Constructor

Class name & method (Function) name must be same.

It does not contain return datatypes.

It does not return a value.

When Object is created then it is automatically called or invoked.

No need of (.) dot operator for calling a constructor.

There are two types of constructors.

1) Non-parameterized or (Default) Constructor.

class Employee

{

int eid;

String name;

double salary;

Employee()//non-parameterized constructor or default constructor

{

eid = 101;

name = "Ashok";

salary = 200000;

// 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("Employee Id:" +eid);

System.***out***.println("Employee Name:" +name);

System.***out***.println("Employee Salary:" +salary);

}

}

public class Emp\_Demo {

public static void main(String[] args) {

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

Employee e1 = new Employee();

e1.display();

Employee e2 = new Employee();

e2.display();

}

}

Output:

Employee Id:101

Employee Name:Ashok

Employee Salary:200000.0

Employee Id:101

Employee Name:Ashok

Employee Salary:200000.0

2) Parameterized Constructor.

import java.util.Scanner;

class Employee2

{

int eid;

String name;

double salary;

Employee2() //non-parameterized constructor or default constructor

{

eid = 101;

name = "Ashok";

salary = 200000;

}

Employee2(int eid, String name, double salary ) //parameterized constructor

{

this.eid = eid;

this.name = name;

this.salary = salary;

}

void display()

{

System.***out***.println(eid+"\t"+name+"\t"+salary);

}

}

public class Emp\_Demo2 {

public static void main(String[] args) {

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

Employee e = new Employee();

e.display();

int eid, i;

String name;

double salary;

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

System.***out***.println("Enter number of records");

int num = sc.nextInt();

Employee2 e1[] = new Employee2[num]; //array creation

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

{

System.***out***.println("Enter Id, Name & Salary");

eid = sc.nextInt();

name = sc.next();

salary = sc.nextDouble();

e1[i] = new Employee2(eid,name,salary); //object creation

}

System.***out***.println("Eid\tEname\tSalary");

System.***out***.println("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\n");

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

{

e1[i].display();

}

}

}

Output:

Employee Id:101

Employee Name:Ashok

Employee Salary:200000.0

Enter number of records

2

Enter Id, Name & Salary

102 Ash 100000

Enter Id, Name & Salary

103 Nobi 150000

Eid Ename Salary

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

102 Ash 100000.0

103 Nobi 150000.0

2) Book (bid, bname, author, price)

import java.util.\*;

class Book

{

int bid;

String bname, author;

double price;

Book()

{

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

System.***out***.println("Enter book id, name, author & price");

bid=sc.nextInt();

bname=sc.next();

author=sc.next();

price=sc.nextDouble();

}

Book(int bid, String bname, String author, double price)

{

this.bid=bid;

this.bname=bname;

this.author=author;

this.price=price;

}

void display()

{

System.***out***.println(bid+"\t"+bname+"\t"+author+"\t"+price);

}

}

public class Book\_Demo

{

public static void main(String[] args)

{

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

Book b=new Book();

int bid,i,size;

String bname;

String author;

double price;

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

size=sc.nextInt();

Book[] b1=new Book[size];

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

{

System.***out***.println("Enter book id, name, author & price");

bid=sc.nextInt();

bname=sc.next();

author=sc.next();

price=sc.nextDouble();

b1[i]=new Book(bid,bname,author,price);

}

System.***out***.println("Book id \t Book Name \t Book author \t Book price");

System.***out***.println("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_");

b.display();

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

b1[i].display();

}

}

Output:

Enter book id, name, author & price

101 RichDadPoorDad RobertT.Kiyosaki 200

Enter array size

2

Enter book id, name, author & price

102 AtomicHabits JamesClear 300

Enter book id, name, author & price

103 Quiet SusanCain 400

Book id Book Name Book author Book price

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

101 RichDadPoorDad RobertT.Kiyosaki 200.0

102 AtomicHabits JamesClear 300.0

103 Quiet SusanCain 400.0

3) Vehicle (vid, vname, color, price)

import java.util.\*;

class Vehicle

{

int vid;

String vname, color;

double price;

Vehicle()

{

vid=2023;

vname="Shine";

color="Black";

price=89500;

}

Vehicle(int vid, String vname, String color,double price)

{

this.vid=vid;

this.vname=vname;

this.color=color;

this.price=price;

}

void display()

{

System.***out***.println(vid+"\t"+vname+"\t"+color+"\t"+price);

}

}

public class Vehicle\_Demo

{

public static void main(String[]args)

{

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

Vehicle v = new Vehicle();

int vid, size, i;

String vname;

String color;

double price;

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

size = sc.nextInt();

Vehicle[]v1 = new Vehicle[size];

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

{

System.***out***.println("Enter vehicle id, name, color, price");

vid = sc.nextInt();

vname = sc.next();

color = sc.next();

price = sc.nextDouble();

v1[i] = new Vehicle(vid,vname,color,price);

}

System.***out***.println("Vehicle id Vehicle name Vehicle color Vehicle price");

System.***out***.println("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_");

v.display();

