1
 - Hackerearth.png
 - ① README.md
 - ① 1.Requirements
 - ① README.md
 - > 2.Architecture
 - 3.Implementation
 - > html
 - > latex
 - Calculator
 - Calculator.c
 - Calculator.exe
 - Calculator.o
 - Doxyfile
 - fact.c
 - fact.o
 - gcc
 - Makefile
 - ① README.md
 - > 4 TestPlanAndOutout

3.Implementation > Calculator.c > ...

```
551 printf("Enter the money in Pond");
552 scanf("%f",&valueOne);
553 float RS8 = valueOne * 101;
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
7
Your Result of Cube is : 343.00
vikash@DESKTOP-MLKFTB4: /mnt/c/Users/Hiiii/Desktop/LTTS/Projects/Git/M1_Calculator_Util-1/3_Implementation$ ./Calculator
Enter 1 for Calculator
Enter 2 for Maths Calculation
Enter 3 for Trigonometric Calculation
Enter 4 for Memory Conversion
Enter 5 for Measurement Conversion
Enter 6 for Currency Conversion
2
*** Welcome to Calculator ***

LCM = 1
HCF = 2
Simple Interest = 3
Compound Interest = 4
log = 5
Integration = 6
Permutation = 7
Combination = 8
Enter the calculation Operator
2
Enter Value 1 and Value 2 for HCF :
```

Activate Windows
Go to Settings to activate Windows.

Ln 564, Col 1 Spaces: 2 UTF-8 CRLF C Win32 Prettier

```
File Edit Selection View Go Run Terminal Help Calculator.c - M1_Calculator_Util-1 - Visual Studio Code

EXPLORER
M1_CALCULATOR_UTIL-1
  Hackerearth.png
  README.md
  1_Requirements
  2_Architecture
  3_Implementation
    html
    latex
    -E
    a.exe
    Calh
    Calh.gch
    Calculator
    Calculator.c
    Calculator.exe
    Calculator.o
    Doxyfile
    fact.c
    fact.o
    gcc
    Makefile
    README.md
  4_TestPlanAndOutput
  TIMELINE

Source Control
Calculator.c
  Calculator.c

TERMINAL
3_Implementation > C Calculator.c > ...
551 printf("Enter the money in Pond");
552 scanf("%f",&valueOne);
553 H.C.F of 12 and 15 is : 3
12
15
H.C.F of 12 and 15 is : 3
vikash@DESKTOP-MLKFTB4:/mnt/c/Users/Hiii/Desktop/LTTS/Projects/Git/M1_Calculator_Util-1/3_Implementation$ ./Calculator
Enter 1 for Calculator
Enter 2 for Maths Calculation
Enter 3 for Trigonometric Calculation
Enter 4 for Memory Conversion
Enter 5 for Measurement Conversion
Enter 6 for Currency Conversion
2
*** Welcome to Calculator ***

LCM = 1
HCF = 2
Simple Interest = 3
Compound Interest = 4
log = 5
Integration = 6
Permutation = 7
Combination = 8
Enter the calculation Operator
3
Enter Principle and Rate :
```

```
File Edit Selection View Go Run Terminal Help Calculator.c - M1_Calculator_Util-1 - Visual Studio Code

EXPLORER
M1_CALCULATOR_UTIL-1
  Hackerearth.png
  README.md
  1_Requirements
  2_Architecture
  3_Implementation
    html
    latex
    -E
    a.exe
    Calh
    Calh.gch
    Calculator
    Calculator.c
    Calculator.exe
    Calculator.o
    Doxyfile
    fact.c
    fact.o
    gcc
    Makefile
    README.md
  4_TestPlanAndOutput
  TIMELINE

Source Control
Calculator.c
  Calculator.c

TERMINAL
3_Implementation > C Calculator.c > ...
551 printf("Enter the money in Pond");
552 scanf("%f",&valueOne);
553 H.C.F of 12 and 15 is : 3
12
15
H.C.F of 12 and 15 is : 3
vikash@DESKTOP-MLKFTB4:/mnt/c/Users/Hiii/Desktop/LTTS/Projects/Git/M1_Calculator_Util-1/3_Implementation$ ./Calculator
Enter 1 for Calculator
Enter 2 for Maths Calculation
Enter 3 for Trigonometric Calculation
Enter 4 for Memory Conversion
Enter 5 for Measurement Conversion
Enter 6 for Currency Conversion
2
*** Welcome to Calculator ***

LCM = 1
HCF = 2
Simple Interest = 3
Compound Interest = 4
log = 5
Integration = 6
Permutation = 7
Combination = 8
Enter the calculation Operator
2
Enter Value 1 and Value 2 for HCF :
12
15
H.C.F of 12 and 15 is : 3
vikash@DESKTOP-MLKFTB4:/mnt/c/Users/Hiii/Desktop/LTTS/Projects/Git/M1_Calculator_Util-1/3_Implementation$
```

