Week 3 Labprogram 1

1BM19CS045
Derek Stanley

```
import java.util.Scanner;

class quadeqn
{  public static void main(String args[])
   {  Double
      int a,b,c,d;
      double r1,r2;
      float

      Scanner get = new Scanner(System.in);
      System.out.println("Enter the three coefficients according
      to decreasing power of x : \n");
      a = get.nextDouble();
      b = get.nextDouble();
      c = get.nextDouble();
      System.out.println("a= "+a+" b="+b+" c="+c);
      d = b*b - 4*a*c;
      if(d>0)
      { System.out.println("Roots are real andunequal");
        r1 = (-b+Math.sqrt(d))/(2*a);
        r2 = (-b+-Math.sqrt(d))/2*a);
        System.out.println("\n r1="+r1+" r2="+r2);
      }
      else
        if(d==0)
        { system.out.println("Roots are real and equal");
          r1 = (-b)/(2*a);
          System.out.println("\nr= "+r1);
        }
        else
          if(d<0)
            System.out.println("Roots are imaginary");
   }
}
```

Week 3 Prog 2

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```
import java.util.Scanner;
class sumindices
{ public static void main(String args[])
{  int n, ele, sume=0, sumo = 0, a[];
   Scanner ger = new Scanner(System.in);
   System.out.println("Enter the no of elements for array:\n");
   n = ger.nextInt();
   a = new int[n];
   System.out.println("Enter elements :\n");
   for(int i=0; i<n; i+=i+1).
     a[i] = ger.nextInt();
   for(int m=0; m<n; m=m+2)
   {  sume= sume + a[m];
      if((m+1)!=n)
      sumo = sumo + a[m+1];
   }
   System.out.println("Sum of Odd indices :"+sumo+"\n sum
   of even indices :"+sume);
}
}
```

Week 3 Prog 3

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```
import java.util.Scanner;
class itemBill
{ public static void main(String args[])
{ int n;
  double tb=0, fb;
  Scanner get= new Scanner(System.in);
  System.out.println("Enter the no of items bought:");
  n = get.nextInt();
  double rate_of[]= new double[n];
  int quantity[] = new int[n];
  System.out.println("\nEnter the rate item and quantity
  purchased:\n");
  for(int i=0; i<n; i++)
  { System.out.println("Item "+(i+1)+":");
    System.out.printf("\nRate:"); rate_of[i] = get.nextdouble();
    System.out.printf("Quantity:"); quantity[i]= get.nextInt();
    tb = tb + rate_of[i] * quantity[i];
  }
  if(tb>=10000)
    fb =tb*0.95;
  else
    if(tb>=7500)
      fb=tb*0.97;
  else
    if(tb>=5000)
      fb = tb*0.98;
  else
   fb=tb;
  System.out.println("Total Bill: "+tb+"\nFinal Bill : "+fb);
}
}
```

Week 3 Prog 2

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```
import java.util.Scanner;
class arrayop
{ public static void main(String args[])
{ int n, sum=0, avg max=0, min=0, a[], b[], c[];
  double avg;
  Scanner get= new Scanner(System.in);
  System.out.println("Enter the no of elements:");
  n= get.nextInt();
  a= new int[n];
  b= new int[n];
  c= new int[n];
  for(int i=0; i<n; i=i+1)
  { a[i]=get.nextInt();
    if(a[i]%2==0)
    { c[i]=a[i];
      sum=sum+c[i];
      if(a[i]>max)
        max=a[i];
      else if(a[i]<min)
        min=a[i];
      }
    else
      b[i]=a[i];
  avg=sum/n;
  System.out.println("For even array: \n SUM: "+sum+"\n
  AVERAGE= "+avg+"\n MAX= "+max+"\nMIN= "+min);
 }
}
```