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Experiment No.	1

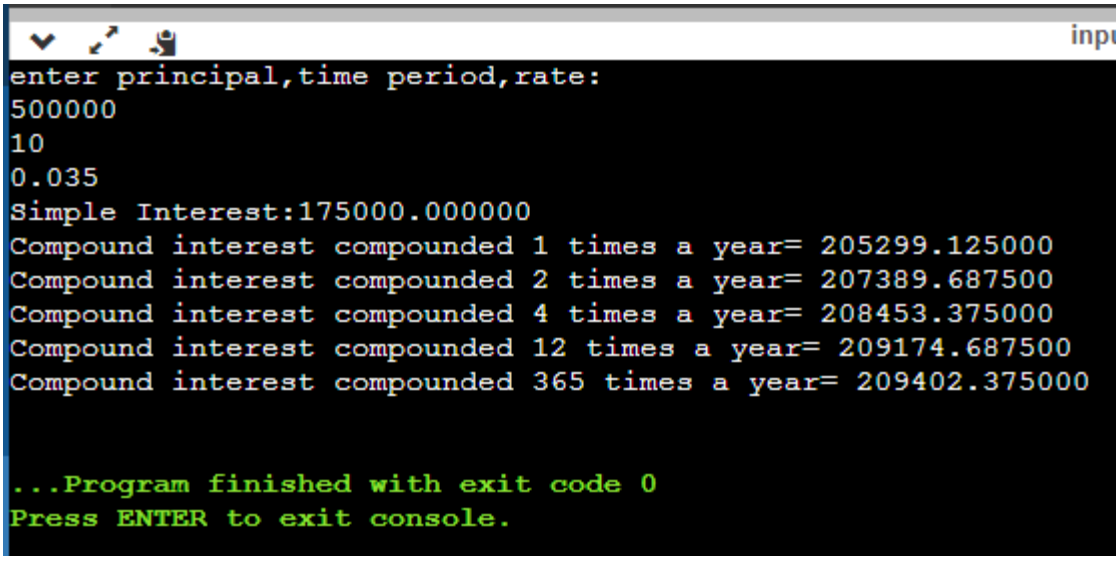
AIM:	Use the formatted input/output statements, operators and expressions of C language
Program 1	
PROBLEM STATEMENT :	Write a C program intrst.c that calculates the total interest income on amount Rupees 5 lakhs in a period of 10 years. Show the results for simple interest, compounded interest when the compounding is done annually, semi-annually, quarterly, monthly and daily. Assume that the interest rate is 3.5% per year.

ALGORITHM:	Step1:Start
	Step2:Input p,t,r
	Step3:simple interest=p*t*r
	Step4:print Simple Interest
	Step5 N[5]={1,2,4,12,365}
	ctr=0
	Step6:while(ctr<=4)
	c=pow(1+(r/N[ctr]),N[ctr]*t);
	ci=p*c-p;
	print Compound Interest
	ctr++
	Step7:Stop

FLOWCHART:	

PROGRAM:	#include <stdio.h>
	#include<math.h>
	int main()
	{ float p;
	float t;
	float r ;
	printf("enter principal,time period,rate:\n");
	scanf("%f %f %f",&p,&t,&r);
	float si;
	si=p*t*r;
	printf("Simple Interest:%f\n",si);
	int N[5]={1,2,4,12,365};
	int ctr = 0;
	
	while(ctr<=4)
	{float c=pow(1+(r/N[ctr]),N[ctr]*t);
	float ci=p*c-p;
	printf("Compound interest compounded %d times a year= %f\n",N[ctr],ci);
	ctr++;
	}
	return 0;
	}

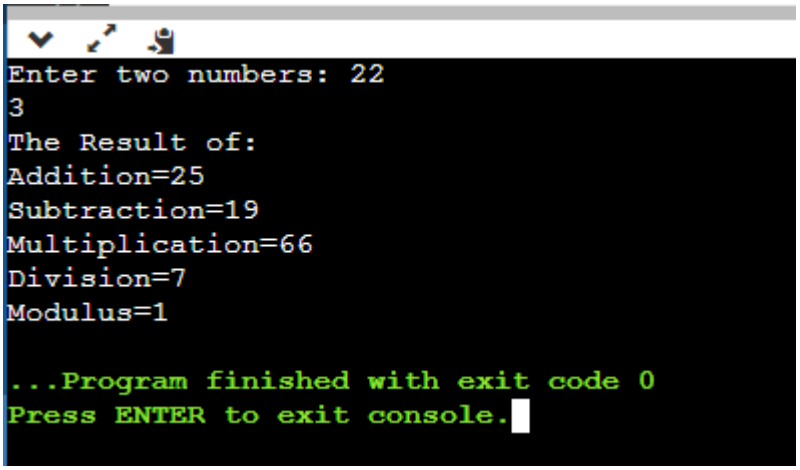
RESULT:



