

First-Year Engineering – Semester II

Question for Computer Programming II, DECEMBER 2008

Time 3 Hours	Instructions	Max. Marks 100																											
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Q4	A What is vector? How it is different from an array?	5																											
	B What are the applications of wrapper classes?	5																											
	C Assume that a bank maintains two kind of account for its customers. The saving account provides compound interest and withdrawal facilities but no cheque book facility. The current account provides cheque book facility but no interest. The current account holders should also maintain a minimum balance and if the balance falls below this level, a service charge is imposed. Create a class account that stores customer name, account number and two types of account. From this derive the classes' current-acct and saving-acct to make them more specific to their requirements. Include the necessary methods in order to achieve the following tasks.	10																											

		<ul style="list-style-type: none"> i. Accept deposit from a customer and update the balance ii. Display the balance iii. Compute and deposit interest iv. Permit withdrawals and update the balance v. Check the minimum balance, impose penalty, if necessary, and update the balance 									
	D	<p>Write a program to check whether given string is palindrome. A palindrome is a word or phrase which reads the same in both directions. Some simple examples are:</p> <table style="width: 100%; text-align: center;"> <tr> <td>MALAYALAM</td> <td>DEED</td> <td>LEVEL</td> <td>PIP</td> </tr> <tr> <td>ROTOR</td> <td>CIVIC</td> <td>POP</td> <td>MADAM</td> </tr> </table>	MALAYALAM	DEED	LEVEL	PIP	ROTOR	CIVIC	POP	MADAM	5
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Q5	A	How do you add a class or an interface to a package? Explain with examples.	10								
	B	<p>Will the code compile? If not why? If yes, write output.</p> <p>i.</p> <pre>import circle; class Import Class { public static void main(String [] args) { Circle.newcircle nc new circle.newCircle(); System.out.println (" Hellow World"); } }</pre> <p>ii.</p> <pre>int m=10; int n=7; while (m % n >=0) { m=m+1; n=n+2; }</pre>	10								
	C	Explain Type Conversion and Type casting in JAVA with examples	5								
Q6		<p>Write short notes on (any four)</p> <ul style="list-style-type: none"> i. HTML, Applet Tags ii. parameter passing to Applets iii. abstract methods and classes iv. Features of JAVA v. Synchronization vi. String Methods 	20								

First-Year Engineering — Semester II

Questions for Computer Programming II, MAY 2009

Time 3 Hours		Instructions	Max. Marks 100											
<ul style="list-style-type: none"> ■ Question No. 1 is compulsory. ■ Attempt any four questions out of remaining SIX questions. ■ Assumptions made should be clearly stated. ■ All computer programs and program segment only in JAVA. 														
Q1	A	<p>Write notes on.</p> <ul style="list-style-type: none"> i. JVM (Java Virtual Machine) ii. JDK (Java Development Kit) 	10											
	B	<p>Write a program to accept any string up to 15 characters. Display the elements of string with their element nos. Use toCharArray () function</p>	10											
Q2	A	<p>What is a package? How do we design a package? What are the benefits of packages?</p>	10											
	B	<p>The annual examination results of 5 students are tabulated as follows:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <th>Roll No</th> <th>Subject 1</th> <th>Subject2</th> <th>Subject3</th> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> <td> </td> <td> </td> </tr> </table> <p>Write a program to read the data and determine the following</p> <ul style="list-style-type: none"> i. total marks obtained by each student ii. the student who obtained the highest total marks 	Roll No	Subject 1	Subject2	Subject3								
Roll No	Subject 1	Subject2	Subject3											
Q3	A	<p>What are constructors? Explain different types of constructors with Example.</p>	10											
	B	<p>Write a program to display the following pattern.</p> <pre style="text-align: center;"> * * * * * * * * * * * * * * </pre>	8											
Q4	A	<p>What is abstract class? Write a program to display volumes of sphere and hemisphere. Make use of abstract class.</p>	10											
	B	<p>Explain with example:-</p> <ul style="list-style-type: none"> i. throw ii. catch iii. finally 	10											
Q5	A	<p>Write a program to illustrate use of isAlive() and join () and sleep ()method. Create three classes A, B and C. Create another class "IsaliveJoin" to invoke isAlive() and join() methods for these 3 child thread.</p>	12											
	B	<p>Explain static class members with example</p>	8											

