```
                                    and  Root 2 = %0.4f", r2, r2);
        }
        else
        if(d<0)
        {  System.out.println("\n The Roots are imaginary !!");
           System.out.printf("\n They are : Root 1 = %0.2f + (%0.2f)(i)
                                    and Root 2 = %0.2f + (%0.2f)(i)\n",
                                    (-b/(2*a)), (-Math.sqrt(-d)/(2*a)),
                                    (-b/(2*a)), (+Math.sqrt(-d)/(2*a)));
        }
    }
}
```

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Lab1 - Extra1:

```
import java.util.Scanner;

class array
{
    public static void main(String[] args)
    {
        int n;
        Scanner get = new Scanner(System.in);
        System.out.printf("\n Enter the size of array: ");
        n=get.nextInt();
        int a[] = new int[n];
        int s_odd=0, s_even=0;
        System.out.printf("\n Enter The array elements : \n");
        for(int i=0;i<n;i++)
        {   a[i]=get.nextInt();
        }
        for (int i=0; i<n; i+=2)
            s_even += a[i];
```

```
        for (int i=1 ; i<n; i+= 2)
          s_odd+=a[i];

        System.out.println("\n Sum of Even Indices = " +s_even+
                    " And Sum of Odd indices = " +s_odd);
        }
    }
```

Lab1. Ex2a2:

```
import java.util.Scanner;

class array_div
{
    public static void main(String[] args)
    {
        int n; int positive=0, negative=0, zero=0;
        Scanner get=new Scanner(System.in);
        System.out.println("\n Enter the size of Array: ");
        n = get.nextInt();
        int array[] = new int[n];
        System.out.println("\n Enter the Array elements: ");
        for(int i=0; i<n;i++)
        {
            array[i] =get.nextInt();
        }
        for(int i=0; i<n ;i++)
        {
            if(array[i] == 0)
                zero++;
            else
                if(array[i]>0)
                    positive++;
            else
                if(array[i]<0)
                    negative++;
        }
```

```
System.out.println("\n The No of Positive digits, Negative digits
and zeros in given array are : \n 1) No. of Positive
numbers ="+positive+"\n 2)No. of Negative numbers = "+negative+"\n
 3) No.of zeros ="+zero);

    }
}
```

Lab1_Extra3

```
impost java.util.Scanner;
class market
{
    public static void main (String[] args)
    {
        int x;
        float total_bill, total_bill_discounted;
        Scanner get =new scanner(System.in);
        System.out.println("\n Enter The No of Items :");
        x =get.nextInt();
        float rate_of[] =new float[x];
        ~~flo~~
        int quantity[] =new int[x];
        System.out.println("\n Enter the rate of item
        and Quantity purchased : \n");
        for (int i=0 ;i<x ;i++)
        {
            System.out.printf("\n Rate :"); rate_of[i]=get.nextFloat();
            System.out.printf("\n Quantity:"); quantity[i]=get.nextInt();
        }
    total_bill =gettotal (rate_of, quantity, x);
    total_bill_discounted = final_bill (total_bill);
    System.out.println("\n The Total Bill =" + total_bill
    + "\n The final Bill after discount (if applicable)
        = " + total_bill_discounted );
```

```
    }
    static float gettotal(float rate[], int quan[], int x)
{
    float total=0;
    for(int i=0;i<x;i++)
    {
      total+=(rate[i]*quan[i]);
    }
    return total;
}

    static float final_bill(float total)
{
    float final_bill=total;
    final_bill-=total>=10000?(0.05*total):((total>=7500
          && total<10000)?(0.03*total):(total>=5000)?
          (0.02*total):0);
    return final_bill;
}
}
```

Lab Program 4

```
import java.util.Scanner;
class array_ope
{
  public static void main(String[] args)
  {
    int n; int p=0,q=0;
    Scanner get=new Scanner(System.in);
    n=get.nextInt();
    int array_A[]=new int[n];
    int array_B[]=new int[n];
    int array_C[]=new int[n];
```

```
System.out.println("\n Enter the Array element :");
for (int i=0; i<n; i++)
  array_A[i] = get.nextInt();

for (int i=0 ; i<n ; i++)
{
    if (array_A[i] ==0 || array_A[i]%2==0)
        {  array_C[p] = array_A[i];
           p++;
        }

    else
        {  array_B[q] = array_A[p];
           q++ ;
        }
}

 System.out.println ("\n In Array_A :");
 for (int i=0 ; i<n ; i++)
 System.out.print ("  %d ", array_A[i]);
 System.out.println ("\n\n Array_B : ");
  for (int i=0 ; i<q ; i++)
      System.out.print ("  %d ", array_B[i]);
  System.out.println ("\n\n Array_C : ");
   for (int i=0 ; i<p ; i++)
       System.out.print ("  %d ", array_C[i]);

   operations (array_C, p);

}

static void operations (int array[], int size)
{
    int sum=0, max, min;
    float average;
```

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```
for (int i=0;i<size;i++)
  sum+=array[i];
 average = sum/size;
 max=array[0];
 min=array[0];
 for(int i=1;i<size;i++)
 {
    if (max<array[i])
       max=array[i];
    if (min>array[i])
       min=array[i];
  }
 System.out.println("\nFor Array-C : \nSum="
 +sum+"\nMax="+max+"\nMin="+min+"\n
  Average="+average);
}
}
```