Program 2	
PROBLEM STATEMENT :	Write a C program to input 2 numbers. Perform addition, subtraction, multiplication, division and modulus and display output.
ALGORITHM:	Step1:start Step2:input a,b Step3:Add=a+b Sub=a-b Mul=a*b Div=a/b Mod=a%b Step4:Print Add,Sub,Mul,Div,Mod Step5:Stop
FLOWCHART:	

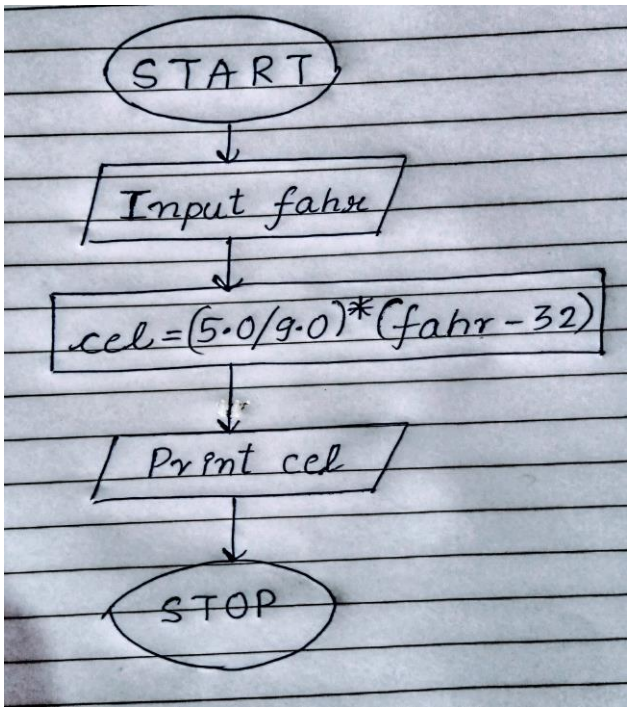
PROGRAM:	#include <stdio.h>
	
	int main(){
	  int p,q;
	printf("Enter two numbers: ");
	scanf("%d",&p);
	scanf("%d",&q);
	
	printf("The Result
	of:\nAddition=%d\nSubtraction=%d\nMultiplication=%d\nDivision=%d\nModulus=%d",p+q
	p-q,p*q,p/q,p%q);
	  return 0;
	}

RESULT:



Program 3	
PROBLEM STATEMENT:	Write a C program temp.c that accepts a temperature in Fahrenheit and prints the corresponding temperature in Celsius
ALGORITHM:	Step1:Start Step2:Input fahr Step3: cel=5.0/9.0*(fahr-32) Step4:Print Cel Step5:Stop

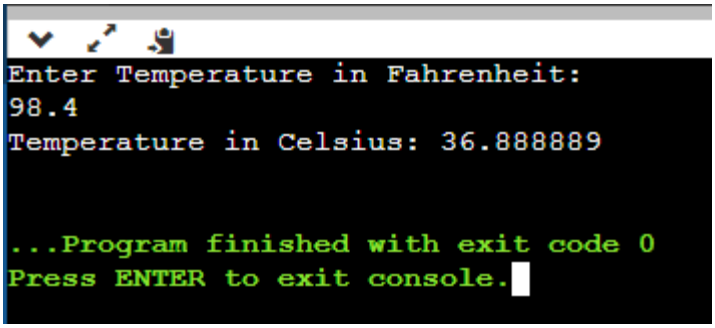
FLOWCHART:



PROGRAM:

```
#include <stdio.h>

int main(){
float fahr,cel;


printf("Enter Temperature in Fahrenheit:\n");
scanf("%f",&fahr);

cel=(5.0/9.0)*(fahr-32);
printf("Temperature in Celsius: %f\n",cel);

   return 0;
}
```

RESULT:

