



Session 1- Java: An introduction

Exercises

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Session 1: Exercises

Multiple Choice Question

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Introduction To Java

Q1. What is java?

- A. Completely object-oriented language
- B. Partially object-oriented language
- C. Object based language
- D. Structured language

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Introduction To Java

Q2. What is the acronym for OOP?

- A. Object Oriented Programming
- B. Object Orientation programming
- C. Object Oriented Program
- D. Object Oriented Procedure

Introduction To Java

Q3. JVM does not contain which of the following?

- A. Bytecode verifier
- B. Class loader
- C. Java standard class libraries
- D. Security Manager

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Introduction To Java

Q4. Bundling attributes and methods together is called?

- A. Abstraction
- B. Data Hiding
- C. Implementation Hiding
- D. Encapsulation

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Introduction To Java

Q5. A user-defined data type that defines a collection of objects that share the same characteristics.

- A. Object
- B. Class
- C. Array
- D. Method

Introduction To Java

Q6. Which of the following are access specifiers in java?

- A. public
- B. private
- C. static
- D. void

Introduction To Java

Q7. What will happen when you compile or execute the following code?

```
public class Test {  
    public static void main() {  
        System.out.println("Hello Nityo");  
    }  
}
```

- A. Code will not compile
- B. Code will execute and print "Hello Nityo"
- C. Code will throw an exception at runtime
- D. Code will execute and print nothing

Introduction To Java

Q8. _____ the ability of a generalized request (message) to produce different results based on the object that it is sent to.

- A. Inheritance
- B. Abstraction
- C. Polymorphism
- D. Encapsulation

Introduction To Java

Q9. _____ feature of OOPS that means ignoring the non-essential details of an object and concentrating on its essential features.

- A. Inheritance
- B. Encapsulation
- C. Abstraction
- D. Polymorphism

Introduction To Java

Q10. What part of object-oriented technology defines superclass and subclass relationships?

- A. Inheritance
- B. Scalability
- C. Encapsulation
- D. Polymorphism

Introduction To Java

Q11. What term is used to describe the internal representation of an object that is hidden from view outside the object's definition?

- A. Encapsulation
- B. Expandable
- C. Polymorphism
- D. Inheritance

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Q12. Java 7 is called as?

- A. Dolphin
- B. Mustang
- C. Tiger
- D. Merlin

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Introduction To Java

Q13. Which of the following is not a feature of the Java language?

- A. Multithreaded
- B. Pointers
- C. Static binding of class libraries
- D. Strong platform specific class libraries

Introduction To Java

Q14. Which of the following is/are true?

- A. Java code can compiled in any OS
- B. Java bytecode is platform independent
- C. Only JRE is required to execute java code
- D. JDK must be downloaded in order to execute java code

Introduction To Java

Q15. Which of the following does JRE consist of?

- A. JVM
- B. JDK
- C. Standard java classes
- D. JNI

Introduction To Java

Q16. What happens when you compile or execute the code?

1. **public class Test {**
2. **public static void main(String as[]) {**
3. **int i;**
4. **System.out.print(i);**
5. **}**
 - A. There is a compilation error at line 4
 - B. Code compiles clean and displays 0
 - C. Code compiles clean and displays garbage value
 - D. Code compiles clean but throws an exception at runtime

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Q17. public class Test{

```
    public static void main(String[] args) {  
        short s1 = 1;      //Line 1  
        final char c1 = 1; //Line 2  
        byte b1 = s1;     //Line 3  
        byte b2 = c1;     //Line 4
```

} A compile-time error is generated at which line?

- A. 1
- B. 2
- C. 3
- D. 4

Introduction To Java

```
Q18. public class Test {  
    public static void main (String[] args) {  
        byte b = 1; // 1  
        int i = 100; // 2  
        _____ // 3
```

} What can you insert at line 3 so that the code compiles and run?

- A. b=i+1;
- B. b += i;
- C. i=b+1;
- D. b=b+1;

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Introduction To Java

Q19. public class Test {

```
int j; //line 1  
public static void main(String str[]) {  
    int i=0; // line 2  
    System.out.println(i); // line 3  
    System.out.println(j); //line 4
```

} } The code above:

- A. Compiles clean and displays 0 for both i and j
- B. Generates compilation error at line 1
- C. Generates compilation error at line 2
- D. Generates compilation error at line 3
- E. Generates compilation error at line 4

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Introduction To Java

Q20. public class Loop {

```
    public static void main(String as[]){
        while(1)      {
            System.out.println("Ok");
        }
    }
```

What will happen when you compile or execute this code?