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Q6	A	<p>write a program that accepts a shopping list of items and perform the following operations:</p> <ul style="list-style-type: none"> i. Add an item at a specified location ii. Delete an item in the list iii. Print the contents of the vector 	10
	B	<p>Consider a class network given. The class 'Admin' derives information from the class 'Account' which in turn derives information from the person class. Write a program to display 'Admin' object</p> <pre> classDiagram class Person { Name code } class Account { Pay } class Admin { Exp } Person < -- Account Account < -- Admin </pre>	10
Q7	A	<p>Write short notes on :- (any three)</p> <ul style="list-style-type: none"> i. Life cycle of an applet ii. Call by value and call by reference iii. Difference between array and vector iv. Explain 'interface' and use of interface 	20

First-Year Engineering – Semester II

Solutions for Computer Programming II, JUNE 2008

Ans 2 (A):

```
import java.io.*;
class gcd
{
    int m,n,result;
    gcd()
    {
        m=n=result=0;
    }
    gcd(int x, int y)
    {
        m=x;
        n=y;
        result=0;
    }
    void gcdinput() throws IOException
    {
        BufferedReader Obj =new BufferedReader(new
InputStreamReader(System.in));
        System.out.println("Enter First number");
        m=Integer.parseInt(Obj.readLine());
        System.out.println("Enter second number");
        n=Integer.parseInt(Obj.readLine());
    }
    void gcdcompute()
    {
        int tmp;
        int max, min;
        max=m >n ? m:n;
        min=m<n ? m:n;
        while (min!=0)
        {
            tmp=max%min;
            max=min;
            min=tmp;
        }
        result=max;
    }
    void gcdoutput()
    {
        System.out.print(" \n The gcd of two numbers is:");
        System.out.println( result );
    }
}
class GCDMAIN
{
    public static void main( String args[])
    {
        gcd g= new gcd();
        try
```

```

    {
        g.gcdinput();
    }
    catch(Exception E)
    {}
    g.gcdcompute();
    g.gcdoutput();
}
}

```

Ans 2 (B):

```

import java.io.*;
import java.util.Calendar;
class CalDays
{
    public static void main(String args[ ]) throws IOException
    {
        BufferedReader Obj =new BufferedReader(new
InputStreamReader(System.in));
        System.out.println("\n Enter the starting Date in the MM/DD/YYYY
format ");
        String S=new String();
        String S1=new String();
        String S2=new String();
        String S3=new String();
        S=Obj.readLine();
        S1=S.substring(0,2);
        S2=S.substring(3,5);
        S3=S.substring(6,10);

        int MM1=Integer.parseInt(S1);
        int DD1=Integer.parseInt(S2);
        int YY1=Integer.parseInt(S3);

        System.out.println("\n Enter the Ending Date in the MM/DD/YYYY format
");
        S=Obj.readLine();
        S1=S.substring(0,2);
        S2=S.substring(3,5);
        S3=S.substring(6,10);
        int MM2=Integer.parseInt(S1);
        int DD2=Integer.parseInt(S2);
        int YY2=Integer.parseInt(S3);
        Calendar c1=Calendar.getInstance();
        Calendar c2=Calendar.getInstance();
        c1.set(YY2,MM2,DD2);
        c2.set(YY1,MM1,DD1);
        System.out.println("No. of Days in the Semester is = "+
(c1.getTimeInMillis()-c2.getTimeInMillis())/(24*60*60*1000));
    }
}

