



Pune Vidyarthi Griha's

**College of Engineering and Technology & G. K. Pate
(Wani) Institute of Management**

Approved by AICTE, DTE (Code: 6274) | Affiliated to SPPU, Pune | NAAC Second Cycle 'A' Grade

Department of Electronics & Telecommunication Engineering

Third Year of E & TC Engineering (2019 Course):

Elective -1 Fundamentals of JAVA Programming

Virtual LAB Links:

Link of the Virtual Lab: <https://java-iitd.vlabs.ac.in/>

Student Name: Hemant Rohidas Murkute

Year: TE Class: 1

Roll Number: 07

Date of execution: 01/10/2025

Sr. No	Experiment Name	Virtual Lab Name	Conclusion/Understanding of student after performing experiment
1	Introduction to Java Programming Language	Core Java Programming	We learned Java basics, its history, features, and environment setup. Finally, we compiled and executed our first Java program, understanding JDK, JRE, and JVM.
2	Creating Classes and their Objects in Java	Core Java Programming	We learned that a class is a blueprint and an object is its instance with state and behavior. Using the new keyword, we can create objects and access their fields and methods.
3	Using constructors for creating Objects	Core Java Programming	Constructors in Java are special methods used to initialize objects at creation time. They share the class name, have no return type, and can be default (no-argument) or parameterized. They ensure objects start with proper values instead of defaults like 0 or null.



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Attach any 3 experiments screenshots

1. Introduction to Java Programming Language

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Introduction to Java Programming Language

Aim

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Q1. Java is a _____ programming language.

- ☐ a. low level
- ☒ b. high level
- ☐ c. medium level
- ☐ d. None of the above

Q2. Simple text editor like notepad can be used to write java programs.

- ☒ a. True
- ☐ b. False

Q3. Which of the following belongs to java programming language?

- ☐ a. Class
- ☐ b. Object
- ☐ c. Method
- ☒ d. All of the above

Q4. Java is used to develop _____.

- ☐ a. mobile apps
- ☐ b. web apps
- ☐ c. games
- ☒ d. All of the above

Q5. Java is the short for JavaScript?

- ☐ a. True
- ☒ b. False

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Preview **Editor**

Simulator


Execute

Output

Hello

Syntax

```
class Main{
    public static void main(String args[]){
        System.out.println("text");
    }
}
```



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Introduction to Java

Q1. Which of the following is a Text Editor?

☐ a. Notepad++

☐ b. Notepad

☐ c. Sublime

☒ d. All of the above

Q2. Which extension is used for saving a java program?

☐ a. .program

☐ b. .class

☐ c. .exe

☒ d. .java

Q3. Println() is the method of PrintStream class. State True or False.

☒ a. True

☐ b. False

Q4. Java is pure object oriented programming language. State True or False.

☒ a. True

☐ b. False

Q5. System is a _____ class.

☒ a. Final

☐ b. Abstract

☐ c. Static

☐ d. Concrete

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Email: support@virlabs.ac.in

Conclusion:

We learned Java basics, its history, features, and environment setup. Finally, we compiled and executed our first Java program, understanding JDK, JRE, and JVM.

2. Creating Classes and their Objects in Java

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Creating Classes and their Objects in Java

Q1. Which of these class is superclass of every class in Java?

☐ a: String class

☒ b: Object class

☐ c: Abstract class

☐ d: ArrayList class

Q2. Which of these method of Object class can clone an object?

☐ a: Objectcopy()

☐ b: copy()

☒ c: Object clone()

☐ d: clone()

Q3. Which of the following is an invalid declaration for the main method in java program?

☐ a: public static void main (String args[])

☐ b: public static strictfp void main (String args[])

☐ c: final static public void main (String args[])

☒ d: All are correct

Q4. In Java programming language, the code is placed inside ____.

☐ a: Classes, Interfaces

☐ b: Methods

☐ c: Blocks

☒ d: All the above

Q5. A Class in Java is like a ____.

