1) Write a C program to find the area and perimeter of any two shapes

I) Square

```
#include <stdio.h>

void main(){
   //Program to find the area and perimeter of Square
   float area, side, perimeter;
   printf("Enter the value of side : ");
   scanf("%f",&side);
   area = side * side ;
   perimeter = side + side;
   printf("The perimeter of the square is %f",perimeter);
   printf("\nThe area of the Square is %f",area);

}
```

ii) Rectangle

```
#include <stdio.h>

void main(){
   //Program to find the area and perimeter of Rectangle
   float area, breadth, width, perimeter;
   printf("Enter the value of breadth : ");
   scanf("%f",&breadth);
    printf("Enter the value of width : ");
   scanf("%f",&width);
   area = breadth * width ;
   perimeter = breadth + width;
   printf("The perimeter of the Rectangle is %f",perimeter);
   printf("\nThe area of the Rectangle is %f",area);

}
```

2. Write a c program to calculate the percentage of 5 subjects.

```
#include <stdio.h>

void main(){
   //Program to find the percentage of five subjects
   float mark1, mark2, mark3, mark4, mark5, sum;
   printf("Enter your marks: ");
   scanf("%f%f%f%f%f", &mark1,&mark2,&mark3,&mark4,&mark5);
   sum = mark1+mark2+mark3+mark4+mark5;
   printf("The percentage of the marks of five subjects is %f",(sum/5));



}
```

3.Write a c program to convert Celsius to Fahrenheit.

```
#include <stdio.h>

void main(){
  //program to convert celcius into farenheit
```

```
   float celcius, farenheit;
   printf("Enter the value of celcius: ");
   scanf("%f",&celcius);

   farenheit = (celcius*1.8) + 32;

   printf("The equivalent value of farenhiet for celcius is %f",farenheit);


}
```

4.Write a c program to find the roots of the quadratic equation

```
#include <stdio.h>
#include <math.h>
void main(){
  //program to find the roots of a quadratic equation
  int a,b,c;
  int x,y,det;
  printf("The coeffecients of the quadratic equation are ");
  scanf("%d %d %d", &a, &b, &c);
  det = (b*b)-(4*a*c);
  if(det<0){
      printf("The roots of the quadratic equation are Imaginary");
  }else{
      x = (-b + sqrt(det))/(2*a);
      y = ((-b) - sqrt(det))/(2*a);
      printf("The Solutions of the quadratic equation are %d and %d",x,y);
  }

}
```

5. Write a c program to swap two number with and without using temporary variable.

(With temporary variable)

```
#include <stdio.h>
#include <math.h>
void main(){
 //program to swap two variables with a temporary variable
 int a, b, c;
 printf("Enter the values of a :");
 scanf("%d",&a);
 printf("Enter the values of b :");
 scanf("%d",&b);

        c = a;
        a = b;
        b = c;

  printf("The value of a is %d",a);
  printf("\nThe value of a is %d",b);
}
```

(Without temporary variable)

```
    #include <stdio.h>
    void main(){
     //program to swap two variables without a temporary variable
```

```
 int a, b;
 printf("Enter the values of a :");
 scanf("%d",&a);
 printf("Enter the values of b :");
 scanf("%d",&b);
 a = a+b;
 b = a-b;
 a = a-b;

  printf("The value of a is %d",a);
  printf("\nThe value of a is %d",b);
}
```

EXERCISE 2:

1. Write a c program to evaluate the expression 5 * (2 + 4)/(5 * 3) + 2

```
#include <stdio.h>

void main() {

   float ans;

   ans = (5 * (2 + 4)/(5 * 3) + 2) ;

   printf("The result is %f",ans);


}
```

2. Write a C programs to evaluate the algebraic expression (ax+b)/(ax-b)

```
 #include <stdio.h>

void main(){

 int a , b, x;

 printf("Enter the values of a, b and x :");

 scanf("%d%d%d", &a,&b,&x);

int numerator = (a*x)+b;

int denominator = (a*x)-b;


float res = (float) numerator / denominator;

printf("The solution is %f",res);

}
```

3.Write a C program to perform all the arithmetic operations

```
#include <stdio.h>
void main(){
 //program to perform arithmetic operations
 int a, b;
 printf("Enter the value of a: ");
 scanf("%d",&a);
 printf("Enter the value of b: ");
 scanf("%d",&b);
 printf("Addition : %d",a+b);
  printf("\nSubtraction : %d",a-b);
   printf("\nMultiplication : %d ",a*b);
   if(b!=0){
      float res = (float)a/b;
    printf("\nDivision %f: ",res);
   }else{
      printf("\nDivision cannot be done by zero");
   }
}
```

4.Write a C program to find Simple and Compound interest

```
#include <stdio.h>

#include<math.h>


void main() {

  float p,t,r,si,ci;


  printf("Enter the principal amount: ");

  scanf("%f",&p);

  printf("Enter the time in year: ");

  scanf("%f",&t);

  printf("Enter the rate of growth : ");

  scanf("%f",&r);


  si = (p*t*r)/100;

  ci = p*(pow(1+(r/100),t)-1);

  printf("Simple Interest : %f",si);

   printf("\nCompound Interest : %f",ci);
```

}

5. Write a C program to reverse a three digit number

```
#include <stdio.h>
void main(){
 //program to perform arithmetic operations
int num1,num2=0;
printf("Enter the three digit number:");
scanf("%d",&num1);

for(int i=0;i<3;i++){
    int rem = num1 % 10;
    num2 = num2*10 + rem;
    num1/=10;
}
printf("The reverse of the number is %d",num2);
}
```