TASK 01:-

Source code:

```c
/*Write a program to create an Electricity Bill Calculator which will ask the user for Customer
Name, Units Consumed (value should be of integer), Price per Unit (value should be of float)
and calculate the Total Bill and display it in a formatted bill slip.*/

#include<stdio.h>
int main()
{
    char a[50];
    int t;
    float b;
    float tot;

    printf("\n-------------------------------------");
printf("\n\t ELECTRICITY BILL");
printf("\n-------------------------------------");
    printf("\n Customer name:");
        scanf("%s",&a);

    printf("\n Units consumed:");
    scanf("%d",&t);
    printf("\n Price per unit:");
    scanf("%f",&b);
    printf("\n-------------------------------------");
    tot=t*b;
    printf("\n Total Bill:%f",tot);
    printf("\n-------------------------------------");
    return 0;

}
```

Output:

```
D:\C language tasks\Untitled1

-----------------------------------
        ELECTRICITY BILL
-----------------------------------
 Customer name:Hashir

 Units consumed:488

 Price per unit:9.7

-----------------------------------
 Total Bill:4733.600098
-----------------------------------
--------------------------------
Process exited after 16.09 seconds with return value 0
Press any key to continue . . .
```

TASK 02:-

Source code:

```
itled1.cpp  Untitled2.cpp  Untitled3.cpp  Untitled4.cpp  Untitled5.cpp
/*Write a program to create a Shopping Receipt Generator which takes as input eggs, bread and
butter prices as float with 2 decimal places and then generate a receipt showing each item's
price, subtotal, 17% sales tax and final total.*/

#include<stdio.h>
int main()
{

float egg,bread,butter,subtotal,tax,tot;

 printf("\n Item 01 price:");
 scanf("%f",&egg);
 printf("\n Item 02 price:");
 scanf("%f",&butter);
 printf("\n Item no 03 price:");
 scanf("%f",&bread);

 subtotal =egg+butter+bread;
 tax=(subtotal)*(0.17);
  tot=tax+subtotal;

 printf("\n-------------------------------------");
printf("\n\t SHOPPING RECEIPT");
printf("\n Price no.1: %2f",egg);
printf("\n Price no.1: %2f",butter);
printf("\n Price no.1: %2f",bread);

 printf("\n-------------------------------------");
 printf("\n SUBTOTAL: %2f",subtotal);
  public int __cdecl printf (const char * __restrict__ _Format, ...)
 printf("\n-------------------------------------");
  printf("\n Total: %2f",tot);

  return 0;
}
```

Output:

```
D:\C language tasks\Untitled2

 Item 01 price:77.8

 Item 02 price:44.267

 Item no 03 price:551.0

-----------------------------------
        SHOPPING RECEIPT
 Price no.1:77.80
 Price no.1:44.27
 Price no.1:551.00
-----------------------------------
 SUBTOTAL:673.07
 Sales Tax:114.421394
-----------------------------------
 Total:787.49
--------------------------------
Process exited after 18.03 seconds with return value 0
Press any key to continue . . .
```

TASK 03:-

Source code:-

Untitled1.cpp | Untitled2.cpp | Untitled3.cpp | Untitled4.cpp | Untitled5.cpp

```c
/*Write a program to create a Fuel Consumption Tracker that calculates car's efficiency and
takes input distance travelled (km, float), fuel used (litres, float), fuel price per litre, fuel price
per litre(float) and gives output distance travelled, fuel consumption (km per litre with 2
decimal places) and total fuel cost.*/
#include<stdio.h>
int main()
{
    float dis,fuel,fpr,con,eff,tot;
printf("\n Enter distance travelled(km):");
scanf("%d",&dis);
printf("\n Enter Fuel used(litres):");
scanf("%d",&fuel);
printf("\n Enter Price Per Litre:");
scanf("%d",&fpr);
printf("\n-------------------------------------------------");
printf("\n FUEL CONSUMPTION TRACKER");
printf("\n-------------------------------------------------");
    eff=dis/fuel;
    tot=fuel*fpr;
    printf("\n DISTANCE TRAVELLED:%2f km",dis);
        printf("\n FUEL CONSUMPTION:%2f litre",fuel);
        printf("\n EFFICIENCY:%2f km/litre",eff);
        printf("\n-------------------------------------------------");
            printf("\n TOTAL FUEL COST:%3f PKR",tot);
            return 0;
}
```

Output:-

```
 Enter distance travelled(km):55

 Enter Fuel used(litres):290

 Enter Price Per Litre:4.9

-------------------------------------------------
 FUEL CONSUMPTION TRACKER
-------------------------------------------------
 DISTANCE TRAVELLED:55.00 km
 FUEL CONSUMPTION:290.00 litre
 EFFICIENCY:0.19 km/litre
-------------------------------------------------
 TOTAL FUEL COST:1421.000 PKR
--------------------------------
Process exited after 13.29 seconds with return value 0
Press any key to continue . . .
```

