

LAB-4-EVALUATION PROGRAMS

PROGRAM-1-ROOTS OF QUADRATIC EQUATION

```
//                                |ROOTS OF QUADRATIC EQUATION
#include<stdio.h>
#include<math.h>
void main()
{
    int a;
    int b;
    int c;
    double x;
    double i;
    double j;
    int denominator;
    printf("Enter the values of a,b,c = ");
    scanf("%d%d%d",&a,&b,&c);
    x=(b*b)-4*a*c;
    denominator=2*a;
    if(x>0)
    {
        i=(-b+sqrt(x))/denominator;
        j=(-b-sqrt(x))/denominator;
        printf("The roots are Real and distinct \nRoots = %lf\t%lf",i,j);
    }
    else if(x==0)
    {
        i=-b/denominator;
        printf("The roots are Real and Equal \nRoots = %lf",i);
    }
    else
    {
        i=b/denominator;
        j=-b/denominator;
        printf("The roots are Imaginary \nRoots = %lf\t%lf",i,j);
    }
}
```

OUTPUT:

```
Enter the values of a,b,c = 3 4 5
The roots are Imaginary
Roots = 0.000000      0.000000
Process returned 50 (0x32)   execution time : 46.019 s
Press any key to continue.
```

```
Enter the values of a,b,c = 1 7 12
The roots are Real and distinct
Roots = -3.000000      -4.000000
Process returned 60 (0x3C)   execution time : 7.392 s
Press any key to continue.
```

```
Enter the values of a,b,c = 1 -2 1
The roots are Real and Equal
Roots = 1.000000
Process returned 46 (0x2E)   execution time : 6.182 s
Press any key to continue.
```

PROGRAM-2-SMALLEST INTEGER USING CONDITIONAL OPERATOR

```
// |SMALLEST INTEGER USING CONDITIONAL OPERATOR
#include<stdio.h>
void main()
{
    int a,b,c;
    int s;
    printf("Enter three numbers = ");
    scanf("%d%d%d",&a,&b,&c);
    s=a<b?(a<c?a:c):(b<c?b:c);
    printf("Smallest number = %d",s);
    return 0;
}
```

OUTPUT:

```
Enter three numbers = 23 45 12
Smallest number = 12
Process returned 20 (0x14)   execution time : 19.731 s
Press any key to continue.
```

```
Enter three numbers = 4 9 6
Smallest number = 4
Process returned 19 (0x13)   execution time : 10.293 s
Press any key to continue.
```

```
Enter three numbers = 45 10 86
Smallest number = 10
Process returned 20 (0x14)   execution time : 14.143 s
Press any key to continue.
```

