Department:- BCA
Faculty Name:- Er. Ashish Kumar
Subject:- JAVA(5th sem)
Topic:-Basic Constructors in Java

Constructors in Java:-

- A constructor is a block of codes similar to the method.
- It is a special type of method which is used to initialize the object.
- Every time an object is created using the new() keyword, at least one constructor is called.

When is a Constructor called ?

Each time an object is created using **new()** keyword at least one constructor (it could be default constructor) is invoked to assign initial values to the **data members** of the same class.

Rules for writing Constructor:-

- A Constructor name must be the same as its class name.

- A Constructor must have no explicit return type.
- A Java constructor cannot be abstract, static, final, and synchronized.
- Access modifiers can be used in constructor declaration to control its access i.e which other class can call the constructor.

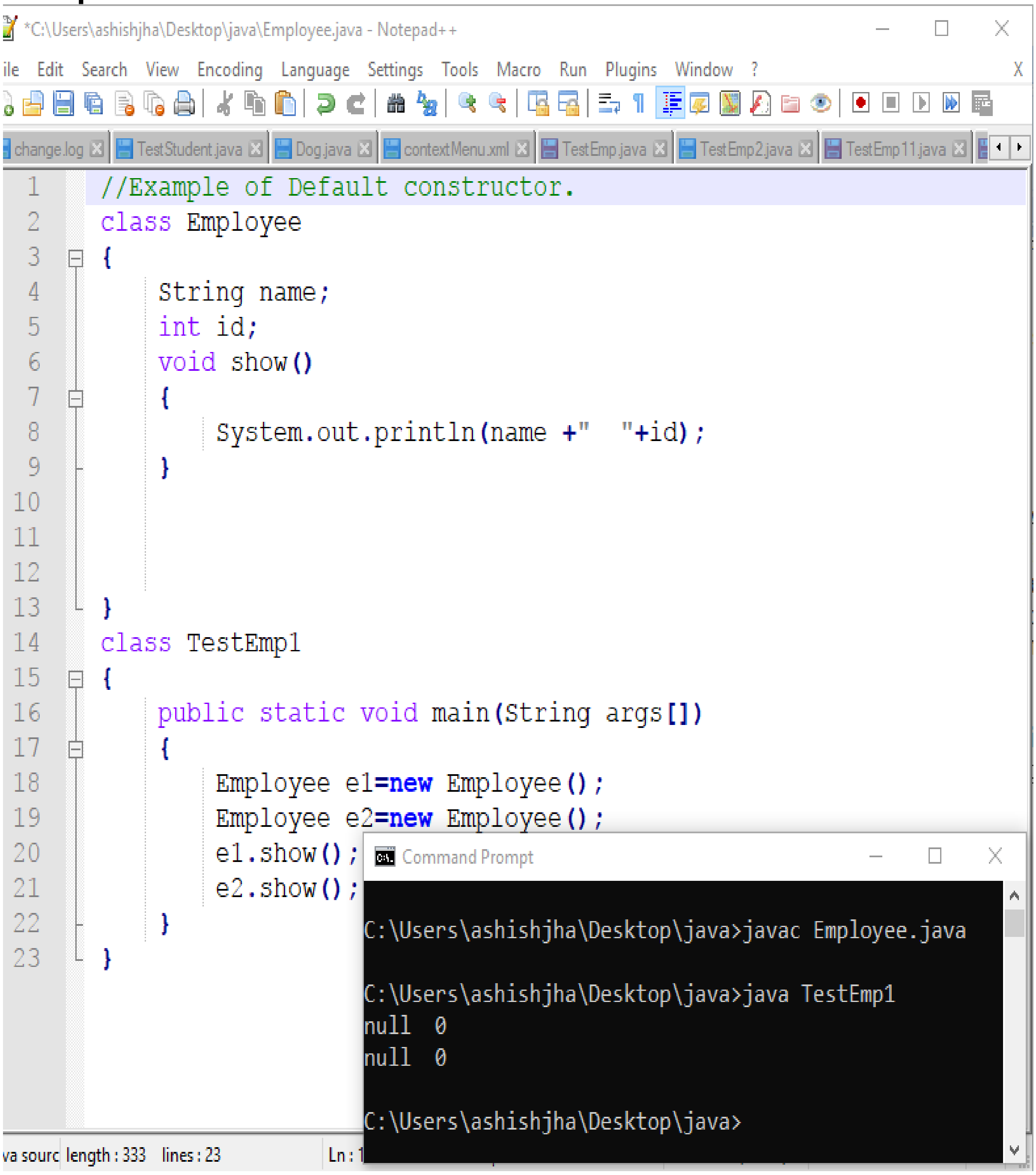
Types of constructor:-

There are two type of constructor in Java:-

1. **No-argument constructor:** A constructor that has no parameter is known as default constructor. If we do NOT define a constructor in a class, then compiler creates **default constructor (with no arguments)** for the class. And if we write a constructor with arguments or no-arguments then the compiler does not create a default constructor.

NOTE :- Default constructor provides the default values to the object like 0, null, etc. depending on the type.

