BASIC FUNCTIONS

Addition

The addition (sum function) is used by clicking on the "+" button or using the keyboard. The function results in a+b.

Subtraction

The subtraction (minus function) is used by clicking on the "-" button or using the keyboard. The

function results in a-b.

Multiplication

The multiplication (times function) is used by clicking on the "x" button or using the keyboard "*" key. The function results in a*b.

Division

The division (divide function) is used by clicking on the "/" button or using the keyboard "/" key. The function results in a/b.

Square Root

The square root function is used by clicking on the "x" button or type "sqrt()". This function represents x^.5 where the result squared is equal to x.

Natural Exponential

The natural exponential (e raised to the x) is used by clicking on the "e^x" button or type "exp()". The result is e (2.71828...) raised to x.

Logarithm

The logarithm (LOG) is used by clicking on the "LOG" button or type "LOG()".

Natural Logarithm

The Natural logarithm (LN) is used by clicking on the "LN" button or type "LN()".

Inverse

Multiplicative inverse (reciprocal function) is used by pressing the "1/x" button or typing "inv()". This function is the same as x^-1 or dividing 1 by the number.

Exponent

Numbers with exponents of 10 are displayed with an "e", for example 4.5e+100 or 4.5e-100. This function represents 10^x. Numbers are automatically displayed in the format when the number is too large or too small for the display. To enter a number in this format use the exponent key "EEX". To do this enter the mantissa (the non exponent part) then press "EEX" or type"e" and then enter the exponent.

Factorial

The Factorial function is used by clicking the "!" button or type "!".

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.

FUNCTIONS TO BE PROVIDED:

The system will be user friendly and completely menu driven so that the users shall have noproblem in using all options.
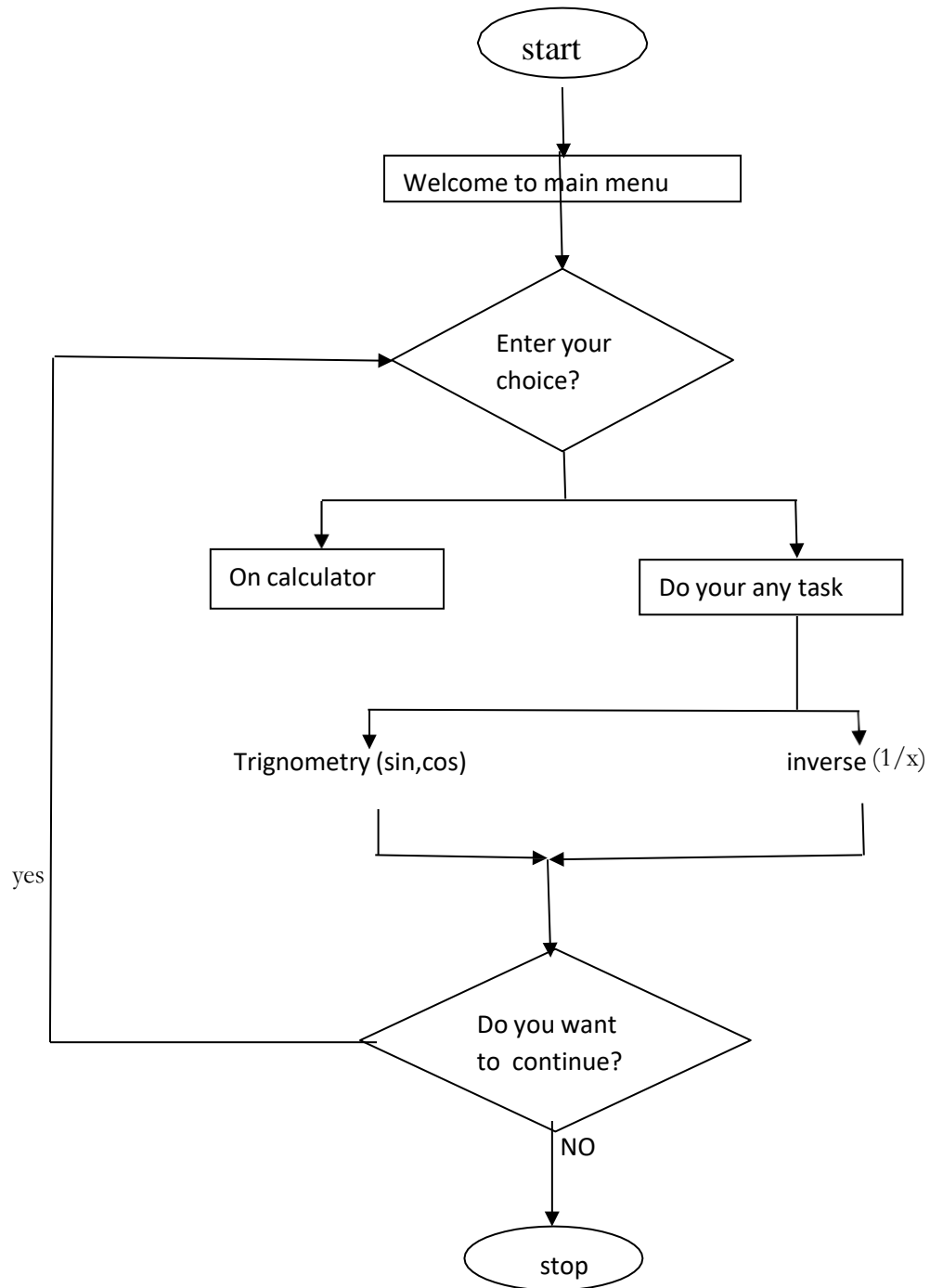
- The system will be efficient and fast in response.