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

v1[i].display();

}

}

Output:

Enter array size

2

Enter vehicle id, name, color, price

2024 Hero Blue 89000

Enter vehicle id, name, color, price

2025 Honda Black 98000

Vehicle id Vehicle name Vehicle color Vehicle price

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2023 Shine Black 89500.0

2024 Hero Blue 89000.0

2025 Honda Black 98000.0

4) Student (id, name, address, per)

import java.util.\*;

class Student

{

int id;

String name, address;

double per;

Student()

{

id=20;

name="Nilesh";

address="Pune";

per=65.9;

}

Student(int id,String name,String address,double per)

{

this.id=id;

this.name=name;

this.address=address;

this.per=per;

}

void display()

{

System.***out***.println(id+"\t"+name+"\t"+address+"\t"+per);

}

}

public class Student\_Demo

{

public static void main(String[] args)

{

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

Student stud=new Student();

int id,size,i;

String name;

String address;

double per;

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

size=sc.nextInt();

Student[] stud1=new Student[size];

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

{

System.***out***.println("Enter student id, name, address, per");

id=sc.nextInt();

name=sc.next();

address=sc.next();

per=sc.nextDouble();

stud1[i]=new Student(id,name,address,per);

}

System.***out***.println("Student id Student name Student address Student percentage");

System.***out***.println("\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_");

stud.display();

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

stud1[i].display();

}

}

Output:

Enter array size

2

Enter student id, name, address, per

102 Ash Japan 78.89

Enter student id, name, address, per

109 Ashok Pune 89.97

Student id Student name Student address Student percentage

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

20 Nilesh Pune 65.9

102 Ash Japan 78.89

109 Ashok Pune 89.97

5) Area of circle

import java.util.Scanner;

class Area\_Demo

{

double r,A;

Area\_Demo()

{

r=0.0;

}

Area\_Demo(double r)

{

this.r=r;

}

double cal\_area()

{

A=3.14\*r\*r;

return(A);

}

}

public class Eg\_AreaOfCircle

{

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();

Area\_Demo a1[ ]=new Area\_Demo [n];//array creation

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

{

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

r1=sc.nextDouble();

a1[i]=new Area\_Demo(r1);

A=a1[i].cal\_area();

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

}

}

}

Output:

Enter no of records

2

Enter value of r

12

Area=452.15999999999997

Enter value of r

12

Area=452.15999999999997

6) Max (int a, int b)

import java.util.Scanner;

class Max

{

int a,b;

Max()

{

a=10;

b=5;

}

Max(int a,int b)

{

this.a=a;

this.b=b;

}

void displayMax()

{

if(a>b)

System.***out***.println(a+" is Max");

else if(b>a)

System.***out***.println(b+" is Min");

else

System.***out***.println("Both are equal");

}

}

public class Maximum

{

public static void main(String[] args)

{

Max m=new Max();

m.displayMax();

int a,b;

int n,i;

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

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

n=sc.nextInt();

Max a1[]=new Max[n];//array creation

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

{

System.***out***.println("Enter two numbers");

a=sc.nextInt();

b=sc.nextInt();

a1[i]=new Max(a,b);

a1[i].displayMax();

}

}

}

Output:

10 is Max

Enter no of records

2

Enter two numbers

12 11

12 is Max

Enter two numbers

11 9

11 is Max

7) Factorial(int n)

import java.util.Scanner;

class Fact

{

int n;

Fact()

{

n=5;

}

Fact(int n)

{

this.n=n;

}

int display()

{

int f1=1,i;

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

{

f1=f1\*i;

}

return(f1);

}

}

public class Factorial

{

public static void main(String[] args)

{

Fact f=new Fact();

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

int n, size, i;

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

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

size=sc.nextInt();

Fact a1[]=new Fact[size];//array creation

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

{

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

n=sc.nextInt();

a1[i]=new Fact(n);

System.***out***.println("Fact="+a1[i].display());

}

}

}

Output:

Fact=120

Enter no of records

2

Enter a numbers

120

Fact=0

Enter a numbers

21

Fact=-1195114496

8) Palindrome (int n)

import java.util.Scanner;

class Palindrome

{

int n;

Palindrome()

{

n=5;

}

Palindrome(int n)

{

this.n=n;

}

void display()

{

int temp=n,sum=0;

while(n>0)

{

int digit=n%10;

sum=(sum\*10)+digit;

n/=10;

}

if(temp==sum)

System.***out***.println("Number is Palindrome");

else

System.***out***.println("Number is not Palindrome");

}

}

public class Eg\_Palindrome

{

public static void main(String[] args)

{

Palindrome p=new Palindrome();

p.display();

int n;

int size,i;

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

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

size=sc.nextInt();

Palindrome p1[]=new Palindrome[size];//array creation

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

{

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

n=sc.nextInt();

p1[i]=new Palindrome(n);

p1[i].display();

}

}

}

Output:

Number is Palindrome

Enter no of records

2

Enter a numbers

121

Number is Palindrome

Enter a numbers

323

Number is Palindrome