TASK 04:-

Source code:

Untitled1.cpp | Untitled2.cpp | Untitled3.cpp | Untitled4.cpp | Untitled5.cpp

```c
/*Create a Student CGPA Calculator that takes marks of your 1stsemester's subjects (float), each
subject is out of 100. Calculate percentage and convert percentage into CGPA (out of 4.0 scale)
using the formula CGPA = (Percentage/100) * 4 and display with proper formatting.*/
#include<stdio.h>
int main()
{

    float mar,per,CGPA,tot=0;
    int n;

    printf("\n Enter number of subjects:");
    scanf("%d",&n);
    for(int i=1;i<=n;i++)
    {
    printf("\n Marks of subject(out of 100):");
    scanf("%f",&mar);
        tot=tot+mar;
    }
    printf("\n-------------------------------------------------");
    printf("\n STUDENT RESULT");
    printf("\n-------------------------------------------------");
    printf("\n TOTAL:%2f",tot);
    per=(tot/(n*100))*100;
        printf("\n PERCENTAGE:%2f",per);
        CGPA=(per/100)*4;
            printf("\n CGPAL:%2f /4.0",CGPA);
    return 0;

}
```

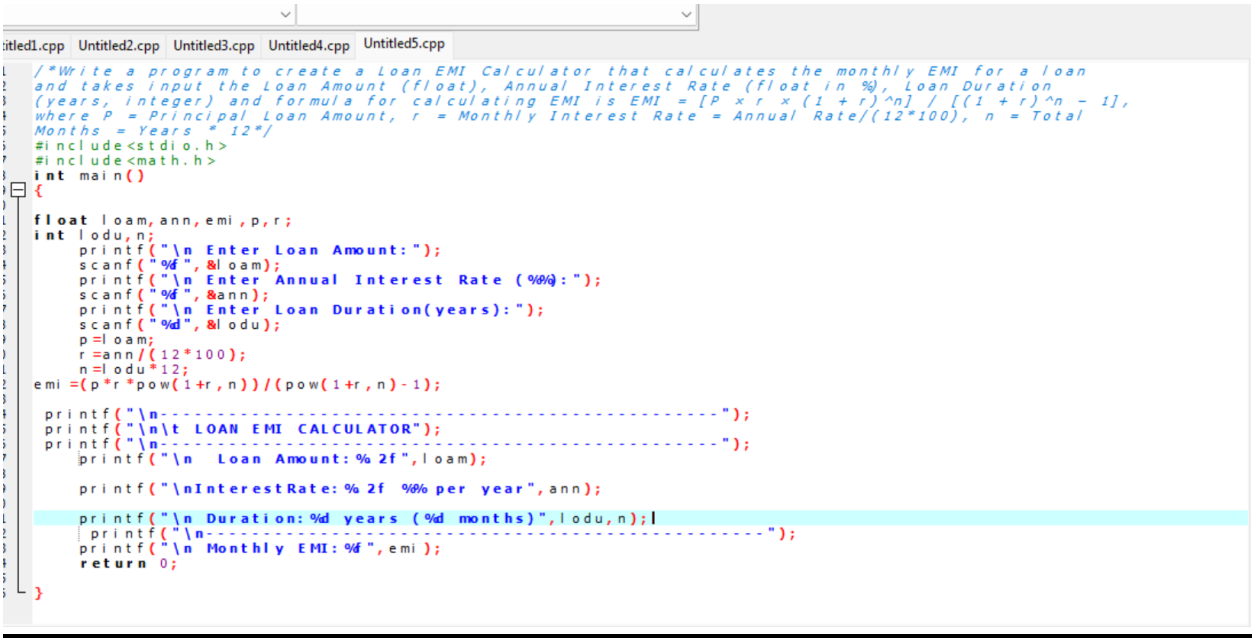
Output:

```
 Enter number of subjects:4

 Marks of subject(out of 100):97

 Marks of subject(out of 100):89

 Marks of subject(out of 100):95

 Marks of subject(out of 100):78

-------------------------------------------------
 STUDENT RESULT
-------------------------------------------------
 TOTAL:359.00
 PERCENTAGE:89.75
 CGPAL:3.59 /4.0
--------------------------------
Process exited after 11.13 seconds with return value 0
Press any key to continue . . .
```

THIS IS AN DYNAMIC PROGRAM, YOU CAN CHOOSE NO. OF SUBJECTS.

