1)Object class

import java.util.\*;

class Student{

private String name;

private String phone;

Student(String nm,String ph){

name = nm;

phone = ph;

}

String getName(){

return name;

}

String getPhone(){

return phone;

}

public boolean equals(Object second){

return (this.getName().equals(((Student)second).getName()));

}

}

public class Main

{

public static void main(String[] args) {

System.out.println("Hello World");

ArrayList<String> as = new ArrayList<String>();

as.add("malu");

as.add("prami");

as.add("star");

as.add("moon");

Iterator<String> itr = as.iterator();

while(itr.hasNext()){

System.out.println(itr.next());

}

int p = as.indexOf("dev");

System.out.println("the index is "+ p);

for(String nm : as){

System.out.println(nm);

}

ArrayList<Student> user = new ArrayList<Student>();

user.add(new Student("malini","9845678799"));

user.add(new Student("prami","813479568"));

Student s1 = new Student("star","9700595322");

Student s2 = new Student("moon","8688675568");

int pos = user.indexOf(s1);

System.out.println(user);

System.out.println("the position is "+ pos);

}

}

2)Clone program

import java.util.\*;

import java.lang.\*;

class Student implements Cloneable{

String name;

double cgpa;

Student(String nm,double gpa){

name = nm;

cgpa = gpa;

}

public Object clone() throws CloneNotSupportedException{

return super.clone();

}

}

public class Main

{

public static void main(String[] args) throws CloneNotSupportedException {

Student s1 = new Student("malini",9.78);

Student s2;

s2 = (Student)s1.clone();

System.out.println(s2.name+" "+s2.cgpa);

}

}

3)vowels program

import java.util.\*;

import java.lang.\*;

import java.io.\*;

public class Main

{

public static void main(String[] args) throws IOException {

StringBuffer sb = new StringBuffer();

System.out.println(sb.capacity());

System.out.println(sb.length());

BufferedReader br = new BufferedReader(new InputStreamReader(System.in));

//Scanner s = new Scanner(System.in);

StringBuffer s1 = new StringBuffer(br.readLine());

int count=0;

for(int i=0;i<s1.length();i++){

if(s1.charAt(i) == 'a'|| s1.charAt(i) == 'e'||s1.charAt(i) == 'i'||s1.charAt(i) == 'o'||s1.charAt(i) == 'u'){

count++;

}

}

System.out.println("the count is "+ count);

}

}