Calculator.c - M1_Calculator_Util-1 - Visual Studio Code

EXPLORER

- M1_CALCULATOR_UTIL-1
 - Hackerearth.png
 - ① README.md
 - 1_Requirements
 - ① README.md
 - 2_Architecture
 - 3_Implementation
 - html
 - latex
 - E
 - a.exe
 - Cal.h
 - Cal.h.gch
 - Calculator
 - Calculator.c
 - Calculator.exe
 - Calculator.o
 - Doxyfile
 - fact.c
 - fact.o
 - gcc
 - Makefile
 - ① README.md
 - 4_TestPlanAndOutput

Calculator.c

```
551 printf("Enter the money in Pond");
552 scanf("%f",&valueOne);
553 float sum = valueOne * 101;
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Enter 2 for Maths Calculation
Enter 3 for Trigonometric Calculation
Enter 4 for Memory Conversion
Enter 5 for Measurement Conversion
Enter 6 for Currency Conversion
2
*** Welcome to Calculator ***

LCM = 1
HCF = 2
Simple Interest = 3
Compound Interest = 4
log = 5
Integration = 6
Permutation = 7
Combination = 8
Enter the calculation Operator
3
Enter Principle and Rate :
12000
6
Enter Time:
7
Your SI is : 5040.00
vikash@DESKTOP-MLKFTB4:/mnt/c/Users/Hiiii/Desktop/LTTS/Projects/Git/M1_Calculator_Util-1/3_Imp
mentation\$

Activate Windows
Go to Settings to activate Windows.

main* 0 0 0

Calculator.c - M1_Calculator_Util-1 - Visual Studio Code

EXPLORER

- M1_CALCULATOR_UTIL-1
 - Hackerearth.png
 - ① README.md
 - 1_Requirements
 - ① README.md
 - 2_Architecture
 - 3_Implementation
 - html
 - latex
 - E
 - a.exe
 - Cal.h
 - Cal.h.gch
 - Calculator
 - Calculator.c
 - Calculator.exe
 - Calculator.o
 - Doxyfile
 - fact.c
 - fact.o
 - gcc
 - Makefile
 - ① README.md
 - 4_TestPlanAndOutput

Calculator.c

```
551 printf("Enter the money in Pond");
552 scanf("%f",&valueOne);
553 float sum = valueOne * 101;
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

3
Enter Principle and Rate :
12000
6
Enter Time:
7
Your SI is : 5040.00
vikash@DESKTOP-MLKFTB4:/mnt/c/Users/Hiiii/Desktop/LTTS/Projects/Git/M1_Calculator_Util-1/3_Imp
mentation\$./Calculator
Enter 1 for Calculator
Enter 2 for Maths Calculation
Enter 3 for Trigonometric Calculation
Enter 4 for Memory Conversion
Enter 5 for Measurement Conversion
Enter 6 for Currency Conversion
3
*** Welcome to Calculator ***

sin = 1
cos = 2
tan = 3
cosec = 4
sec = 5
cot = 6
Enter the calculation Operator

Activate Windows
Go to Settings to activate Windows.

