***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\tprice");

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\tpercentage");

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());

}

}

}