Harman Java Assignment day 1

Q1. Loose coupling and high cohension.

```
package day1;



public class Q1 {
public static void main(String[] args) {

		int a[]=new int[20];
		a[0]=1;
		a[1]=1;
		float avg=2;
		System.out.print("fab nos are"+a[0]+","+a[1]);
		for(int i=2;i<20;i++)
		{
			a[i]=a[i-2]+a[i-1];

			System.out.print(","+a[i]);
			avg=avg+a[i];




		}
```

Q2. Encapsulation and abstraction

```
package day1;
import java.util.*;

public class Q2 {
	public static void main(String[]args)
	{
		Scanner s=new Scanner(System.in);
		System.out.println("enetr no. of students");
		int numStudents=s.nextInt();
		float a[]= new float[numStudents];
		float k=0;
		s.close();
		float GradesAverage;
		System.out.println("enter grades of students");
		for(int i=0;i<numStudents;i++)
		{
			a[i]=s.nextFloat();
			while(a[i]<0 || a[i]>100)
			{
				System.out.println("Grow up kiddo, try again");
				a[i]=s.nextFloat();

			}
```

```
            }
            for(int i=0;i<numStudents;i++)
            {


            {
                  k=k+a[i];
            }
            }

            GradesAverage=k/numStudents;
            System.out.println("Average score of class is"+GradesAverage);


      }
}
```

Q3.

```
package day1;

import java.util.*;
public class Q3 {
      public static void main(String[] args)
      {
            Scanner s= new Scanner(System.in);
            System.out.println("enter no of elements");
            int n=s.nextInt();

            int a[]= new int[n];
            System.out.println("enter elements in array");
            for(int i=0;i<n;i++)
            {
                  a[i]= s.nextInt();
            }
            int c[]=copyOf(a);
            for(int i=0;i<n;i++)
            {
                  System.out.println("copied array is"+c[i]);
            }
            s.close();
      }

            public static int[] copyOf(int[]array)
            {
                  int[]b= new int[array.length];
                  for(int i=0;i<array.length;i++)
                  {
                        b[i]=array[i];
                  }

                  return b;
            }

}
```

Q4. Code to print pascal triangle.

module-info.java | hello.java | ok.java | nextdate.java | pascal.java

```
1  package testnew;
2  import java.util.Scanner;
3
4  public class pascal {
5      public static void main(String args[])
6      {
7          Scanner sc=new Scanner(System.in);
8          int n,i,j,a[][];
9
10         System.out.println("HOW MANY STEPS?");
11         n=sc.nextInt();
12         a=new int[n][n];
13
14         for(i=0;i<n;i++){
15             for(j=0;j<=i;j++)
16                 if(j==0 || j==i)
17                     a[i][j]=1;
18                 else
19                     a[i][j]=a[i-1][j-1]+a[i-1][j];
20         }
21
22         System.out.println("\nOUTPUT:\n");
23         for(i=0;i<n;i++)
24         {
25             for(j=0;j<=i;j++)
26                 System.out.print(a[i][j]+"\t");
27
28             System.out.println();
29         }
30     }
31
32 }
```

Problems | Javadoc | Declaration | Console

<terminated> pascal (1) [Java Application] C:\Users\hp\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.

```
1
1       1
1       2       1
1       3       3       1
1       4       6       4       1
```

Q5.

```
package day1;

import java.util.*;

public class Q5 {

	public static void main(String[]args)
	{
		int day, month, year;

		Scanner scanner = new Scanner(System.in);

		System.out.println("PE day");
		day = scanner.nextInt();
```

```
            System.out.println("PE month");
            month = scanner.nextInt();

            System.out.println("PE year");
            year = scanner.nextInt();

            System.out.println("current date: " + day + "/" + month + "/" +
year);


scanner.close();

            int noOfDaysInMonth[]={-1, 31,28,31,30,31,30,31,31,30,31,30,31};

              if(isLeapYear(year)){
                   noOfDaysInMonth[2]=29;
              }


              day=day+1;

              if(day > noOfDaysInMonth[month]){
                   day=1;
                   month++;
                   if(month > 12){
                         month=1;
                         year++;
                   }

              }
              System.out.println("next date: " + day + "/" + month + "/" +
year);
       }

       public static boolean isLeapYear(int year) {
             if ((year % 400 == 0 || year % 100 != 0) && (year % 4 == 0))
                   return true;
             else
                   return false;
       }


}
```