main* 0 0 0

```
File Edit Selection View Go Run Terminal Help Calculator.c - M1_Calculator_Util-1 - Visual Studio Code
```

EXPLORER

- M1_CALCULATOR_UTIL-1
 - Hackerearth.png
 - ① README.md
 - 1_Requirements
 - ① README.md
 - 2_Architecture
 - 3_Implementation
 - > html
 - > latex
 - E
 - a.exe
 - Cal.h
 - Cal.h.gch
 - Calculator
 - Calculator.c
 - Calculator.exe
 - Calculator.o
 - Doxyfile
 - fact.c
 - fact.o
 - gcc
 - Makefile
 - ① README.md
 - 4_TestPlanAndOutput

3.Implementation > Calculator.c > ...

```
551 printf("Enter the money in Pond");
552 scanf("%f",&valueOne);
553
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
7
Your SI is : 5040.00
vikash@DESKTOP-MLKFTB4:/mnt/c/Users/Hiiii/Desktop/LTTS/Projects/Git/M1_Calculator_Util-1/3_Imp
lementation$ ./Calculator
Enter 1 for Calculator
Enter 2 for Maths Calculation
Enter 3 for Trigonometric Calculation
Enter 4 for Memory Conversion
Enter 5 for Measurement Conversion
Enter 6 for Currency Conversion
3
*** Welcome to Calculator ***

sin = 1
cos = 2
tan = 3
cosec = 4
sec = 5
cot = 6
Enter the calculation Operator
1
Enter the value of angle in degree :
30
Sin value is 0.50
vikash@DESKTOP-MLKFTB4:/mnt/c/Users/Hiiii/Desktop/LTTS/Projects/Git/M1_Calculator_Util-1/3_Imp
lementation$
```

powershell
wsl

Activate Windows
Go to Settings to activate Windows.

Ln 564, Col 1 Spaces: 2 UTF-8 CRLF C Win32 Prettier

```
File Edit Selection View Go Run Terminal Help Calculator.c - M1_Calculator_Util-1 - Visual Studio Code
```

EXPLORER

- M1_CALCULATOR_UTIL-1
 - Hackerearth.png
 - ① README.md
 - 1_Requirements
 - ① README.md
 - 2_Architecture
 - 3_Implementation
 - > html
 - > latex
 - E
 - a.exe
 - Cal.h
 - Cal.h.gch
 - Calculator
 - Calculator.c
 - Calculator.exe
 - Calculator.o
 - Doxyfile
 - fact.c
 - fact.o
 - gcc
 - Makefile
 - ① README.md
 - 4_TestPlanAndOutput

3.Implementation > Calculator.c > ...

```
551 printf("Enter the money in Pond");
552 scanf("%f",&valueOne);
553
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

```
1
Enter the value of angle in degree :
30
Sin value is 0.50
vikash@DESKTOP-MLKFTB4:/mnt/c/Users/Hiiii/Desktop/LTTS/Projects/Git/M1_Calculator_Util-1/3_Imp
lementation$ ./Calculator
Enter 1 for Calculator
Enter 2 for Maths Calculation
Enter 3 for Trigonometric Calculation
Enter 4 for Memory Conversion
Enter 5 for Measurement Conversion
Enter 6 for Currency Conversion
4
*** Welcome to Calculator ***

Byte to bit = 1
Kilobyte to byte = 2
Megabyte to Kilobyte = 3
Gigabyte to Megabyte = 4
Terabyte to Gigabyte = 5
Petabyte to Terabyte = 6
Exabyte to Terabyte = 7
Zetabyte to Exabyte = 8
Yottabyte to Zetabyte = 9
Enter the calculation Operator
```

powershell
wsl

Activate Windows
Go to Settings to activate Windows.

Ln 564, Col 1 Spaces: 2 UTF-8 CRLF C Win32 Prettier

This screenshot shows the Visual Studio Code interface with a C program running. The Explorer panel on the left displays the project structure for 'M1_CALCULATOR_UTIL-1', including files like 'Hackerearth.png', 'README.md', and '3_Implementation'. The main editor shows the 'Calculator.c' file with C code for memory conversion. The TERMINAL panel at the bottom shows the program's output, which lists conversion factors from Megabyte to Kilobyte up to Yottabyte to Zetabyte, prompts for a value and an operator, and then displays the result: 'Your Value is 15360.0 kb'. The status bar at the bottom indicates the current line and column (Ln 371, Col 39) and other settings like 'Spaces: 2' and 'UTF-8'.

