**Name: VISHAL PATEL Section: A5(41) LAB-1**

**PROGRAM-1**

/\* Program to find area of triangular using formula at=√s(s-a)(s-b)(s-c) \*/

#include<stdio.h>

#include<conio.h>

#include<math.h>

void main()

{

float a,b,c,s,Area;

clrscr();

printf("Enter the side of a triangle\n");

scanf("%f%f%f",&a,&b,&c);

s=(a+b+c)/2;

Area=sqrt(s\*(s-a)\*(s-b)\*(s-c));

printf("Area of triangle is = %f",Area);

getch();

}

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**OUTPUT**

Enter the side of a triangle

3

4

5

Area of triangle is = 6.000000

**………………………………………………………………………………………………………………………**

**PROGRAM-2**

/\*Program to calculate Net Salary of an employee\*/

#include<stdio.h>

#include<conio.h>

void main()

{

float Bs,DA,HRA,GS,Net\_salary;

clrscr();

printf("Enter the basic salary of an employee\n");

scanf("%f",&Bs);

DA=25\*Bs/100;

HRA=15\*Bs/100;

GS=Bs+DA+HRA;

Net\_salary=Bs-(10\*GS/100);

printf("Net salary of an employee=%f",Net\_salary);

getch();

}

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**OUTPUT**

Enter the basic salary of an employee

10000

Net salary of an employee=8600.000000

**………………………………………………………………………………………………………………………**

**PROGRAM-3**

/\* Program to find roots of quadratic equation\*/

#include<stdio.h>

#include<conio.h>

#include<math.h>

void main( )

{

float a,b,c,r1,r2,x;

clrscr();

printf("Enter coefficients a,b,c\n");

scanf("%f%f%f",&a,&b,&c);

if(a==0)

printf("Not a quadratic equation");

else

{

x=(b\*b)-(4\*a\*c);

if(x==0)

{

r1= -b/(2\*a);

printf("Equal roots=%f",r1);

}

else if(x<0)

printf("Imaginary roots\n");

else

{

r1=(-b+sqrt(x))/(2\*a);

r2=(-b-sqrt(x))/(2\*a);

printf("Real roots are r1=%f\n r2=%f",r1,r2);

}

}

getch();

}

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**OUTPUT**

Enter coefficients a,b,c

2

9

4

Real roots are

r1=-0.500000

r2=-4.000000

**………………………………………………………………………………………………………………………**

**PROGRAM-4**

/\*Program to find largest among three number using nested if else\*/

#include<stdio.h>

#include<conio.h>

void main( )

{ int a,b,c;

clrscr();

printf("Enter three number\n");

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

if((a==b)&&(a==c))

printf("All are equal number\n");

if((a>=b)&&(a>=c))

printf("%d is largest\n",a);

if((b>=a)&&(b>=c))

printf("%d is largest\n",b);

else

printf("%d is largest\n",c);

getch();

}

**………………………………………………………………………………………………………………………**

**OUTPUT**

Enter three number

45

86

34

86 is largest

**………………………………………………………………………………………………………………………**

**PROGRAM-5**

/\* Program to check student are eligible or not \*/

#include<stdio.h>

#include<conio.h>

void main()

{

int phy,che,math;

clrscr();

printf("Enter the marks of physics\n");

scanf("%d",&phy);

printf("Enter the marks of chemistry\n");

scanf("%d",&che);

printf("Enter the marks of math\n");

scanf("%d",&math);

if((phy>40)&&(che>50)&&(math>60))

printf("Student are eligible\n");

else if(((phy+math)>150)||(phy+che+math)>200)

printf("Student are eligible\n");

else

printf("Student are not eligible\n");

getch();

}

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**OUTPUT**

Enter the marks of physics

67

Enter the marks of chemistry

65

Enter the marks of math

86

Student are eligible

**………………………………………………………………………………………………………………………**

**LAB-2**

**PROGRAM-6**

/\* Program to find the value of y\*/

#include<stdio.h>

#include<conio.h>

#include<math.h>

void main()

{

int n,b,a,x,y;

clrscr();

printf("Enter the value of a,x,b\n");

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

printf("Enter your choice\n 1,2,3,4\n");

scanf("%d",&n);

switch(n);

{

case1: y=a\*x%b;

printf("Value of y=%d",y);

break;

case2: y=a\*pow(a,2)+pow(b,2);

printf("Value of y=%d",y);

break;

case3: y=a-b\*x;

printf("Value of y=%d",y);

break;

case4: y=a\*x/b;

printf("Value of y=%d",y);

break;

default: printf("Invalid choice");

}

getch();

}

**………………………………………………………………………………………………………………………**

**OUTPUT**

Enter the value of a,x,b

2

1

3

Enter your choice

2

Value of y=11

**………………………………………………………………………………………………………………………**

**PROGRAM-7**

/\*Pragram to find fibonacci series upto n terms\*/

#include<stdio.h>

#include<conio.h>

void main()

{

int i,n,a=0,b=1,c;

clrscr();

printf("Enter the number of terms\n");

scanf("%d",&n);

printf("%d\t%d\t",a,b);

for(i=1;i<=n;i++)

{

c=a+b;

printf("%d\t",c);

a=b;

b=c;