```

Ans 3 (A):

```

import java.io.*;
class Distance
{

```

```

public static void main(String args[ ]) throws IOException
{
    BufferedReader Obj =new BufferedReader(new
    InputStreamReader(System.in));
    System.out.println("Enter values of So, Vo, and a");
    int So=Integer.parseInt(Obj.readLine());
    int Vo=Integer.parseInt(Obj.readLine());
    int a=Integer.parseInt(Obj.readLine());
    int A[][]= new int [50][50];
    int t=1;
    int I;
    A[1][2]= So+ Vo*t+(1/2)*(a)*(t*t);
    A[1][1]=t;
    for (t=5, I=2; t<=100; I++, t+=5)
    {
        A[I][2]= So+ Vo*t+(1/2)*(a)*(t*t);
        A[I][1]=t;
    }
    System.out.println(A[1][1] + A[1][2]);
    for (t=5, I=2; t<=100; I++, t+=5 )
    System.out.print(A[I][1] + A[I][2]+ " ");
}
}

```

Ans 3 (B):

```

import java.io.*;
class student
{
    String Name= new String();
    String IDno = new String();
    int Math, Phys, Chem, Total;
}// end of class student
class sort
{
    int N;
    student Str [ ] =new student[100];
    void InputData()throws IOException
    {
        BufferedReader Obj =new BufferedReader(new
        InputStreamReader(System.in));
        System.out.println("\n Enter the Total Number of student ");
        N=Integer.parseInt(Obj.readLine());
        System.out.println("\n Enter the student details Name ID, Maths,
        Phys, Chem");
        for(int j=0;j<=99;j++)
        {
            str[j]=new student();
        }
        for(int I=0; I<N; I++)
        {
            str[I].Name=Obj.readLine();
            str[I].IDno =Obj.readLine();
            str[I].Math=Integer.parseInt(Obj.readLine());
            str[I].Phys=Integer.parseInt(Obj.readLine());
            str[I].Chem=Integer.parseInt(Obj.readLine());
            str[I].Total= str[I].Math +str[I].Phys +str[I].Chem;
        }
    }
}

```

```

void SortData()
{
    for (int K=0; K<N-1; K++)
    {
        for(int I=0; I<N-K; I++)
        {
            if(Str[I].Total<Str[I+1].Total)
            {
                student Temp= Str[I];
                Str[I]=Str[I+1];
                Str[I+1]=Temp;
            }
        }
    }
}

void DisplayData()
{
    for(int I=0; I<N; I++)
    {
        System.out.print(" " + Str[I].Name);
        System.out.print(" " + Str[I].IDno);
        System.out.print(" " + Str[I].Math);
        System.out.print(" " + Str[I].Phys);
        System.out.println(" " + Str[I].Chem);
    }
}

// end of class sort
class MeritList
{
    public static void main(String args[]) throws IOException
    {
        sort Sobj= new sort();
        Sobj.InputData();
        Sobj.SortData();
        Sobj.DisplayData();
    }
}

```

Ans 6:

```

import java.io.*;
interface Matrix
{
    final static int M=2,N=2; // Matrix indices
    void readMatrix()throws IOException; // Read a Matrix
    void displayMatrix(); // Display a matrix
    void addMatrix(); // Add two matrix
    void multMatrix(); // Multiply twomatrix
    void transposeMatrix(); // Transpose of Matrix
}
class MatrixManip implements Matrix
{
    int A[][] =new int [6][6];
    int B[][] =new int [6][6];
    int C[][] =new int [6][6];
    public void readMatrix() throws IOException
    {