```
Calculator.c - M1_Calculator_Util-1 - Visual Studio Code
```

File Edit Selection View Go Run Terminal Help

EXPLORER

- M1_CALCULATOR_UTIL-1
 - Hackerearth.png
 - 1_Requirements
 - README.md
 - 2_Architecture
 - 3_Implementation
 - html
 - latex
 - E
 - a.exe
 - Cal.h
 - Cal.h.gch
 - Calculator
 - Calculator.c
 - Calculator.exe
 - Calculator.o
 - Doxyfile
 - fact.c
 - fact.o
 - gcc
 - Makefile
 - README.md
 - 4_TestPlanAndOutput

3_Implementation > Calculator.c > main()

```
333         break;
334     case 2:
335         printf("Enter the value in kb ");
336         scanf("%f",&valueOne);
337         float mmr2 = valueOne * 1024;
338         printf("Your Value is %1f Bytes\n", mmr2);
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Megabyte to Kilobyte = 3
Gigabyte to Megabyte = 4
Terabyte to Gigabyte = 5
Petabyte to Terabyte = 6
Exabyte to Terabyte = 7
Zetabyte to Exabyte = 8
Yottabyte to Zetabyte = 9
Enter the calculation Operator
3
Enter the value in mb 15
Your Value is 15360.0 kb
vikash@DESKTOP-MLKFTB4:/mnt/c/Users/Hiiii/Desktop/LTTS/Projects/Git/M1_Calculator_Util-1/3_Implementation\$

powershell
wsl

Activate Windows
Go to Settings to activate Windows.

main* 0 0 0 Ln 371, Col 39 Spaces: 2 UTF-8 CRLF C Win32 Prettier

This screenshot shows the Visual Studio Code interface with the same C program running. The TERMINAL panel now displays a menu of options: 'Enter 1 for Calculator', 'Enter 2 for Maths Calculation', 'Enter 3 for Trigonometric Calculation', 'Enter 4 for Memory Conversion', 'Enter 5 for Measurement Conversion', and 'Enter 6 for Currency Conversion'. After the user enters '5', the program outputs '*** Welcome to Calculator ***' and lists conversion factors for various units of length, from Centimetre to Millimetre up to Hectometre to Kilometre. It then prompts for a calculation operator. The status bar at the bottom remains the same as in the previous screenshot.

```
Calculator.c - M1_Calculator_Util-1 - Visual Studio Code
```

File Edit Selection View Go Run Terminal Help

EXPLORER

- M1_CALCULATOR_UTIL-1
 - Hackerearth.png
 - 1_Requirements
 - README.md
 - 2_Architecture
 - 3_Implementation
 - html
 - latex
 - E
 - a.exe
 - Cal.h
 - Cal.h.gch
 - Calculator
 - Calculator.c
 - Calculator.exe
 - Calculator.o
 - Doxyfile
 - fact.c
 - fact.o
 - gcc
 - Makefile
 - README.md
 - 4_TestPlanAndOutput