Example:-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change.log
TestStudent.java
Dog.java
contextMenu.xml
TestEmp.java
TestEmp2.java
TestEmp11.java
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Command Prompt

```java
//Example of Default constructor.
class Employee
{
	String name;
	int id;
	void show()
	{
		System.out.println(name +"  "+id);
	}



}
class TestEmp1
{
	public static void main(String args[])
	{
		Employee e1=new Employee();
		Employee e2=new Employee();
		e1.show();
		e2.show();
	}
}
```

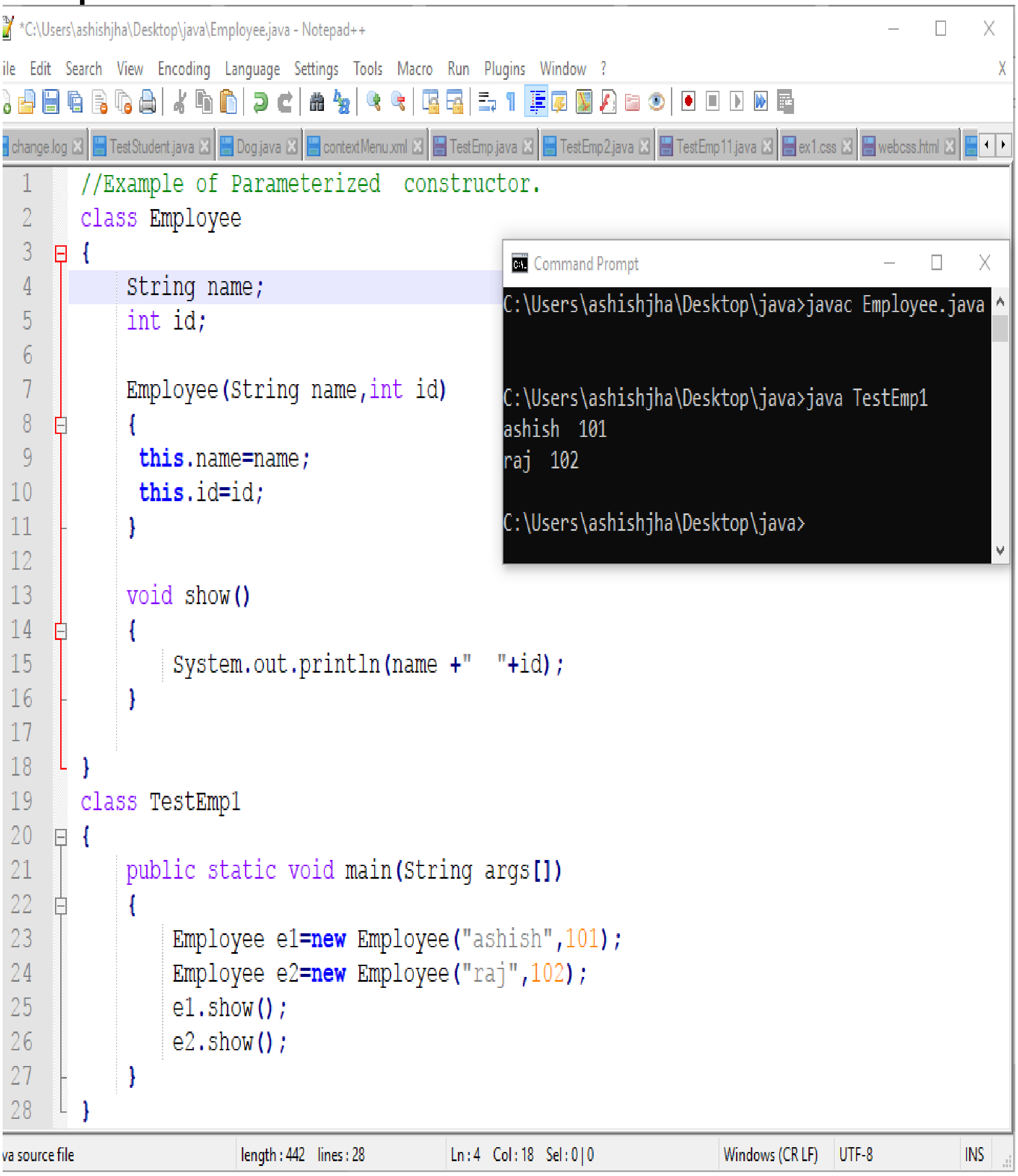
```
C:\Users\ashishjha\Desktop\java>javac Employee.java

C:\Users\ashishjha\Desktop\java>java TestEmp1
null  0
null  0

C:\Users\ashishjha\Desktop\java>
```

2. **Parameterized Constructor:** A constructor that has parameters is known as parameterized constructor. If we want to initialize fields of the class with our own values, then use a parameterized constructor.

Example:-



```java
//Example of Parameterized  constructor.
class Employee
{
    String name;
    int id;

    Employee(String name,int id)
    {
     this.name=name;
     this.id=id;
    }

    void show()
    {
        System.out.println(name +"  "+id);
    }

}
class TestEmpl
{
    public static void main(String args[])
    {
        Employee e1=new Employee("ashish",101);
        Employee e2=new Employee("raj",102);
        e1.show();
        e2.show();
    }
}
```

```
C:\Users\ashishjha\Desktop\java>javac Employee.java


C:\Users\ashishjha\Desktop\java>java TestEmp1
ashish  101
raj  102

C:\Users\ashishjha\Desktop\java>
```