**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\_a  
rea());  
}  
}  
}  
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].c  
al\_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].powe  
r(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**