***7.circle area using array of object.***

import java.util.Scanner;

public class Main

{

double r,A;

void accept(double r)

{

this.r=r;

}

double cal\_area()

{

A=3.14\*r\*r;

return(A);

}

public static void main(String[] args)

{

double r;

int n,i;

Scanner sc=new Scanner(System.in);

System.out.println("Enter no of n");

n=sc.nextInt();

Main a1[]=new Main[n];

for(i=0;i<n;i++)

{

a1[i]=new Main();

System.out.println("Enter value of r");

r=sc.nextDouble();

a1[i].accept(r);

System.out.println("Area="+a1[i].cal\_area());

}

}

}

***Output:***

Enter no of n

2

Enter value of r

4

Area=50.24

Enter value of r

5

Area=78.5

***8.factorial using array of object.***

import java.util.\*;

public class Main

{

int n,f1=1,i;

void accept(int n)

{

this.n=n;

}

int cal\_fact()

{

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

{

f1=f1\*i;

}

return(f1);

}

public static void main(String[] args)

{

double r;

int n,p,i;

Scanner sc=new Scanner(System.in);

System.out.println("Enter no of n");

n=sc.nextInt();

Main f2[]=new Main[n];

for(i=0;i<n;i++)

{

f2[i]=new Main();

System.out.println("Enter value of p");

p=sc.nextInt();

f2[i].accept(p);

System.out.println("factorial="+f2[i].cal\_fact());

}

}

}

***Output:***

Enter no of n

2

Enter value of p

5

factorial=120

Enter value of p

4

factorial=24

***9.prime using array of object.***

import java.util.\*;

public class Main

{

int n,flag=0,sum=0,i;

void accept(int n)

{

this.n=n;

}

String prime()

{

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

{

if(n%i==0)

{

flag=1;

break;

}

}

if(flag==0)

{

return "num is prime";

}

else{

return "num is not prime";

}

}

public static void main(String[] args) {

int n,n1,i;

Scanner sc=new Scanner(System.in);

System.out.println("enter the n1");

n1=sc.nextInt();

Main a1[]=new Main[n1];

for(i=0;i<n1;i++)

{

a1[i]=new Main();

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

n=sc.nextInt();

a1[i].accept(n);

System.out.println(" "+a1[i].prime());

}

}

}

***Output:***

enter the n1

2

enter n

5

num is prime

enter n

4

num is not prime

***10. disarium using array of object.***

import java.util.\*;

public class Main

{

int i,n,p,n1,s=0,rev=0,res=0,sum=0;

void accept(int n)

{

this.n=n;

}

String disarium()

{

p=n;

while(p>0)

{

rev=p%10;

s=s\*10+rev;

p=p/10;

}

while(s>0)

{

res=s%10;

i++;

sum=sum+(int)Math.pow(res,i);

s=s/10;

}

if(sum==n)

{

return "num is disarium";

}

else{

return "num is not disarium";

}

}

public static void main(String[] args) {

int n,num,i;

Scanner sc=new Scanner(System.in);

System.out.println("enter the n1");

num=sc.nextInt();

Main a1[]=new Main[num];

for(i=0;i<num;i++)

{

a1[i]=new Main();

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

n=sc.nextInt();

a1[i].accept(n);

System.out.println(" "+a1[i].disarium());

}

}

}

***Output:***

enter the n1

2

enter n

153

num is not disarium

enter n

135

num is disarium

***11.reverse using array of object.***

import java.util.\*;

public class Main

{

int n,n1,sum=0;

void accept(int n)

{

this.n=n;

}

int reverse()

{

while(n>0)

{

n1=n%10;

sum=sum\*10+n1;

n=n/10;

}

return sum;

}

public static void main(String[] args) {

int n,num,i;

Scanner sc=new Scanner(System.in);

System.out.println("enter the n1");

num=sc.nextInt();

Main a1[]=new Main[num];

for(i=0;i<num;i++)

{

a1[i]=new Main();

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

n=sc.nextInt();

a1[i].accept(n);

System.out.println("reverse no is: "+a1[i].reverse());

}

}

}

***Output:***

enter the n1

2

enter n

123

reverse no is: 321

enter n

34567

reverse no is: 76543

***12. magic using array of object.***

import java.util.\*;

public class Main

{

int p,n,n1,s=0;

void accept(int n)

{

this.n=n;

}

String magic()

{

p=n;

while(n>9)

{

s=0;

while(n>0)

{

n1=n%10;

s=s+n1;

n=n/10;

}

n=s;

}

if(n==1)

{

return "number is magic";

}

else{

return "number is not magic";

}

}

public static void main(String[] args) {

int n,num,i;

Scanner sc=new Scanner(System.in);

System.out.println("enter the n1");

num=sc.nextInt();

Main a1[]=new Main[num];

for(i=0;i<num;i++)

{

a1[i]=new Main();

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

n=sc.nextInt();

a1[i].accept(n);

System.out.println(" "+a1[i].magic());

}

}

}

***Output:***

enter the n1

2

enter n

10

number is magic

enter n

11

number is not magic

***13.Armstrong using array of object.***

import java.util.\*;

public class Main

{

int p,n,n1,sum=0;

void accept(int n)

{

this.n=n;

}

String armstrong()

{

p=n;

while(n>0)

{

n1=n%10;

sum=sum+n1\*n1\*n1;

n=n/10;

}

if(sum==p)

{

return "number is armstrong";

}

else{

return "number is not armstrong";

}

}

public static void main(String[] args) {

int n,num,i;

Scanner sc=new Scanner(System.in);

System.out.println("enter the n1");

num=sc.nextInt();

Main a1[]=new Main[num];

for(i=0;i<num;i++)