```

```

BufferedReader Obj =new BufferedReader(new
InputStreamReader(System.in));
for (int i=0 ;i<M; i++)
{
    for(int j=0; j<N; j++)
    {
        System.out.println("Enter "+ i+ " th row " +j+" th
column value :");
        A[i][j]= Integer.parseInt(Obj.readLine());
    }
}
for(int i=0 ; i<M; i++)
{
    for(int j=0; j<N; j++)
    {
        System.out.println (" Enter "+ i +"th row "+j+" th
column value :");
        B[i][j]=Integer.parseInt(Obj.readLine());
    }
}
public void addMatrix()
{
    C[0][0]=0;
    for (int i=0 ;i<M; i++)
    {
        for(int j=0; j<N; j++)
        {
            C[i][j]=A[i][j]+B[i][j];
        }
    }
}
public void multMatrix()
{
    for (int j = 0; j < M; j++)
    {
        for (int i = 0; i < N; i++)
        {
            int s = 0;
            for (int k = 0; k < N; k++)
            {
                s += A[i][k] * B[k][j];
            }
            C[i][j] = s;
        }
    }
}
public void transposeMatrix()
{
}
public void displayMatrix()
{
    System.out.println("The resultant Matrix is:");
    for (int i=0 ;i<M; i++)
    {
        for(int j=0; j<M; j++)
        {
            System.out.print(C[i][j]+" ");
        }
    }
}

```

```
        System.out.println();
    }
}
public static void main(String ar[])throws IOException
{
    MatrixManip T=new MatrixManip();
    T.readMatrix();
    T.addMatrix();
    T.displayMatrix();
    T.multMatrix();
    T.displayMatrix();
}
}
```

**First Year Engineering – Semester II,
Solutions for Computer Programming II, DECEMBER 2008**

Ans. 1(B):

```
import java.io.*;
class NCRNPR
{
    static int Fact( int N)
    {
        int F=1;
        for(int I=1; I<=N; I++)
            F=F*I;
        return (F);
    }

    public static void main( String args[]) throws IOException
    {
        BufferedReader Bobj = new BufferedReader( new
            InputStreamReader(System.in));
        System.out.println ("Enter the value of N");
        int N= Integer.parseInt(Bobj.readLine());
        System.out.println("Enter the value of r");
        int r= Integer.parseInt(Bobj.readLine());
        int NCR = Fact(N)/ ( Fact(r ) * Fact(N-r));
        int NPR = Fact(N) / Fact(N-r);

        System.out.println ("Ncr = " + NCR);
        System.out.println ("Npr= " + NPR);

    }//end of main
}// end of class
```

Ans. 1(D):

```
import java.io.*;

class sum
{
    public static void main( String args[]) throws IOException
    {
        BufferedReader Bobj = new BufferedReader( new
            InputStreamReader(System.in));
        System.out.println ("Enter the value of N");
        int N= Integer.parseInt(Bobj.readLine());

        double sum=0;
        for(int I=1; I<=N; I++)
            sum=sum+ (double) 1.0/ I;
```

```

        System.out.println ("Sum of Series" + sum);

    } //end of Main
} // end of class

```

Ans. 2 (B):

```

import java.io.*;
class sline
{
    static int x[] = new int[20];
    static int y[] = new int[20]; // assuming n<20
    static int n;

    static void calcm()
    {
        int i, SigmaX=0, SigmaY=0, SigmaXY=0, SigmasqX=0, SigmaYsq=0;
        for(i=1; i<=n; i++)
        {
            SigmaX= SigmaX + x[i];
            SigmaY= SigmaY + y[i];
            SigmaXY= SigmaXY+ (x[i]*y[i]);
            SigmasqX=SigmasqX + x[i]*x[i];
        } // end of for

        SigmaYsq= SigmaY*SigmaY;
        double m= (double) (n*SigmaXY-(SigmaX*SigmaY ))/ (n*SigmasqX-SigmaYsq);
        System.out.println("m=" + m);
        double c= (double)(SigmaY - m*SigmaX)/n;
        System.out.println("c=" + c);
    } // end of function calcm

    public static void main(String args[]) throws IOException
    {
        BufferedReader Bobj = new BufferedReader( new
        InputStreamReader(System.in));
        System.out.println ("Enter the value of N");
        n= Integer.parseInt(Bobj.readLine());
        for(int i=1; i<=n ; i++)
        {
            System.out.println ("Enter the value of X and Y");
            x[i] = Integer.parseInt(Bobj.readLine());
            y[i] = Integer.parseInt(Bobj.readLine());
        }
        calcm();
    } // end of main
} // end of class