☐ a: Prototype

☐ b: Instruction Sheet

☐ c: Blueprint

☒ d: All the above

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Creating Classes and their Objects in Java

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Output

10

Syntax

```
public class ClassName {
    int VariableName = VariableValue;
    public static void main(String[] args){
        ClassName ObjectName = new ClassName();
        System.out.println(ObjectName.VariableName);
    }
}
```

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Creating Classes and their Objects in Java

Q1. Choose the correct way of creating an object of the below class. class Table{Table(){System.out.println("Table Created");}}

☐ a: Table t = new Table;

☒ b: Table t = new Table();

☐ c: Table() t = new Table();

☐ d: None of the above

Q2. Attribute of an object can include information about.....

☐ a: Method

☐ b: Behavior

☒ c: State

☐ d: Procedures

Q3. The keyword used to create a new object in Java is ____.

☐ a: class

☐ b: java

☒ c: new

☐ d: Create

Q4. An object is created at ____ time in Java.

☐ a: Compile-time

☒ b: Run time

☐ c: Assembling time

☐ d: None of the above

Q5. Choose the correct statements about choosing a name for a class in Java.

☐ a: The class name can start with only a letter or underscore or dollar sign

☐ b: The class name can contain numbers

☐ c: The class name can not start with a number

☒ d: All the above

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Conclusion:

We learned that a class is a blueprint and an object is its instance with state and behavior. Using the new keyword, we can create objects and access their fields and methods.

3. Using constructors for creating Objects

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Using constructors for creating Objects

Q1. What is false about constructor?

- ☐ a. Constructors cannot be synchronized in Java
- ☐ b. Java does not provide default copy constructor
- ☒ c. Constructor can have a return type
- ☐ d. "this" and "super" can be used in a constructor

Q2. What would be behavior if the constructor has a return type?

- ☒ a. Compilation error
- ☐ b. Runtime error
- ☐ c. Compilation and runs successfully
- ☐ d. Only String return type is allowed

Q3. What is default accessibility modifier of a default constructor?

- ☐ a. Public
- ☐ b. private
- ☒ c. Same as class accessibility modifier
- ☐ d. default

Q4. We can declare constructor as private?

- ☒ a. Yes
- ☐ b. No

Q5. Which of the following is/are true about constructors in Java? A) Constructor name should be same as class name. B) If you dont define a constructor for a class, a default parameter less constructor is automatically created by the compiler. C) The default constructor calls super() and initializes all instance variables to default value like 0, null. D) If we want to parent class constructor, it must be called in first line of constructor.

- ☐ a. 1
- ☒ b. 1, 2
- ☐ c. 1, 2 and 3
- ☐ d. 1, 2, 3 and 4

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Using constructors for creating Objects

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Simulator


execute

Output

Area of Square is

Syntax

```
public class ClassName {
    public ConstructorName() {
        System.out.println("text")
    }
    public static void main(String args[]){
        ClassName objectName = new ClassName();
    }
}
```



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Using constructors for creating Objects

Q1. public class Test {} What is the prototype of the default constructor?

☒ a: public Test()

☐ b: Test()

☐ c: Test(void)

☐ d: None of the above

Q2. In which access should a constructor be defined, so that object of the class can be created in any function?

☒ a: Public

☐ b: Protected

☐ c: Private

☐ d: Any access specifier will work

Q3. Default constructor must be defined, if parameterized constructor is defined and the object is to be created without arguments.

☐ a: False

☒ b: True

Q4. Which of the modifier can't be used for constructor_____?

☒ a: Static

☐ b: Protected

☐ c: Private

☐ d: Public

Q5. The implicit return type of a constructor is_____.

☒ a: A class object in which it is defined

☐ b: Void

☐ c: There is no return type

☐ d: None of the above

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Conclusion:

Constructors in Java are special methods used to initialize objects at creation time. They share the class name, have no return type, and can be default (no-argument) or parameterized. They ensure objects start with proper values instead of defaults like 0 or null.