3_Implementation > Calculator.c > main()

```
333         break;
334     case 2:
335         printf("Enter the value in kb ");
336         scanf("%f",&valueOne);
337         float mmr2 = valueOne * 1024;
338         printf("Your Value is %1f Bytes\n", mmr2);
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Enter 1 for Calculator
Enter 2 for Maths Calculation
Enter 3 for Trigonometric Calculation
Enter 4 for Memory Conversion
Enter 5 for Measurement Conversion
Enter 6 for Currency Conversion
5
*** Welcome to Calculator ***
Centimetre to Millimetre = 1
Millimetre to Centimetre = 2
Decimetre to Centimetre = 3
Centimetre to Decimetre = 4
Metre to Decimetre = 5
Decimetre to Metre = 6
Decametre to Metre = 7
Metre to Decametre = 8
Hectometre to Decametre = 9
Decametre to Hectometre = 10
Kilometre to Hectometre = 11
Hectometre to Kilometre = 12
Enter the calculation Operator

powershell
wsl

Activate Windows
Go to Settings to activate Windows.

main* 0 0 0 Ln 371, Col 39 Spaces: 2 UTF-8 CRLF C Win32 Prettier

Calculator.c - M1_Calculator_Util-1 - Visual Studio Code

EXPLORER

- M1_CALCULATOR_UTIL-1
 - Hackerearth.png
 - ① README.md
 - 1_Requirements
 - ① README.md
 - 2_Architecture
 - 3_Implementation
 - html
 - latex
 - E
 - a.exe
 - Calh
 - Calh.gch
 - Calculator M
 - Calculator.c M
 - Calculator.exe
 - Calculator.o
 - Doxyfile
 - fact.c
 - fact.o
 - gcc U
 - Makefile
 - ① README.md
 - 4_TestPlanAndOutput
 - TIMELINE

3_Implementation > Calculator.c > main()

```
333         break;
334     case 2:
335         printf("Enter the value in kb ");
336         scanf("%f",&valueOne);
337         float mmr2 = valueOne * 1024;
338         printf("Your Value is %1f Deterla" mmr2);
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Enter 5 for Measurement Conversion
Enter 6 for Currency Conversion
5
*** Welcome to Calculator ***

Centimetre to Millimetre = 1
Millimetre to Centimetre = 2
Decimetre to Centimetre = 3
Centimetre to Decimetre = 4
Metre to Decimetre = 5
Decimetre to Metre = 6
Decametre to Metre = 7
Metre to Decametre = 8
Hectometre to Decametre = 9
Decametre to Hectometre = 10
Kilometre to Hectometre = 11
Hectometre to Kilometre = 12
Enter the calculation Operator
4
Enter the value in cm 12
Your Value is 1.2 dm
vikash@DESKTOP-MLKFTB4: /mnt/c/Users/Hiiii/Desktop/LTTS/Projects/Git/M1_Calculator_Util-1/3_imp
1ementation\$

powerShell
wsl

Ln 371, Col 39 Spaces: 2 UTF-8 CRLF C Win32 Prettier

Calculator.c - M1_Calculator_Util-1 - Visual Studio Code

EXPLORER

- M1_CALCULATOR_UTIL-1
 - Hackerearth.png
 - ① README.md
 - 1_Requirements
 - ① README.md
 - 2_Architecture
 - 3_Implementation
 - html
 - latex
 - E
 - a.exe
 - Calh
 - Calh.gch
 - Calculator M
 - Calculator.c M
 - Calculator.exe
 - Calculator.o
 - Doxyfile
 - fact.c
 - fact.o
 - gcc U
 - Makefile
 - ① README.md
 - 4_TestPlanAndOutput
 - TIMELINE

3_Implementation > Calculator.c > main()

```
333         break;
334     case 2:
335         printf("Enter the value in kb ");
336         scanf("%f",&valueOne);
337         float mmr2 = valueOne * 1024;
338         printf("Your Value is %1f Deterla" mmr2);
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL

Enter 5 for Measurement Conversion
Enter 6 for Currency Conversion
5
*** Welcome to Calculator ***

Centimetre to Millimetre = 1
Millimetre to Centimetre = 2
Decimetre to Centimetre = 3
Centimetre to Decimetre = 4
Metre to Decimetre = 5
Decimetre to Metre = 6
Decametre to Metre = 7
Metre to Decametre = 8
Hectometre to Decametre = 9
Decametre to Hectometre = 10
Kilometre to Hectometre = 11
Hectometre to Kilometre = 12
Enter the calculation Operator
3
Enter the value in dm 12
Your Value is 120.0 cm
vikash@DESKTOP-MLKFTB4: /mnt/c/Users/Hiiii/Desktop/LTTS/Projects/Git/M1_Calculator_Util-1/3_imp
1ementation\$

powerShell
wsl

Ln 371, Col 39 Spaces: 2 UTF-8 CRLF C Win32 Prettier

The screenshot shows the Visual Studio Code interface with the following components:

- Explorer Pane (Left):** Displays the project structure. The '3_Implementation' folder is selected, showing files like 'html', 'latex', 'a.exe', 'Cal.h', 'Cal.h.gch', 'Calculator', 'Calculator.c', 'Calculator.exe', 'Calculator.o', 'Doxyfile', 'fact.c', 'fact.o', 'gcc', 'Makefile', 'README.md', and 'TestPlanAndOutout'.
- Main Editor:** Shows the implementation of the calculator program in C. The code includes a case statement for different calculations:


```

      case 2:
          printf("Enter the value in kb ");
          scanf("%f",&valueOne);
          float mmr2 = valueOne * 1024;
          printf("Your Value is % 15.6 Bytes\n", mmr2);
      
```
- Output Pane (Right):** Shows the program's execution. It displays the welcome message and the results of various calculations:


```

      Enter the value in dm 12
      Your Value is 120.0 cm
      vikash@DESKTOP-MLKFTB4: /mnt/c/Users/Hiii/Desktop/LTTS/Projects/Git/M1_Calculator_Util-1/3_Implementation$ ./Calculator
      Enter 1 for Calculator
      Enter 2 for Maths Calculation
      Enter 3 for Trigonometric Calculation
      Enter 4 for Memory Conversion
      Enter 5 for Measurement Conversion
      Enter 6 for Currency Conversion
      6
      *** Welcome to Calculator ***

      Rupees to Dollar = 1
      Dollar to Rupees = 2
      Rupees to Euro = 3
      Euro to Rupees = 4
      Rupees to Riyal= 5
      Riyal to Rupees = 6
      Rupees to Pond = 7
      Pond to Rupees = 8
      Enter the calculation Operator
      
```

The screenshot shows the Visual Studio Code interface with the following details:

- Explorer Pane (Left):** Displays the project structure for 'M1_CALCULATOR_UTIL-1'. It includes folders for '1_Requirements', '2_Architecture', and '3_Implementation'. The '3_Implementation' folder is expanded, showing files like 'html', 'latex', 'a.exe', 'Cal.h', 'Cal.h.gch', 'Calculator', 'Calculator.c', 'Calculator.exe', 'Calculator.o', 'Doxyfile', 'fact.c', 'fact.o', 'gcc', 'Makefile', 'README.md', and 'TestPlanAndOutout'.
- Main Editor:** Shows the implementation of the calculator program in C. The code includes a menu for various calculations (Calculator, Maths, Trigonometric, Memory, Measurement, Currency) and a loop for repeated use. The code is as follows:


```

      333         break;
      334     case 2:
      335         printf("Enter the value in kb ");
      336         scanf("%f",&valueOne);
      337         float mmr2 = valueOne * 1024;
      338         printf("Your Value is %16.6f Bytes\n", mmr2);
      
```
- Output Pane (Bottom):** Shows the program's execution. It displays the menu and the user's input for a calculation. The output is as follows:


```

      Enter 1 for Calculator
      Enter 2 for Maths Calculation
      Enter 3 for Trigonometric Calculation
      Enter 4 for Memory Conversion
      Enter 5 for Measurement Conversion
      Enter 6 for Currency Conversion
      6
      *** Welcome to Calculator ***

      Rupees to Dollar = 1
      Dollar to Rupees = 2
      Rupees to Euro = 3
      Euro to Rupees = 4
      Rupees to Riyal= 5
      Riyal to Rupees = 6
      Rupees to Pond = 7
      Pond to Rupees = 8
      Enter the calculation Operator
      3
      Enter the money in RS.65789
      You have : Euro 765.0
      vishal@DESKTOP-MLKFTB4: /mnt/c/Users/Hiiii/Desktop/LTTS/Projects/Git/M1_Calculator
      3_Implementation$
      