```

Ans. 3 (A):

```

import java.awt.*;
import java.awt.event.*;

```

```
import java.awt.datatransfer.*;
import java.io.*;

class MenuDemo extends Frame
{
    String msg=" ";
    CheckboxMenuItem i13,i14;
    TextArea text;

    MenuDemo()
    {
        MenuBar mbar=new MenuBar();

        text=new TextArea(400,200);
        add(text);
        text.setEditable(true);
        Menu file=new Menu("File");
        mbar.add(file);

        Menu edit=new Menu("Edit");
        MenuItem i5,i6,i7,i8,i9,i10,sep;
        edit.add(i5=new MenuItem("Undo"));
        edit.add(i6=new MenuItem("Cut"));
        edit.add(i7=new MenuItem("Copy"));
        edit.add(i8=new MenuItem("Paste"));
        edit.add(i9=new MenuItem("-"));
        mbar.add(edit);

        Menu view=new Menu("View");
        mbar.add(view);

        Mymenuhandler handler=new Mymenuhandler(this);
        i5.addActionListener(handler);
        i6.addActionListener(handler);
        i7.addActionListener(handler);
        i8.addActionListener(handler);
        i9.addActionListener(handler);

        MyWindowAdapter adapter=new MyWindowAdapter(this);
        addWindowListener(adapter);
        setMenuBar(mbar);
    }

    public void paint(Graphics g)
    {
    }

    public static void main(String args[])
    {
        MenuDemo cle = new MenuDemo();
        cle.setVisible(true);
        cle.setTitle("Menu Demo");
    }
}
```

```
    cle.setSize(200,200);
}

class MyWindowAdapter extends WindowAdapter
{
    MenuDemo md;
    public MyWindowAdapter(MenuDemo md)
    {
        this.md=md;
    }

    public void windowClosing(WindowEvent we)
    {
        System.exit(0);
    }
}

class Mymenuhandler implements ActionListener, ItemListener
{
    MenuDemo mdemo;
    FileDialog fd;
    String pm="you selected : ",msg=" ";
    String filename;
    public Mymenuhandler(MenuDemo mdemo)
    {
        this.mdemo=mdemo;
    }

    public void actionPerformed(ActionEvent ae)
    {
        String arg=(String)ae.getActionCommand();

        if(arg.equals("Undo"))
            msg=pm+"Undo";
        else if(arg.equals("Cut"))
            msg=pm+"Cut";
        else if(arg.equals("Copy"))
            msg=pm+"Copy";
        else if(arg.equals("Paste"))
            msg=pm+"Paste";

        mdemo.text.setText(msg);
        mdemo.repaint();
    }

    public void itemStateChanged(ItemEvent ie)
    {
        mdemo.repaint();
    }
}
```

Ans. 4 (C):

```

import java.io.*;
class customer
{
    String Cname = new String();
    String AccountNo = new String();
    String TypeAccount= new String();

    void CustomerDetails() throws IOException
    {
        BufferedReader Bobj = new BufferedReader( new
            InputStreamReader(System.in));
        System.out.println ("Enter theCustomer name?");
        Cname=Bobj.readLine();
        System.out.println ("Enter the Account No ?");
        Cname=Bobj.readLine();
        System.out.println ("Enter the Account Type? Savings/ Current.");
        TypeAccount=Bobj.readLine();
    }
}

import java.io.*;
class SavingAcc extends customer
{
    int Amt, wAmt;
    double Balance, RateInterest;
    public SavingAcc ()
    {
        RateInterest= 0.1; // Rate of interest
        Amt=0;
        wAmt=0;
    }

    void AcceptDeposit() throws IOException
    {
        BufferedReader Bobj = new BufferedReader( new
            InputStreamReader(System.in));
        System.out.println ("Enter the amount to be deposited");
        Amt= Integer.parseInt(Bobj.readLine());
        Balance+= Amt;
        System.out.println ("Balance amount" + Balance);
    }

    void WithdrawDeposit( ) throws IOException
    {
        BufferedReader Bobj = new BufferedReader( new
            InputStreamReader(System.in));
        System.out.println ("Enter the amount to be withdrawn");
        wAmt= Integer.parseInt(Bobj.readLine());
        Balance =Balance- wAmt;
        System.out.println ("Balance amount" + Balance);
    }
}

