**Create a class for Cstring having a string data member and provide functions for read , display, compare(return Boolean value),add and concatenate.**

**CODE**

import java.io.\*;

import java.util.Scanner;

import java.lang.\*;

class Cstring1

{

static void display(String n1,String n2)

{

System.out.println("n1="+n1);

System.out.println("n2="+n2);

}

static void compare(String n1,String n2)

{

System.out.println(n1==n2);

}

static void add(String n1,String n2)

{

System.out.println(n1+n2);

}

static void concatenate(String n1,String n2)

{

System.out.println(n1.concat(n2));

}

public static void main(String args[])

{

try

{

String n1,n2;

int c,ch=1;

DataInputStream dir=new DataInputStream(System.in);

Scanner console=new Scanner(System.in);

System.out.println("first string :");

n1=console.nextLine();

System.out.println("second string :");

n2=console.nextLine();

do

{

System.out.println("1.display\n2.compare\n3.add\n4.concatenate\n");

c=Integer.parseInt(dir.readLine());

switch(c)

{

case 1:display(n1,n2);

break;

case 2:compare(n1,n2);

break;

case 3:add(n1,n2);

break;

case 4:concatenate(n1,n2);

break;

}

System.out.println("do you want to continue(1/0)");

ch=Integer.parseInt(dir.readLine());

}while(ch==1);

}

catch(Exception e)

{

System.out.println("error"+e);

}}}

**Write a program to implement object cloning for the class Distance which has inch and feet as data members.**

**CODE**

import java.io.\*;

import java.lang.\*;

class Distance implements Cloneable

{

Double inch,feet;

Distance(Double a,Double b)

{

inch=a; feet=b;

}

public Object clone()

{

try

{

return super.clone();}

catch(CloneNotSupportedException c)

{System.out.println("error"+c);

return this;}}}

class Clone2

{

public static void main(String ags[])

{

Distance obj1=new Distance(10.1,25.0);

Distance obj2=(Distance)obj1.clone();

System.out.println("inch="+obj2.inch);

System.out.println("feet="+obj2.feet);

}

}

**Write a program to create a menu driven program for performing the following operations.**

**·        Length of a given string**

**·        Compare for equality**

**·        Extract a substring from a string.**

**·        Convert to uppercase and lowercase**

**CODE**

import java.io.\*;

import java.util.Scanner;

import java.lang.\*;

class Cstring3

{

static void length(String n1,String n2)

{

System.out.println("length of the first string is="+n1.length());

System.out.println("length of the second string is="+n2.length());

}

static void compare(String n1,String n2)

{

System.out.println(n1==n2);

}

static void substring(String n1)

{

System.out.println("substring of "+n1+" is "+n1.substring(3));

}

static void lowercase(String n1,String n2)

{

System.out.println(n1.toLowerCase());

System.out.println(n2.toLowerCase());

}

public static void main(String args[])

{

try

{

String n1,n2;

int c,ch=1;

DataInputStream dir=new DataInputStream(System.in);

Scanner console=new Scanner(System.in);

System.out.println("first string :");

n1=console.nextLine();

System.out.println("second string :");

n2=console.nextLine();

do

{

System.out.println(“1.length\n2.compare\n3.substring\n4.lowercase\n”);

c=Integer.parseInt(dir.readLine());

switch(c)

{

case 1:length(n1,n2);

break;

case 2:compare(n1,n2);

break;

case 3:substring(n1);

break;

case 4:lowercase(n1,n2);

break;

}

System.out.println(“do you want to continue(1/0)”);

ch=Integer.parseInt(dir.readLine());

}while(ch==1);

}

catch(Exception e)

{

System.out.println(“error”+e);

}

}

}

**Write a program to reverse a string**

**CODE**

import java.io.\*;

import java.util.Scanner;

import java.lang.\*;

class RevString4

{

public static void main(String args[])

{

try

{

int i;

Scanner console=new Scanner(System.in);

System.out.println("enter the string");

String name=console.nextLine();

int l=name.length();

for(i=l-1;i>=0;i--)

{

System.out.print(name.charAt(i));

}

}

catch(Exception e)

{

System.out.println("error"+e);

}

}

}

**Write a program to calculate the prime factors of a given number, using packages.**

**CODE**

**//**main block

import java.io.\*;

import java.lang.\*;

import primepackage.\*;

class primefac5

{

public static void main(String args[])

{

try

{

int m=1,d,temp;

DataInputStream dis=new DataInputStream(System.in);

System.out.println("Enter the number:");

int num=Integer.parseInt(dis.readLine());

temp=num;

primeFac obj=new primeFac();

obj.disp(temp);

}

catch(Exception e)

{

System.out.println("error"+e);

}

}

}

//package

package primepackage;

import java.io.\*;

public class primeFac

{

public void disp(int temp)

{

int i=2;

while((temp!=0)&&(temp>0))

{

if((temp==0)||(i<=0))

{

break;

}else

{

if(temp%i==0)

{

System.out.println(i);

temp=temp/i;

}else

{

i=i+1;

}

}

}

}

}

**Write a program to calculate the value of nCr for given value of n & r, using packages.**

**CODE**

//main block

import java.io.\*;

import ncrPac.\*;

import java.lang.\*;

class ncr

{

public static void main(String args[])

{

try

{

int result2,i;

DataInputStream dis=new DataInputStream(System.in);

System.out.println("enter n:");

int n=Integer.parseInt(dis.readLine());

System.out.println("enter r:");

int r=Integer.parseInt(dis.readLine());

int d=n-r;

ncrPackage6 obj=new ncrPackage6();

result2=obj.ncrmethod(n,d);

System.out.println("result="+result2);

}

catch(Exception e)

{

System.out.println("error"+e);

}

}

}

//package

package ncrPac;

import java.io.\*;

public class ncrPackage6

{

public int ncrmethod(int n,int d)

{

int i;

int result=1,result1=1,result2;

for(i=1;i<=n;i++)

{

result=result\*i;

}

for(i=1;i<=d;i++)

{

result1=result1\*i;

}

result2=result/result1;

return result2;

}

}