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

Rational numbers
The addition of two rational numbers is used by clicking on the “+” button or using the keyboard “+” key. The function result in a/b + b/c.

Age calculation
Hear you can find out what is your age by entering your date of birth and current date and result will be your present age.

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 no problem in using all options.

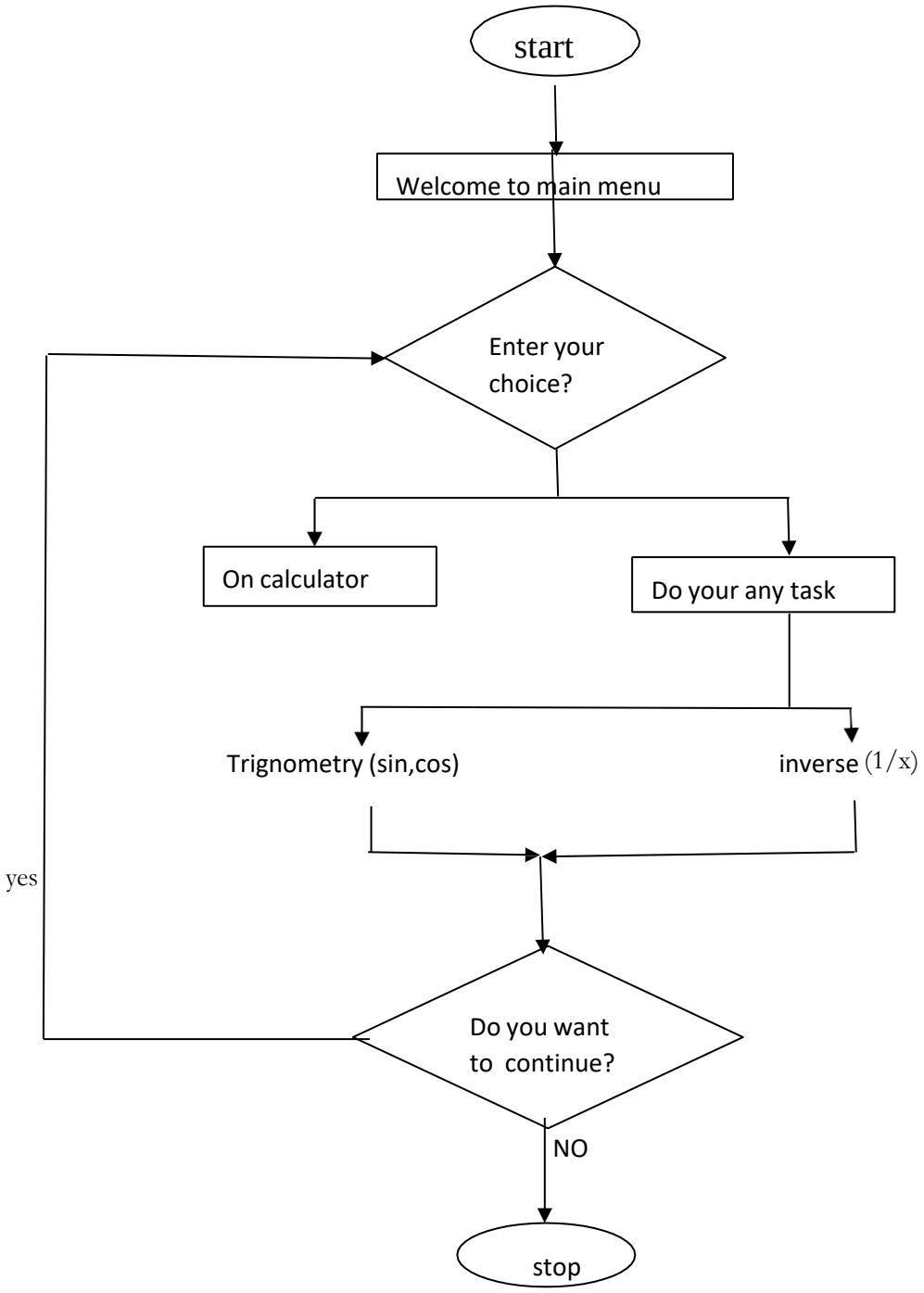
- The system will be efficient and fast in response.
- The system will be customized according to needs.