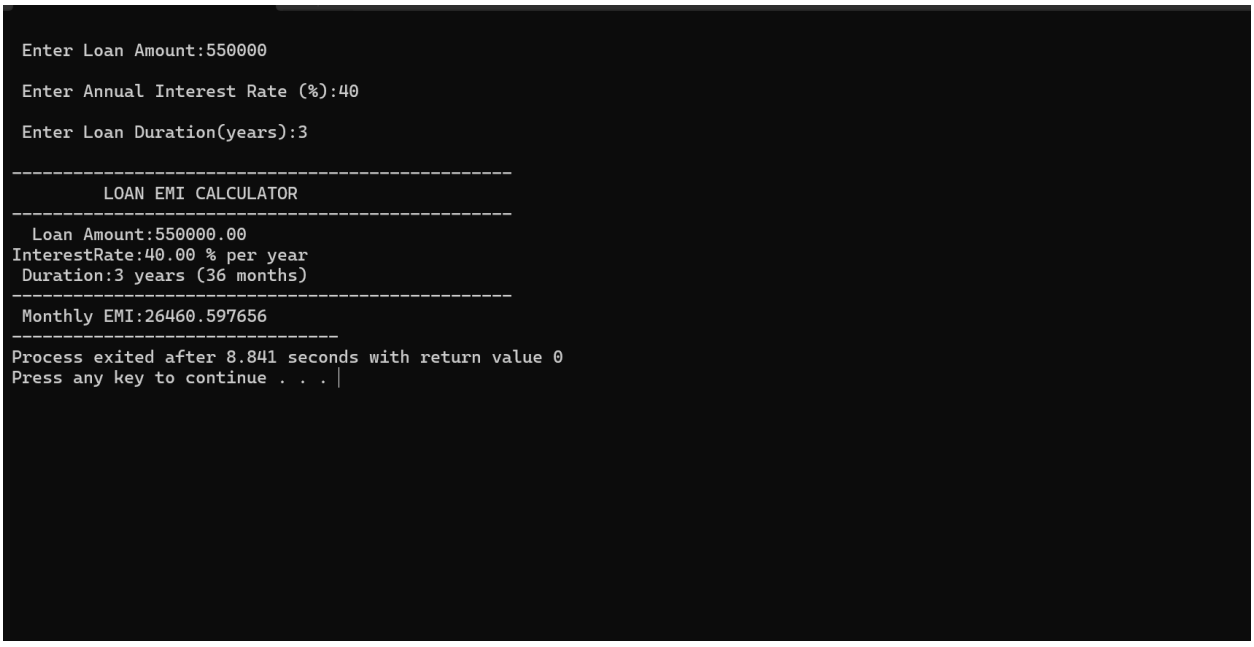
Task 05:-

Source code:



```
itled1.cpp | Untitled2.cpp | Untitled3.cpp | Untitled4.cpp | Untitled5.cpp

/*Write a program to create a Loan EMI Calculator that calculates the monthly EMI for a loan
and takes input the Loan Amount (float), Annual Interest Rate (float in %), Loan Duration
(years, integer) and formula for calculating EMI is EMI = [P x r x (1 + r)^n] / [(1 + r)^n - 1],
where P = Principal Loan Amount, r = Monthly Interest Rate = Annual Rate/(12*100), n = Total
Months = Years * 12*/
#include<stdio.h>
#include<math.h>
int main()
{

float loam,ann,emi,p,r;
int lodu,n;
     printf("\n Enter Loan Amount:");
     scanf("%f",&loam);
     printf("\n Enter Annual Interest Rate (%%):");
     scanf("%f",&ann);
     printf("\n Enter Loan Duration(years):");
     scanf("%d",&lodu);
     p=loam;
     r=ann/(12*100);
     n=lodu*12;
emi =(p*r*pow(1+r,n))/(pow(1+r,n)-1);

 printf("\n-------------------------------------------------");
 printf("\n\t LOAN EMI CALCULATOR");
 printf("\n-------------------------------------------------");
     printf("\n  Loan Amount: %.2f",loam);

     printf("\nInterestRate: %.2f  %% per year",ann);

     printf("\n Duration: %d years (%d months)",lodu,n);
     printf("\n-------------------------------------------------");
     printf("\n Monthly EMI: %f",emi);
     return 0;

}
```

Output:



```
 Enter Loan Amount:550000

 Enter Annual Interest Rate (%):40

 Enter Loan Duration(years):3

-------------------------------------------------
         LOAN EMI CALCULATOR
-------------------------------------------------
  Loan Amount:550000.00
InterestRate:40.00 % per year
 Duration:3 years (36 months)
-------------------------------------------------
 Monthly EMI:26460.597656
--------------------------------
Process exited after 8.841 seconds with return value 0
Press any key to continue . . .
```