```

```

void CalInterest() throws IOException
{
    Balance=Balance+RateInterest;
    System.out.println ("Balance amount" + Balance);
}
}//end of class SavingAcc

import java.io.*;
class CurrentAcc extends customer
{
    int Amt, Balance, wAmt, Penalty, MinAmt;
    public CurrentAcc ()
    {
        MinAmt=1000; // Minimum amount

        Amt=0;
        wAmt=0;
        Penalty=25;
    }
    void AcceptDeposit() throws IOException
    {
        BufferedReader Bobj = new BufferedReader( new
        InputStreamReader(System.in));
        System.out.println ("Enter the amount to be deposited");
        Amt= Integer.parseInt(Bobj.readLine());
        Balance+= Amt;
        System.out.println ("Balance amount" + Balance);

    }

    void WithdrawDeposit () throws IOException
    {
        BufferedReader Bobj = new BufferedReader( new
        InputStreamReader(System.in));
        System.out.println ("Enter the amount to be withdrawn");
        wAmt= Integer.parseInt(Bobj.readLine());
        Balance =Balance- wAmt;
        System.out.println ("Balance amount" + Balance);
    }

    void Calservicecharges() throws IOException
    {
        if (Balance<MinAmt)
            Balance=Balance-Penalty;
        System.out.println ("Balance amcunt" + Balance);
    }
}//end of class CurrentAcc

import java.io.*;
class MainClass
{
    public static void main(String args[ ])
    {

```

```

SavingAcc Sobj = new SavingAcc();
CurrentAcc Cobj =new CurrentAcc ();
Sobj.CustomerDetails();
Sobj.AcceptDeposit();
Sobj.WithdrawDeposit();
Sobj.CalInterest();
Cobj.CustomerDetails();
Cobj.AcceptDeposit();
Cobj.WithdrawDeposit();
Cobj.CalServiceCharges();
}

}

```

Ans. 4 (D):

```

import java.io.*;
class Palindrome
{
    public static void main(String args[])throws IOException
    {
        String Str1, Str2;
        int index;
        Str2= "";
        BufferedReader Bobj = new BufferedReader(new
        InputStreamReader(System.in));
        System.out.println("Enter a word and check whether it's a palindrome or
        not: ");
        Str1= Bobj.readLine();
        index = Str1.length() - 1;
        for(int i = 0; i < Str1.length(); i++)
        {
            Str2 = Str2 + Str1.charAt(index - i);
        }

        if(Str1.equalsIgnoreCase(Str2))
        System.out.println("The entered word is a palindrome.");
        Else
        System.out.println("The entered word is not a palindrome. ");
    }
}

```

Ans. 5 (B) i :

It will not compile as the class name is invalid with space between two names
 Import and Class. Circle.newcircle nc new circle.newCircle();
 Need not be a valid statement as we are not sure of the content of the package
 called circle

```

int m=10;
int n=7;

while (m % n >=0)
{

```

```
m=m+1;  
n=n+2;  
}
```

Ans. 5 (B) ii:

m and n will assume following if this program code is getting wrapped in proper JAVA semantics

Iteration	m	n
1	11	9
2	12	11
3	13	13
4	14	15
5	15	17
6		
7		
-		
-		

The while structure will invoke infinite cycle as the denominator (n) of integer division (m % n) go on increasing

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Ans. 1(B):

```
import java.io.*;
class StringTest
{
    public static void main( String args[] ) throws IOException
    {
        BufferedReader Bobj = new BufferedReader( new
InputStreamReader( System.in ) );
        System.out.println ( "Enter the string" );
        String Str= Bobj.readLine();
        char t [ ]= Str.toCharArray();
        for( int i=0; i<Str.length(); i++)
            System.out.println ( "Character at position : " + i + " is " + t[i] );
    }
}
```

