**1.employee without parameter  
class Employee  
{  
int eid;  
String name;  
double salary;  
Employee()//non-parameterized  
constructor/default  
{  
eid=101;  
name="Sam";  
salary=9876.90;  
/\*Scanner sc=new Scanner (System.in);  
System.out.println("Enter id ,name &  
salary");  
eid=sc.nextInt();**

**name=sc.next();  
salary=sc.nextDouble();\*/  
}  
void display()  
{  
System.out.println("Emp id="+eid);  
System.out.println("Name="+name);  
System.out.println("Salary="+salary);  
}  
}  
public class Emp\_Demo {  
public static void main(String[] args)  
{  
Employee e1=new Employee();  
e1.display();**

**Employee e2=new Employee();  
e2.display();  
}  
}  
Output:  
Emp id=101  
Name=Sam  
Salary=9876.9  
Emp id=101  
Name=Sam  
Salary=9876.9  
2.employee with parameterized constuructor  
import java.util.Scanner;  
class Employee  
{**

**int eid;  
String name;  
double salary;  
Employee(int eid,String name,double  
salary)//parameterized constuctor  
{  
this.eid=eid;  
this.name=name;  
this.salary=salary;  
}  
void show()  
{  
System.out.println("Emp id="+eid);  
System.out.println("Name="+name);  
System.out.println("Salary="+salary);**

**}  
}  
public class Main {  
public static void main(String[] args)  
{  
int eid;  
String name;  
double salary;  
Scanner sc=new Scanner (System.in);  
System.out.println("Enter id ,name &  
salary");  
eid=sc.nextInt();  
name=sc.next();  
salary=sc.nextDouble();**

**Employee e2=new  
Employee(eid,name,salary);  
e2.show();  
}  
}  
Output:  
Enter id ,name & salary  
1  
rina  
67890  
Emp id=1  
Name=rina  
Salary=67890.0**

**3.employee using without parameter and with  
parameter constructor  
import java.util.Scanner;  
class Employee  
{  
int eid;  
String name;  
double salary;  
Employee()//defualt constructor  
{  
eid=101;  
name="Sam";  
salary=9876.90;  
}  
Employee(int eid,String name,double  
salary)//parameterized constuctor  
{**

**this.eid=eid;  
this.name=name;  
this.salary=salary;  
}  
void display()  
{  
System.out.println(eid+"\t"+name+"\t"+salary);  
}  
}  
public class Main {  
public static void main(String[] args)  
{  
int eid,i;  
String name;**

**double salary;  
Employee e=new Employee();//non-  
parameterized  
e.display();  
Scanner sc=new Scanner (System.in);  
System.out.println("Enter no of  
records");  
int n=sc.nextInt();  
Employee e1[ ]=new Employee[n];//array  
creation  
for(i=0;i<n;i++)  
{  
System.out.println("Enter id ,name &  
salary");  
eid=sc.nextInt();  
name=sc.next();  
salary=sc.nextDouble();**

**e1[i]=new  
Employee(eid,name,salary);//object creation  
}  
System.out.println("Eid\tEname\tSalary");  
System.out.println("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
\_\_\_\_\_\_\_\_\_\n");  
for(i=0;i<n;i++)  
{  
e1[i].display();  
}  
}  
}**

**Output:  
101 Sam 9876.9  
Enter no of records  
1  
Enter id ,name & salary  
1  
ira  
23000  
Eid Ename Salary  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
1 ira 23000.0  
4.book without parameter and with parameter  
constructor  
import java.util.Scanner;  
class Book**

**{  
int bid;  
String name;  
String author;  
double price;  
Book()//defualt constructor  
{  
bid=101;  
name="mahabharat";  
author="valmiki";  
price=987;  
}  
Book(int bid,String name,String author  
,double price)//parameterized constuctor  
{  
this.bid=bid;  
this.name=name;**

**this.author=author;  
this.price=price;  
}  
void display()  
{  
System.out.println(bid+"\t"+name+"\t"+author+"\  
t"+price);  
}  
}  
public class Main {  
public static void main(String[] args)  
{  
int bid,i;  
String name;**