- The system will be customized according to needs.

SYSTEM REQUIRMENTS

Operating system: Windows 10

Language: C Language

FLOW CHART

start

Welcome to main menu

Enter your choice?

On calculator

Do your any task

Trignometry (sin,cos)

inverse $(1/x)$

yes

Do you want to continue?

NO

stop

CODING:

```c
#include<stdio.h>
#include<math.h>
int main()
{
	int num1,num2,sum,prod,diff,choice,n;
	float fact,quoi,sqrtrt,x,y,result,onebyx;

	printf("\t\tBASIC CALCULATOR\n");
	printf("enter the first number");
	scanf("%d",&num1);
	printf("enter the second number");
	scanf("%d",&num2);
	printf("Enter x ");
	scanf("%f",&x);
	printf("Enter y ");
	scanf("%f",&y);

	printf("1.sum\n 2.diff\n 3.prod\n 4.quoi\n 5.squareroot\n
6.power\n7.onebyx\n8.power of x and 1/y\n9 .10 power x\n11.log10(x)\n12.
sin(x)\n13.
cos(x)\n14.tanx(x)\n15.log(x)\n16.exp(x)\n17.sinh(x)\n18.cosh(x)\n19.tanh(x
)");
	scanf("%d",&choice);
	switch(choice)
	{

		case 1:
			sum=num1+num2;
			printf("the sum is=%d",sum);
			break;

		case 2:
			diff=num1-num2;
			printf("the diff is=%d",diff);
			break;
		case 3:
			prod=num1*num2;
			    printf("the prod is=%d",prod);
			break;
```

```c
case 4:
            quoi=num1/num2;
                printf("the quoi is=%f",quoi);
                break;

      case 5:
            sqrtrt=sqrt(x);
            printf("the square root=%f",sqrtrt);
            break;
      case 6:

            result=pow(x,y);
            printf("the power of x and y=%f",result);
            break;
     case 7:
            onebyx=(1/x);
            printf("Result is=%f",onebyx);
            break;
      case 8:
            result=pow(x,1/y);
            printf("Result is=%f",result);
            break;
      case 9:
            result=pow(10,x);
            printf("Result is=%f",result);
            break;
      case 10:
            for(int i=1;i<=x;i++)
          fact=fact*i;
       printf("Factorial of %f is: %f",x,fact);
            break;
      case 11:
                result=log10(x);
                printf("Result is=%f",result);
                break;
      case 12:
            result=sin(x);
            printf("Result is=%f",result);
            break;
      case 13:
            result=cos(x);
            printf("Result is=%f",result);
            break;
       case 14:
            result=tan(x);
            printf("Result is=%f",result);
            break;
```

```c
                        case 15:
                                result=log(x);
                                printf("Result is=%f",result);
                                break;
                        case 16:
                                result=exp(x);
                                printf("Result is=%f",result);
                                break;
                        case 17:
                                result=sinh(x);
                                printf("Result is=%f",result);
                                break;
                        case 18:
                                result=cosh(x);
                                printf("Result is=%f",result);
                                break;
                        case 19:
                                result=tanh(x);
                                printf("Result is=%f",result);
                                break;


                default:
                                printf("invalid input");
        }

        return 0;
        }
```

APPLICATIONS

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.