{

a1[i]=new Main();

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

n=sc.nextInt();

a1[i].accept(n);

System.out.println(" "+a1[i].armstrong());

}

}

}

***Output:***

enter the n1

2

enter n

153

number is armstrong

enter n

121

number is not Armstrong

***14.max of two number using array of object.***

import java.util.\*;

class NumberPair {

int num1;

int num2;

public NumberPair(int num1, int num2) {

this.num1 = num1;

this.num2 = num2;

}

public int getMax() {

return Math.max(num1, num2);

}

}

public class Main {

public static void main(String[] args) {

NumberPair[] pairs = {

new NumberPair(10, 20),

new NumberPair(5, 15),

new NumberPair(30, 25),

new NumberPair(50, 45)

};

for (NumberPair pair : pairs) {

System.out.println("Max of (" + pair.num1 + ", " + pair.num2 + ") is: " + pair.getMax());

}

}

}

Output:

Max of (10, 20) is: 20

Max of (5, 15) is: 15

Max of (30, 25) is: 30

Max of (50, 45) is: 50

***15. max of three number using array of object.***

class Number {

int value;

Number(int value) {

this.value = value;

}

}

public class Main {

public static int findMax(Number[] numbers) {

int max = numbers[0].value;

for (int i = 1; i < numbers.length; i++) {

if (numbers[i].value > max) {

max = numbers[i].value;

}

}

return max;

}

public static void main(String[] args) {

Number[] numbers = new Number[3];

numbers[0] = new Number(15);

numbers[1] = new Number(23);

numbers[2] = new Number(10);

int max = findMax(numbers);

System.out.println("The maximum number is: " + max);

}

}

***Output:***

The maximum number is: 23

***16.vowel or not using array of object.***

import java.util.Scanner;

public class Main

{

char ch;

void accept(char ch)

{

this.ch=ch;

}

String vowel()

{

if((ch=='a' || ch=='e')||(ch=='i') || (ch=='o')||(ch=='u')||(ch=='A') || (ch=='E')||(ch=='I') || (ch=='O')||(ch=='U'))

{

return "char is vowel";

}

else

{

return "char is not vowel";

}

}

public static void main(String[] args)

{

int i,n4;

char ch;

Scanner sc =new Scanner (System.in);

System.out.println("no of records");

n4=sc.nextInt();

Main a1[]=new Main[n4];

for(i=0;i<n4;i++)

{

a1[i]=new Main();

System.out.println("Enter value char");

ch=sc.next().charAt(0);

a1[i].accept(ch);

System.out.println(" "+a1[i].vowel());

}

}

}

***Output:***

no of records

2

Enter value char

a

char is vowel

Enter value char

r

char is not vowel

***17. Any 4 favourite functions add in class use any three types of userdefine function***

import java.util.Scanner;

public class Main

{

int flag=0,n,i,n1,n2,sum=0,p,t,f1=1,c=0,rev=0,s ;

void accept(int n)

{

this.n=n;

}

void krishnmurty()

{

t=n;

while(n>0)

{

n1=n%10;

f1=1;

for(i=0;i<=n1;i++)

{

f1=f1\*1;

}

sum=sum+f1;

n=n/10;

}

if(sum==t)

{

System.out.println(" number is krishnmurty");

}

else{

System.out.println("number is not krishnmurty");

}

}

String prime\_pal()

{

p=n;

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

{

if(p%i==0)

{

c++;

}

}

while(n>0)

{

rev=n%10;

s=s\*10+rev;

n=n/10;

}

if(c==2 && p==s)

{

return "number is prime\_pal";

}

else

{

return "number is not prime\_pal";

}

}

String perfect()

{

int i = 1;

while ( i<n) {

if (n%i==0) {

sum=sum+i;

}

i++;

}

if (sum==n) {

return " is a perfect number.";

} else {

return " is not a perfect number.";

}

}

String pronic()

{

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

{

if(i\*(i+1)==n)

{

flag=1;

break;

}

}

if(flag==1)

{

return "number is pronic";

}

else

{

return "number is not pronic";

}

}

public static void main(String[] args)

{

int i,n,n4;

Scanner sc =new Scanner (System.in);

System.out.println("no of records");

n4=sc.nextInt();

Main a1[]=new Main[n4];

for(i=0;i<n4;i++)

{

a1[i]=new Main();

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

n=sc.nextInt();

a1[i].accept(n);

a1[i].krishnmurty();

System.out.println(" "+a1[i].prime\_pal());

System.out.println(" "+a1[i].perfect());

System.out.println(" "+a1[i].pronic());

}

}

}

***Output:***

no of records

1

Enter value of n

2

number is not krishnmurty

number is not prime\_pal

is not a perfect number.

number is not pronic

***18. Any 4 favourite functions add in class use any three types of userdefine function***

import java.util.Scanner;

public class Main

{

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;

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

{

f1=f1\*x;

}

return (f1);

}

public static void main(String[] args)

{

int i,n,x,n1;

Scanner sc =new Scanner (System.in);

System.out.println("no of records");

n1=sc.nextInt();

Main a1[]=new Main[n1];

for(i=0;i<n1;i++)

{

a1[i]=new Main();

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

n=sc.nextInt();

a1[i].accept(n);

a1[i].pattern();

a1[i].prime();

System.out.println(""+a1[i].pal());

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

x=sc.nextInt();

System.out.println("Power"+a1[i].power(x));

}

}

}

***Output:***

no of records

2

Enter value of n

3

1

12

123

No is prime

No is pal

Enter value of x

4

Power64

Enter value of n

4

1

12

123

1234

No is not prime

No is pal

Enter value of x

2

Power16