- A. prints “Ok” continuously
- B. Code will not compile
- C. Code will generate an error at runtime
- D. Nothing is displayed

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Introduction To Java

Q21. public class Test {
 public static void main(String[] args) {
 for(int j = 0; j < 1 ; j++) {
 if (j < 1) continue inner;
 inner:
 for(int i = 0; i < 2; i++)
 {
 System.out.println("Hello world");
 }
 }
 }
}

What will happen when you compile or execute this code?

- A. The code will not compile
- B. It will run and print "Hello world" twice
- C. It will run and print "Hello world" once
- D. It will run and print "Hello world" thrice

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Introduction To Java

Q22. Which of the following is/are NOT valid variable name declaration?

- A. %name
- B. \$xyz
- C. String
- D. Main
- E. 2number

Introduction To Java

Q23. Select the invalid assignments:

- A. int i = (int)16.2d;
- B. byte b = (byte)(long)16.2;
- C. float f = 16.2;
- D. byte b = (int)16.2;

Introduction To Java

```
Q24. public class Test {  
    public static void main(String[] args) {  
        int x=10;  
        double y=10/3;  
        System.out.println(y);  
    }  
}
```

What does the code print?

- A. 3.0
- B. 3.3333333
- C. 3
- D. Compilation error

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Introduction To Java

```
Q25. public class Test {  
    public static void main(String[] args){  
        float x=10f;  
        float y=10/3;  
        System.out.println(y);  
    }  
}
```

What does the code print?

- A. 3.0
- B. 3.3333333
- C. 3
- D. Compilation error

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```
Q26. public class Test
{
    public static void display(boolean b1)
    {
        System.out.print("Boolean");
    }
    public static void display(byte b1)
    {
        System.out.print("byte ");
    }
    public static void display(int i1)
    {
        System.out.print("int");
    }
    public static void main(String[] args)
    {
        byte b1; display(b1 = 1); display(b1 == 1);
    }
}
```

What is the result of attempting to compile and run the program?

- A. Prints: int Boolean
- B. Prints: byte Boolean
- C. Prints: Boolean Boolean
- D. Compilation error

Introduction To Java

```
Q27. public class Test1{
    int[] i1 = {1}, i2 = {3};
    void m1() {
        m2(i1, i2);
        System.out.print(i1[0] + "," + i2[0]);
    }
    void m2(int[] i1, int[] i2) {
        int[] i3 = i1;
        this.i1 = i2;
        this.i2 = i3;
    }
    public static void main (String[] args) {
        new Test1().m1();
    }
}
```

The code above:

- A. Prints:0,0
- B. Prints:1,1
- C. Prints:1,3
- D. Prints : 3,1

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Q28. Overloading requires:

- A. Different method signatures
- B. Same method name but different arguments
- C. Same method name and number of arguments but different order of arguments
- D. Same name but different arguments and return type

Introduction To Java

Q29. public class A {

```
public static void main(String[] args) {
    char a = 'a', b = 'b';
    System.out.print(a + b + "" + a + b);
}
```

Given that ascii code for 'a' = 97, 'b'=98 what is the result of attempting to compile and run the program?

- A. Prints ab195
- B. Prints:195ab
- C. Prints: 195195
- D. Prints: abab

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Introduction To Java

Q30. public class Employee{
 private void display(){
 private String msg="Hello"; // line 1
 System.out.println(msg);
 }
 public static void main(String str[]){
 new Employee().display(); //line 2
 }}The code above:

- A. Code prints: Hello
- B. Code prints nothing
- C. Compilation error occurs at line marked 1
- D. Compilation error occurs at line marked 2

Introduction To Java

Q31. There is exactly one copy of this variable in existence, regardless of how many times the class has been instantiated.

The statement above is referring to:

- A. Local variable
- B. Global variable
- C. Instance variable
- D. Static variable

Introduction To Java

Q32. Which of the following is false?

- A. Class name and constructor name must be same
- B. Constructor does not have return type
- C. Constructor must be public
- D. Constructor cannot be static

Introduction To Java

Q33. `public class Person {
 1. private String name;
 2. public static void main(String str[]) {
 3. Person p=new Person();
 4. _____
 5. System.out.print(p.name);
 6. }
}`

What statement can be put in line 4 so that the code prints “Machiel”?

- A. `p.name=“Machiel”;`
- B. `p.setName(“Machiel”);`
- C. `name=“Machiel”;`
- D. None of the above

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Introduction To Java

Q34. public class Test{

```
public static int m1(int x) {return ++x;}  
public static void main (String[] args) {  
    int x = 1;  
    int y = m1(x);  
    System.out.println(x + "," + y);  
}
```

What is the result of attempting to compile and run the program?

- A. prints 1,2
- B. prints 1,1
- C. Compilation error. m1() cannot be called without Test instance
- D. Prints nothing

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Introduction To Java