**String author;  
double price;  
Book e=new Book();//non-parameterized  
e.display();  
Scanner sc=new Scanner (System.in);  
System.out.println("Enter no of  
records");  
int n=sc.nextInt();  
Book e1[ ]=new Book[n];//array creation  
for(i=0;i<n;i++)  
{  
System.out.println("Enter id ,name  
,author, price");  
bid=sc.nextInt();  
name=sc.next();  
author=sc.next();**

**price=sc.nextDouble();  
e1[i]=new  
Book(bid,name,author,price);//object creation  
}  
System.out.println("bid\tbname\tauthor\tpric  
e");  
System.out.println("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
\_\_\_\_\_\_\_\_\_\n");  
for(i=0;i<n;i++)  
{  
e1[i].display();  
}  
}  
}  
Output:  
101 mahabharat valmiki 987.0  
Enter no of records**

**2  
Enter id ,name ,author, price  
1  
ramayn  
valmiki  
234  
Enter id ,name ,author, price  
2  
mahabharat  
vyas  
543  
bid bname author price  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
1 ramayn valmiki 234.0  
2 mahabharat vyas 543.0**

**5. vehical without parameter and with  
parameter constructor  
import java.util.Scanner;  
class vehical  
{  
int vid;  
String name;  
String color;  
double price;  
vehical()//defualt constructor  
{  
vid=101;  
name="suzuki";  
color="pink";  
price=987900;  
}**

**vehical(int vid,String name,String color  
,double price)//parameterized constuctor  
{  
this.vid=vid;  
this.name=name;  
this.color=color;  
this.price=price;  
}  
void display()  
{  
System.out.println(vid+"\t"+name+"\t"+color+"\t"  
+price);  
}  
}  
public class Main {**

**public static void main(String[] args)  
{  
int vid,i;  
String name;  
String color;  
double price;  
vehical e=new vehical();//non-  
parameterized  
e.display();  
Scanner sc=new Scanner (System.in);  
System.out.println("Enter no of  
records");  
int n=sc.nextInt();  
vehical e1[ ]=new vehical[n];//array creation  
for(i=0;i<n;i++)**

**{  
System.out.println("Enter id ,name  
,color, price");  
vid=sc.nextInt();  
name=sc.next();  
color=sc.next();  
price=sc.nextDouble();  
e1[i]=new  
vehical(vid,name,color,price);//object creation  
}  
System.out.println("vid\tvname\tcolor\tprice"  
);  
System.out.println("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
\_\_\_\_\_\_\_\_\_\n");  
for(i=0;i<n;i++)  
{  
e1[i].display();  
}**

**}  
}  
Output:  
101 suzuki pink 987900.0  
Enter no of records  
2  
Enter id ,name ,color, price  
12  
maruti  
black  
4500000  
Enter id ,name ,color, price  
21  
honda  
gray**

**678945  
vid vname color price  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
12 maruti black 4500000.0  
21 honda gray 678945.0  
6.student without parameter and with parameter  
constructor  
import java.util.Scanner;  
class student  
{  
int id;  
String name;  
String address;  
double percentage;  
student()//defualt constructor**

**{  
id=101;  
name="madhav";  
address="punr";  
percentage=98;  
}  
student(int id,String name,String address  
,double percentage)//parameterized constuctor  
{  
this.id=id;  
this.name=name;  
this.address=address;  
this.percentage=percentage;  
}  
void display()  
{**

**System.out.println(id+"\t"+name+"\t"+  
address+"\t"+percentage);  
}  
}  
public class Main {  
public static void main(String[] args)  
{  
int id,i;  
String name;  
String address;  
double percentage;  
student e=new student();//non-  
parameterized  
e.display();**

**Scanner sc=new Scanner (System.in);  
System.out.println("Enter no of  
records");  
int n=sc.nextInt();  
student e1[ ]=new student[n];//array  
creation  
for(i=0;i<n;i++)  
{  
System.out.println("Enter id ,name  
,address, percentage");  
id=sc.nextInt();  
name=sc.next();  
address=sc.next();  
percentage=sc.nextDouble();  
e1[i]=new  
student(id,name,address,percentage);//object  
creation**