}

getch();

}

**………………………………………………………………………………………………………………………**

**OUTPUT**

Enter the number of terms

10

0 1 1 2 3 5 8 13 21 34 55 89

**………………………………………………………………………………………………………………………**

**PROGRAM-8**

/\*Pragram to find wheater a number is armstrong or not\*/

#include<stdio.h>

#include<conio.h>

#include<math.h>

void main()

{

int num,r,sum=0,a,b=0;

clrscr();

printf("Enter the number\n");

scanf("%d",&num);

a=num;

while(num!=0)

{

r=num%10;

num=num/10;

b=b+1;

}

num++;

num=a;

while(num!=0)

{

r=num%10;

sum=sum+pow(r,b);

num=num/10;

}

num++;

if(sum==a)

printf("It is an Armstrong number\n");

else

printf("It is an not Armstrong number\n");

getch();

}

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**OUTPUT**

Enter the number

45

It is an not Armstrong number

**………………………………………………………………………………………………………………………**

**PROGRAM-9**

/\*Pragram to find Sum of the series=1!+2!+3!+--------n!\*/

#include<stdio.h>

#include<conio.h>

#include<math.h>

void main()

{

int n,i,f=1,c=0, float sum=0;

clrscr();

printf("Enter the number of terms\n");

scanf("%d",&n);

for(i=1;i<=n;i++)

{

f=f\*i;

sum=sum+f\*pow(1,c);

c=c+1;

}

printf("Sum of the series is %f",sum);

getch();

}

**………………………………………………………………………………………………………………………**

**OUTPUT**

Enter the number of terms

10

Sum of the series is 4037913.000000

**………………………………………………………………………………………………………………………**

**PROGRAM-10**

/\*Pragram to find Sum of the following series 1-X1/1!+X2/2!-…………Xn/n!\*/

#include<stdio.h>

#include<conio.h>

#include<math.h>

void main()

{

int X,n,i,f=1,c=0;

float sum=0;

clrscr();

printf("Enter the number of terms\n");

scanf("%d",&n);

printf("Enter the value of X\n");

scanf("%d",&X);

for(i=1;i<=n;i++)

{

f=f\*i;

X=pow(-1,c);

sum=sum+f\*pow(X,i)/i;

c=c+1;

}

printf("Sum of the series is %f",sum);

getch();

}

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**OUTPUT**

Enter the number of terms

10

Enter the value of X

2

Sum of the series is 409114.000000

**………………………………………………………………………………………………………………………**

**LAB-3**

**PROGRAM-11**

/\* Program to print prime number between 1 and 300\*/

#include<stdio.h>

#include<conio.h>

void main()

{

int i,j,count;

clrscr();

printf("Prime number between 1 and 300\n");

for(i=2;i<=300;i++)

{

for(j=1;j<=i;j++)

{

if(i%j==0)

count++;

}

if(count==2)

printf("%d\t",i);

count=0;

}

getch();

}

**………………………………………………………………………………………………………………………**

**OUTPUT**

Prime number between 1 and 300

2 3 5 7 11 13 17 19 23 29 31 37 41 43 47 53 59 61 67 71 73 79 83 89 97 101 103 107 109 113 127 131 137 139 149 151 157 163 167 173 179 181 191 193 197 199 211 223 227 229 233 239 241 251 257 263 269 271 277 281 283 293

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**PROGRAM-12**

/\* Program to find Armstrong number between 100 and 500\*/

#include<stdio.h>

#include<conio.h>

#include<math.h>

void main()

{

int num,r,sum,a=100;

clrscr();

printf("Armstrong number between 100 and 500\n");

while(a<=500)

{

num=a;

sum=0;

while(num)

{

r=num%10;

sum=sum+pow(r,3);

num=num/10;

}

if(a==sum)

{

printf("%d\t",a);

}

a++;

}

getch();

}

**………………………………………………………………………………………………………………………**

**OUTPUT**

Armstrong number between 100 and 500

153 370 371 407

**………………………………………………………………………………………………………………………**

**PROGRAM-13**

/\*Program to draw a shape of like triangle\*/

#include<stdio.h>

#include<conio.h>

void main()

{

int i,j,k;

clrscr();

for(i=1;i<=3;i++)

{ for(k=2;k>=i;k--)

{

printf(" ");

}

for(j=1;j<=i;j++)

{

printf("\*");

}

printf("\n");

}

getch();

}

**………………………………………………………………………………………………………………………**

**OUTPUT**

\*

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\*\*\*

**………………………………………………………………………………………………………………………**

**PROGRAM-14**

/\* program to recieve five digit number and show a like\*/

#include<stdio.h>

#include<conio.h>

void main()

{

int a,num,r,sum=0;

clrscr();

printf("Enter five digit number\n");

scanf("%d",&num);

a=num;

while(num!=0)

{

r=num%10;

sum=sum\*10+r;

num=num/10;

}

num++;

num=sum;

while(num!=0)

{

r=num%10;

num=num/10;

printf("%d\n",r);

}

num++;

getch();

}

**………………………………………………………………………………………………………………………**

**OUTPUT**

Enter five digit number

24689

2

4

6

8

9

**………………………………………………………………………………………………………………………**