5) Area

import java.util.Scanner;

class Area

{

double r, A;

void accept(double r)

{

this.r=r;

}

double cal\_area()

{

A =3.14\*r\*r;

return (A);

}

}

public class Area\_Demo {

public static void main(String[] args) {

// **TODO** Auto-generated method stub

double r, A;

Scanner sc = new Scanner(System.***in***);

System.***out***.print("Enter value of r:");

r = sc.nextDouble();

Area a = new Area();

a.accept(r);

A = a.cal\_area();

System.***out***.print("Area=" +A);

}

}

Output:

Enter value of r:12

Area=452.15999999999997

6) Factorial

import java.util.\*;

class Fact\_Demo{

int n,f1=1,i;

void accept(int n)

{

this.n=n;

}

int cal\_fact()

{

for(i=n;i>=1;i--)

{

f1\*=i;

}

return(f1);

}

}

public class Factorial

{

public static void main(String[] args)

{

int size,n,f1,i;

Scanner sc =new Scanner (System.***in***);

System.***out***.println("Enter size of array");

size=sc.nextInt();

Fact\_Demo[] fd=new Fact\_Demo[size];

for(i=0;i<size;i++){

fd[i]=new Fact\_Demo();

System.***out***.println("Enter a number");

n=sc.nextInt();

fd[i].accept(n);

f1=fd[i].cal\_fact();

System.***out***.println("Fact="+f1);

}

}

}

Enter size of array

2

Enter a number

12

Fact=479001600

Enter a number

5

Fact=120

7) pattern, prime, palindrome, power

import java.util.Scanner;

class ParaMethodDemo

{

int flag=0,n1,n,x,sum=0,p,f1=1,i;

void accept(int n)

{

this.n=n;

}

void pattern()

{

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

{

for(int j=1;j<=i;j++)

{

System.***out***.print(" "+j);

}

System.***out***.println();

}

}

void prime()

{

for(i=2;i<=(n/2);i++)

{

if(n%i==0)

{

flag=1;

break;

}

}

if(flag==0)

System.***out***.println("No is prime");

else

System.***out***.println("No is not prime");

}

String pal()

{

p=n;

while(p>0)

{

n1=p%10;

p=p/10;

sum=(sum\*10)+n1;

}

if(sum==n)

return "No is pal";

else

return "No is not pal";

}

int power(int x)

{

this.x=x;//this operator means acces the member of itself

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

{

f1=f1\*x;

}

return (f1);

}

}

public class CombinationOfProrams1{

public static void main(String[] args)

{

int n,x;

Scanner sc =new Scanner (System.***in***);

ParaMethodDemo a1=new ParaMethodDemo();

System.***out***.println("Enter value of n");

n=sc.nextInt();

a1.accept(n);

a1.pattern();

a1.prime();

System.***out***.println(""+a1.pal());

System.***out***.println("Enter value of x");

x=sc.nextInt();

int f1=a1.power(x);

System.***out***.println("Power="+f1);

}

}

Output:

Enter value of n

7

1

1 2

1 2 3

1 2 3 4

1 2 3 4 5

1 2 3 4 5 6

1 2 3 4 5 6 7

No is prime

No is pal

Enter value of x

12

Power=35831808

8)

import java.util.\*;

class ParaMethod

{

int n,i,j;

void accept(int n)

{

this.n=n;

}

void pattern()

{

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

{

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

{

System.***out***.print("\* ");

}

System.***out***.println();

}

}

String arm(int num)

{

int sum=0,temp=num;

while(num>0)

{

int digit=num%10;

sum+=digit\*digit\*digit;

num/=10;

}

if(temp==sum)

{

return "Number is armstrong";

}

else

{

return "Number is not armstrong";

}

}

void reverseNumber(int num)

{

int sum=0;

while(num>0)

{

int digit=num%10;

sum=(sum\*10)+digit;

num/=10;

}

System.***out***.println("Revered number is:"+sum);

}

int vowelCount()

{

Scanner sc=new Scanner(System.***in***);

int count=0;

System.***out***.println("Enter a string");

String s=sc.next();

char[] s1=s.toCharArray();

for(i=0;i<s.length();i++)

{

if(s1[i]=='a' || s1[i]=='e' || s1[i]=='i' || s1[i]=='o' || s1[i]=='u' || s1[i]=='A' || s1[i]=='E' ||

s1[i]=='I' || s1[i]=='O' || s1[i]=='U')

{

count++;

}

}

return count;

}

}

public class CombinationOfProrams2

{

public static void main(String[] args)

{

int n;

Scanner sc=new Scanner(System.***in***);

System.***out***.println("Enter a number");

n=sc.nextInt();

ParaMethod pm=new ParaMethod();

pm.accept(n);

pm.pattern();

System.***out***.println("Enter a number");

int num=sc.nextInt();

System.***out***.println(pm.arm(num));

pm.reverseNumber(num);

System.***out***.println("Total vowels="+pm.vowelCount());

}

}

Output:

Enter a number

8

\*

\* \*

\* \* \*

\* \* \* \*

\* \* \* \* \*

\* \* \* \* \* \*

\* \* \* \* \* \* \*

\* \* \* \* \* \* \* \*

Enter a number

153

Number is armstrong

Revered number is:351

Enter a string

Ashok

Total vowels=2