```
Q35. public class A {  
    public A() {}          // Line1  
    private int A;         // Line2  
    public void A() {}    // Line3  
}
```

Which line causes compilation error?

- A. Line marked 1 because method does not have return type
- B. Line marked 2 because member variable name and class name clash
- C. Line marked 3 because method name is same as the class name
- D. There is no compilation error anywhere

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Introduction To Java

Q36. ~~public class Test{~~

```
private static int x=1;  
public static void m1(int i) {x++; i++;}  
public static void main (String[] args) {  
    int y=3;  
    m1(y);  
    System.out.println(x + "," + y); }}
```

What is the result of attempting to compile and run the program?

- A. prints 1,3
- B. prints 2,3
- C. Prints 1,4
- D. Prints 2,4

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```
Q37. public class Test1 {  
    public static void main(String[] args) {  
        int[][] a1 = {{1,2},{3,4,5},{6,7,8,9},{}};  
        for (int i = 0; i < a1.length; i++) {  
            System.out.print(a1[i].length+",");  
        }  
    }  
}
```

} What is the result of attempting to compile and run the program?

- A. Prints: 2,3,4,0,
- B. Prints: 1,2,5,0,
- C. Compile-time error
- D. Run-time error

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Introduction To Java

```
Q38. int a[]={1,2,3,4,5};  
      for( ____ )  
          System.out.println(j);
```

What needs to be filled in order to print the content of the array?

- A. j:a
- B. int j:a
- C. a:int j
- D. int a:j

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Introduction To Java

Q39. Test1.java(is source file name)

```
package a;  
package b;  
public class Test1 {  
    public static void main(String[] args) {}  
}  
public class Test2{  
    public static void main(String[] args) {}  
}
```

} What is/are the problems with the code?

- A. There are two package statements. There can be only 1
- B. There are two main methods. There can be only 1
- C. There are two public classes. There can be only 1
- D. The file must be named as Test2.java

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Introduction To Java

Q40. Which of the following are Package naming conventions?

- A. Must begin with lower case
- B. Must not contain numbers
- C. Must be all in lower case
- D. Must be a single letter

Introduction To Java

Q41. What of the following packages are imported automatically?

- A. javax.lang
- B. java.lang.*
- C. java.util
- D. java.io

Introduction To Java

Q42. The import statement in Java:

- A. Includes the source file of the specified classes with the current file before compiling
- B. Includes the class files of the specified classes with the current class file before after compiling
- C. Loads the class files on demand
- D. Allows the current code to access classes which are declared in other packages without using their full name

Introduction To Java

Q43. Select the code snippets which is/are NOT correct?

- A. package Student;
import java.lang. *;
public class Grade{}
- B. import java.lang. *;
package student;
public class Grade{}
- C. package student;
import java.lang. *;
public class Grade{}
public class Teacher{}
- D. import java.*;
import java.lang. *;
public class Grade{}

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Introduction To Java

Q44. package a;

```
class A{  
    int i;  
    A(){}  
}  
  
package b;  
  
public class B{}
```

For class B to access “i” of class A, which of the following is/are necessary?

- A. class A must be declared public
- B. Constructor A(){} must be declared public
- C. int i must be declared public
- D. None of the above

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Introduction To Java

Q45. Which of the following is TRUE?

- A. In java, an instance field declared public generates a compilation error
- B. Int is the name of a class available in the package java.lang
- C. Instance variable names may only contain letters and digits
- D. A class has always a constructor (possibly automatically supplied by the java compiler)

Session 1: Exercises

Hands-On Exercises

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Introduction To Java

- Q1.** Write a program to print default values of all primitive types.
- Q2.** Write a program to declare all primitive data types with all possible types of initialization and also check implicit and explicit type casting by assigning them to each other.
- Q3.** Write a program to find whether a number is Prime or not.
- Q4.** Write a program to calculate average of the n number using a separate function other than main.

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Introduction To Java

Q5. Write a program to display number matrix as follows using Two Dimensional Rectangular Array.

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

Q6. Write a program using loop to display “*” in below order.

*			
*	*		
*	*	*	
*	*	*	*

Q7. Try to execute java program by giving different name to class and file.

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Introduction To Java

Q8. Try to compile and execute java program by defining main

- A. Without public modifier
- B. Without static modifier
- C. Without function parameter

Q9. Write a program to test:

- A. to modify const member.
- B. to access static member in a non-static method.
- C. create a class with one argument constructor and try to instantiate object without parameter.

Q10. Write a program using Switch-case to print number of days in a month. For the month of February check for leap year and calculate.

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Questions & Answers Session



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