SYSTEM REQUIRMENTS

Operating system: Windows 10

Language: C Language

FLOW CHART



CODING:

```
#include<stdio.h>
#//include<conio.h>
#include<stdlib.h>
#include <time.h>
```

```
int main()
{
char opt;
int n1, n2,i,d,d1,m1,y1,d2,m2,y2,r1,r2,r3,numerator1=1, denominator1, numerator2=1, denominator2, x, y, c, gcd_no;
float res;
        label1:
                system("color 1b");
                printf("\n\n\n SIMPLE CALCULATOR / APPITUDE CALCULATOR FOR (TIME AND WORK / Age calculator)");
                printf("\n--------------------------------------------------------------------------------");
                printf("\n press 1: If you press 1 you can able to perform normal calculations \n");
                printf("\n Press 2: If you press 2 you can able to perform Time and work calculations \n");
                printf("\n press 3: If you press 3 you can able to perform Age calculations:\n");
                scanf("%d",&i);
        if(i==1)
        {
          printf (" Choose an operator(+, -, *, /) to perform the operation in C Calculator \n");

          scanf ("%s", &opt);

          if (opt == '/' )
          {
    printf (" You have selected: Division");
          }
          else if (opt == '*')
          {
             printf (" You have selected: Multiplication");
           }

          else if (opt == '-')
          {
```

```
   printf (" You have selected: Subtraction");
 }
   else if (opt == '+')
{
   printf (" You have selected: Addition");
 }
printf (" \n Enter the first number: ");
scanf(" %d", &n1); // take fist number
printf (" Enter the second number: ");
scanf (" %d", &n2); // take second number

switch(opt)
{
   case '+':
      res = n1 + n2; // add two numbers
      printf (" Addition of %d and %d is: %.2f", n1, n2, res);
      break;

   case '-':
      res = n1 - n2; // subtract two numbers
      printf (" Subtraction of %d and %d is: %.2f", n1, n2, res);
      break;

   case '*':
      res = n1 * n2; // multiply two numbers
      printf (" Multiplication of %d and %d is: %.2f", n1, n2, res);
      break;

   case '/':
      if (n2 == 0)   // if n2 == 0, take another number
      {
         printf (" \n Divisor cannot be zero. Please enter another value ");
```

```
    scanf ("%d", &n2);
    }
  res = n1 / n2; // divide two numbers
  printf (" Division of %d and %d is: %.2f", n1, n2, res);
  break;
 default:  /* use default to print default message if any condition is not satisfied */
  printf (" Something is wrong!! Please check the options ");

 }
 printf("\n press 1: For Home \n press 2: To perform Time and work calculations \n press 3: To perform the age calculations\nPress any key to stop the execution\n");
 scanf("%d",&d);
        if(d==1)
        {
                system("cls");
                goto
                label1;
  }
  else if(d==2)
        {
                goto
                lable2;
        }
        else if(d==3)
        {
                goto
                lable3;
        }
        else
        exit(0);
  }
```

```
                else if(i==2)
        {
                lable2:
                system("color 2b");
        printf("Enter the denominator for 1st number : ");
        scanf("%d",&denominator1);

        printf("Enter the denominator for 2nd number : ");
        scanf("%d",&denominator2);
        x=(numerator1*denominator2)+(denominator1*numerator2);
        y=denominator1*denominator2;
        for(c=1; c <= x && c <= y; ++c)
        {
          if(x%c==0 && y%c==0)
            gcd_no = c;
        }
        printf("(%d / %d) + (%d / %d) = (%d / %d)\n", numerator1, denominator1, numerator2,
denominator2, x/gcd_no, y/gcd_no);

                printf("\n press 1: For Home \n Press any key to stop the execution\n");
          scanf("%d",&d);
                if(d==1)
                {
                        system("cls");
                        goto
                        label1;
        }
        else
        exit(0);

        }
```

```
                    if (d==3)
                    {
                            goto
                            lable3;
                                    }
                            else if(i==3)
            {
                    lable3:
                            system("color 4b");
        printf("Enter your birth day\n");
        scanf("%d",&d1);
        printf("Enter your birth month\n");
        scanf("%d",&m1);
        printf("Enter your birth year\n");
        scanf("%d",&y1);
        printf("Enter your current day\n");
        scanf("%d",&d2);
        printf("Enter your current month\n ");
        scanf("%d",&m2);
        printf("Enter your current year\n");
        scanf("%d",&y2);
        if((d1>31 || d1<1) && (d2>31 || d2<1) && (m1<1 || m1>12) &&(m2<1 || m2>12) && (y1<0 &&
y2<0))
        {
            printf("you enter wrong somthing try again");
        }
        else
        {
            r3=y2-y1;
            if(d2>=d1)
            {
                    r1=d2-d1;
```

```
                }
                else
                {
                        m2=m2-1;
                        d2=d2+30;
                        r1=d2-d1;
                }
                if(m2>=m1)
                {
                        r2=m2-m1;
                }
                else
                {
                        y2=y2-1;
                        m2=m2+12;
                        r2=m2-m1;
                }

        }
        printf("your age is %d year %d month %d day",r3,r2,r1);
}
printf("\n press 1: For Home \n Press any key to stop executing \nPress any key to stop the execution\n");
         scanf("%d",&d);
                        if(d==1)
                        {
                                system("cls");
                                goto
                                label1;
                }
                else
                exit(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.