```

```
File Edit Selection View Go Run Terminal Help
Calculator.c - M1_Calculator_Util-1 - Visual Studio Code

EXPLORER
M1_CALCULATOR_UTIL-1
  Hackerearth.png
  README.md
  1_Requirements
  README.md
  2_Architecture
  3_Implementation
    html
    latex
    -E
    a.exe
    Cal.h
    Cal.h.gch
    Calculator
    Calculator.c
    Calculator.exe
    Calculator.o
    Doxyfile
    fact.c
    fact.o
    gcc
    Makefile
    README.md
    4_TestPlanAndOutput
  TIMELINE

3_Implementation > Calculator.c
333
334
335
336
337
338

3_Implementation > Calculator.c
333
334
335
336
337
338
break;
case 2:
printf("Enter the value in kb ");
scanf("%f",&valueOne);
float mmr2 = valueOne * 1024;
printf("Your Value is %1f Bytes\n", mmr2);

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL
Enter 1 for Calculator
Enter 2 for Maths Calculation
Enter 3 for Trigonometric Calculation
Enter 4 for Memory Conversion
Enter 5 for Measurement Conversion
Enter 6 for Currency Conversion
6
*** Welcome to Calculator ***
Rupees to Dollar = 1
Dollar to Rupees = 2
Rupees to Euro = 3
Euro to Rupees = 4
Rupees to Riyal= 5
Riyal to Rupees = 6
Rupees to Pond = 7
Pond to Rupees = 8
Enter the calculation Operator
2
Enter the money in $712
You have : RS.53400.0
vikash@DESKTOP-MLKFTB4: /mnt/c/Users/Hiii/Desktop/LTTS/Projects/Git/M1_Calculator_Util-1/3_imp
1ementation$
```

REFERENCES

1. <https://bigprof.com/c4engineering/intgr001.htm#:~:text=This%20C%20program%20involves%20dividing,is%20the%20value%20of%20integration.>
2. <https://codeforwin.org/2015/06/c-program-to-find-hcf-of-two-numbers.html>
3. <https://en.wikipedia.org/wiki/Integration>
4. <https://app.diagrams.net/>
5. https://www.google.com/search?q=how+to+enter+in+directory+through+cmd&rlz=1C1SQJL_enIN962IN962&oq=how+to+enter+in+directory+through+cmd&aqs=chrome..69i57.10025j0j7&sourceid=chrome&ie=UTF-8
6. https://www.google.com/search?q=doxygenated+auto+documentation&rlz=1C1SQJL_enIN962IN962&oq=doxygenated+auto+documentation&aqs=chrome..69i57.10553j0j7&sourceid=chrome&ie=UTF-8
7. <https://www.netdevgroup.com/online/courses/open-source/linux-essentials>

8. <https://www.sololearn.com/learning/1089>
9. <https://www.hackerearth.com/@vikkuvikash79097>
10. <https://git-scm.com/>
11. <https://www.youtube.com/watch?v=HYrXogLj7vg&t=1202s>
12. https://www.youtube.com/watch?v=ZSPZob_1TOk&t=3514s
13. <https://www.youtube.com/watch?v=HQmbAdjuB88&t=95s>
14. https://www.youtube.com/watch?v=-V_vHZPOZfY
15. <https://www.youtube.com/watch?v=GExnnTaBELk&t=1877s>
16. <https://www.youtube.com/watch?v=s9D8rjtNsKw>
17. <https://www.youtube.com/watch?v=RS9GwYwRi4Q&t=110s>
18. <https://www.youtube.com/watch?v=a8CwpGARAsQ&t=101s>
19. <https://marketplace.visualstudio.com/items?itemName=fpopescu.vscode-unity-test-adapter>
20. <https://stackoverflow.com/questions/62260277/how-to-make-a-makefile-for-c-in-vscode>
21. <https://en.wikipedia.org/wiki/Documentation>