**}  
System.out.println("vid\tvname\taddress\tpe  
rcentage");  
System.out.println("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
\_\_\_\_\_\_\_\_\_\n");  
for(i=0;i<n;i++)  
{  
e1[i].display();  
}  
}  
}  
Output:  
101 madhav punr 98.0**

**Enter no of records  
2  
Enter id ,name ,address, percentage  
1  
ritu  
pune  
78  
Enter id ,name ,address, percentage  
2  
mira  
bombay  
45  
vid vname address percentage  
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  
1 ritu pune 78.0  
2 mira bombay 45.0**

**7.area of circle. With parameterized  
constructure.  
import java.util.Scanner;  
public class Main  
{  
double r,A;  
Main()  
{  
r=0.0;  
}  
Main(double r)  
{  
this.r=r;  
}  
double cal\_area()  
{**

**A=3.14\*r\*r;  
return(A);  
}  
public static void main(String[] args)  
{  
double r1,A;  
int n,i;  
Scanner sc=new Scanner (System.in);  
System.out.println("Enter no of  
records");  
n=sc.nextInt();  
Main a1[ ]=new Main [n];//array creation  
for(i=0;i<n;i++)  
{  
System.out.println("Enter value of r");  
r1=sc.nextDouble();**

**a1[i]=new Main(r1);  
A=a1[i].cal\_area();  
System.out.println("Area="+A);  
}  
}  
}  
Output:  
Enter no of records  
2  
Enter value of r  
4  
Area=50.24  
Enter value of r  
5  
Area=78.5  
8.palindrome With parameterized constructure.**

**import java.util.Scanner;  
public class Main  
{  
int flag=0,n1,n,x,sum=0,p,f1=1,i;  
Main(int n)  
{  
this.n=n;  
}  
String pal( )  
{  
p=n;  
while(p>0)  
{  
n1=p%10;  
p=p/10;  
sum=(sum\*10)+n1;  
}**

**if(sum==n)  
return "Number is pal";  
else  
return "Number is not pal";  
}  
public static void main(String[] args)  
{  
int n;  
Scanner sc =new Scanner (System.in);  
System.out.println("Enter value of n");  
n=sc.nextInt();  
Main a1=new Main(n);  
System.out.println(""+a1.pal());  
}  
}  
Output:**

**Enter value of n  
121  
Number is pal  
9.factorial With parameterized constructure.  
import java.util.\*;  
public class Main  
{  
int n,f1=1,i;  
Main(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)  
{  
int n,p,i,A;  
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++)  
{  
System.out.println("Enter value of p");  
p=sc.nextInt();**

**f2[i]=new Main(p);  
A=f2[i].cal\_fact();  
System.out.println("factorial="+A);  
}  
}  
}  
Output:  
Enter no of n  
2  
Enter value of p  
4  
factorial=24  
Enter value of p  
5  
factorial=120**

**10.max from two With parameterized  
constructure.  
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  
11. 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;  
Main (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("Num is prime");  
else  
System.out.println("Num is not  
prime");  
}  
String pal()  
{  
p=n;  
while(p>0)  
{  
n1=p%10;  
p=p/10;  
sum=(sum\*10)+n1;**

**}  
if(sum==n)  
return "Num is pal";  
else  
return "Num 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 static void main(String[] args)  
{  
int n,x;  
Scanner sc =new Scanner (System.in);  
System.out.println("Enter value of n");  
n=sc.nextInt();  
Main a1=new Main(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  
2  
1  
12  
Num is prime  
Num is pal  
Enter value of x  
4  
Power16  
12. 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 ;  
Main(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++)  
{  
System.out.println("Enter value of n");  
n=sc.nextInt();  
a1[i]=new Main(n);  
a1[i].krishnmurty();  
System.out.println(" "+a1[i].prime\_pal());  
System.out.println(" "+a1[i].perfect());  
System.out.println(" "+a1[i].pronic());  
}  
}  
}**