Ans. 2(B):

```
import java.io.*;
class StudentMarks
{
    public static void main( String args[] ) throws IOException
    {
        String HrollNo = " ";
        BufferedReader Bobj = new BufferedReader( new
InputStreamReader( System.in ) );
        int Psum=0;
        for ( int i=1; i<=5; i++)
        {
            int Sum=0;
            System.out.println ( "Enter Roll No of" + i + "student" );
            String str= Bobj.readLine();
            System.out.println ( "Enter subject1 of" + i + "student" );
            int S1= Integer.parseInt( Bobj.readLine() );
            System.out.println ( "Enter subject2 of" + i + "student" );
            int S2= Integer.parseInt( Bobj.readLine() );
            System.out.println ( "Enter subject3 of" + i + "student" );
        }
    }
}
```

```

int S3= Integer.parseInt(Bobj.readLine());

Sum += S1+S2+S3;
System.out.println ("Total mark of" + i + "student" + Sum);

if (Psum<Sum)
{
    Psum=Sum;
    HrollNo=str;
}

}// end of for loop
System.out.println ("The Roll of the student who scored the highest is
" + HrollNo);

}// end of Main

}

```

Ans. 3 (B):

```

- class DisplayDiamond
{
public static void main( String args[])
{
    for (int i=1; i<=3; i++)
    {
        System.out.println();

        for (int j=1; j<=40-4*i; j++) // assuming 80 column display device
        System.out.print(" ");           // trying to position the pattern in
                                         the middle
        // one space within quote
        for (int k=1;k<=2*i-1;k++)
        System.out.print(" *");
    }// end of for K, segment which generates first 3 rows
    // 3 white space within quote before *

    for (int i=2; i>=1;i--)
    {
        System.out.println();

        for (int j=1; j<=40-4*i; j++) // assuming 80 column display device
        System.out.print(" ");           // trying to position the pattern in
                                         the middle for (int k=1;k<=2*i-1;k++)
        System.out.print(" *");
    }// end of for k
    // 3 white space within quote before *

    System.out.println();
}// end of main
}// end of class

```

Ans. 6 (A):

```

import java.util.*;
import java.io.*;
class Shopping
{
    public static void main( String args[] ) throws IOException
    {
        BufferedReader Bobj = new BufferedReader( new
        InputStreamReader( System.in ) );

        System.out.println ("Enter the no. of shopping Item");

        int N= Integer.parseInt(Bobj.readLine());
        Vector List = new Vector();
        for (int i=1; i<=N; i++)
        {
            System.out.println ("Enter the shopping Item");
            List.addElement( Bobj.readLine());
        }

        //adding an item at the specified location
        System.out.println ("Enter the location and name of item to be
        added");
        System.out.println ("Enter the location of item to be added");
        int loc= Integer.parseInt(Bobj.readLine());
        System.out.println ("Enter the item name to be added");
        List.insertElementAt(Bobj.readLine(), loc);

        //deleting the item from a specified location
        System.out.println ("Enter the location of item to be deleted");
        loc= Integer.parseInt(Bobj.readLine());
        List.removeElementAt(loc);

        //displaying the items in the Vector list
        Enumeration e=List.elements();
        System.out.println("The elements of vector: " + List);
        while(e.hasMoreElements()){
            System.out.println("The elements are: " + e.nextElement());
        }
    }// end of main
}// end of class

```

Ans. 6 (B):

```

class Person
{
    String Namecode="E123";
}

class Account extends Person
{

```

```
        int Pay=200000;
    }

    class Admin extends Account
    {
        int Exp=23;
    }

    class DisplayAdminObject
    {

        public static void main( String args[])
        {
            Admin Aobj= new Admin();

            System.out.println(Aobj.Namecode);

            System.out.println(Aobj.Pay);

            System.out.println(Aobj.Exp);

        }
    }
}
```