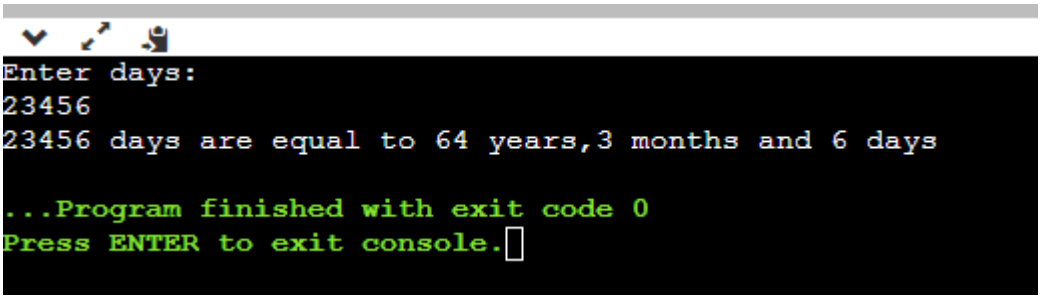


Program 4	
PROBLEM STATEMENT:	Write a C program to convert days into year, month and days.
ALGORITHM:	Step1:Start Step2:Input Days Step3:years= Days/365 Step4:months= (Days%365)/30 Step5:remdays= (Days%365)%30 Step6:Print years,months and remdays Step7:Stop
FLOWCHART:	

PROGRAM:	#include <stdio.h>
	
	int main()
	{int days;
	printf("Enter days:\n");
	scanf("%d",&days);

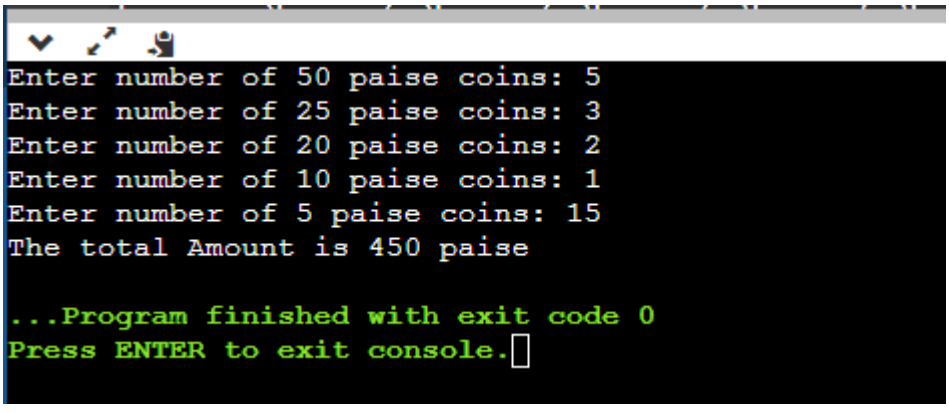
```
printf("%d days are equal to %d years,%d months and %d
days",days,days/365,(days%365)/30,(days%365)%30);

    return 0;
}
```

RESULT:



Program 5	
PROBLEM STATEMENT:	Determine how much money is in the piggy bank that contains several 50, 25, 20, 10 and 5 paise coins.
ALGORITHM:	Step1:Start Step2:input denominations of p50,p25,p20,p10,p5 Step3: Amount = (p50*0.50) + (p25*0.25) + (p20*0.2) + (p10*0.1) + (p5*0.05) Step4: Rupees = int(Amount) Step6: Print Rupees and Paise Step7: STOP
FLOWCHART:	

PROGRAM:	#include <stdio.h>
	
	int main()
	{
	  int p50, p25, p20, p10, p5, paise;
	
	printf("Enter number of 50 paise coins: ");
	scanf("%d",&p50);
	printf("Enter number of 25 paise coins: ");
	scanf("%d",&p25);
	printf("Enter number of 20 paise coins: ");
	scanf("%d",&p20);
	printf("Enter number of 10 paise coins: ");
	scanf("%d",&p10);
	printf("Enter number of 5 paise coins: ");
	scanf("%d",&p5);
	paise = (p50*50)+(p25*25)+(p20*20)+(p10*10)+(p5*5);
	printf("The total Amount is %d paise", paise);
	return 0;
	
	}

RESULT:	
CONCLUSION:	The experiment gives us knowledge about arithmetic operators,pow function from math.h,it also tells us how to take inputs from the user using scanf and how to print output using printf.It also tells us about the &(address operator).