09/03/2023

1) Write a sample programs using data types  
2) Write a sample programs using access modifiers  
3) Write a sample program for addition of two numbers.  
4) Write a program using methods with return type and without return types and use instance methods and static methods

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| --- |
| 5) Fibonacci Series in Java |
| 6) Prime Number Program in Java |
| 7) Palindrome Program in Java |
| 8) Factorial Program in Java |
| 9) Armstrong Number in Java |
| 10) How to Generate Random Number in Java |
| 11) How to Print Pattern in Java |
| 1) Write a method which accepts Name of a person as a parameter returns a Welcome message. To test call this method from the main method and display the output in the main method eg. If the person enters John then it should return Hello John Welcome to Java World |
| 10/03/2023  1)write a sample program for default constructor and provide default values for the variable  2)write a default constructor and print some message in the console 3)write a sample program for parameterized constructor 4)write a sample program for constructor overloading |
| 1)write a sample program for WideningTypeCasting 2)write a sample program for Narrowing Type Casting 3) Java Program to demonstrate the use of static variable |
| 1) write a sample program using if statements 2) write a sample program using switch 3)write a sample programs using below statements  o do while loop o while loop o for loop o for-each loop  4)write a sample program using below statements  1. Jump statements o break statement o continue statemet |
|  |

13/03/2023

**1.** Write a Java program to print 'Hello' on screen and then print your name on a separate line.    
Expected Output :  
Hello  
Alexandra Abramov

**2.** Write a Java program to print the sum of two numbers.    
Test Data:  
74 + 36  
Expected Output :  
110

**3.** Write a Java program to divide two numbers and print on the screen.    
Test Data :  
50/3  
Expected Output :  
16

**4.** Write a Java program to print the result of the following operations.  Test Data:  
a. -5 + 8 \* 6  
b. (55+9) % 9  
c. 20 + -3\*5 / 8  
d. 5 + 15 / 3 \* 2 - 8 % 3  
Expected Output :  
43  
1  
19  
13

**5.** Write a Java program that takes two numbers as input and display the product of two numbers.   
Test Data:  
Input first number: 25  
Input second number: 5  
Expected Output :  
25 x 5 = 125

**6.** Write a Java program to print the sum (addition), multiply, subtract, divide and remainder of two numbers.

Test Data:  
Input first number: 125  
Input second number: 24  
Expected Output :  
125 + 24 = 149  
125 - 24 = 101  
125 x 24 = 3000  
125 / 24 = 5  
125 mod 24 = 5

**7.** Write a Java program that takes a number as input and prints its multiplication table upto 10.   
Test Data:  
Input a number: 8  
Expected Output :  
8 x 1 = 8  
8 x 2 = 16  
8 x 3 = 24  
...  
8 x 10 = 80

**8.** Write a Java program to display the following pattern.    
Sample Pattern :

J a v v a

J a a v v a a

J J aaaaa V V aaaaa

JJ a a V a a

**9.** Write a Java program to compute the specified expressions and print the output   
Test Data:  
((25.5 \* 3.5 - 3.5 \* 3.5) / (40.5 - 4.5))  
Expected Output  
2.138888888888889

**10.** Write a Java program to compute a specified formula.

Specified Formula :  
4.0 \* (1 - (1.0/3) + (1.0/5) - (1.0/7) + (1.0/9) - (1.0/11))  
Expected Output  
2.9760461760461765

**11.** Write a Java program to print the area and perimeter of a circle.  Test Data:  
Radius = 7.5  
Expected Output  
Perimeter is = 47.12388980384689  
Area is = 176.71458676442586

**12.** Write a Java program that takes three numbers as input to calculate and print the average of the numbers.

**13.** Write a Java program to print the area and perimeter of a rectangle.

Test Data:  
Width = 5.5 Height = 8.5

Expected Output  
Area is 5.6 \* 8.5 = 47.60  
Perimeter is 2 \* (5.6 + 8.5) = 28.20

**14.** Write a Java program to print an American flag on the screen

Expected Output

\* \* \* \* \* \* ==================================

\* \* \* \* \* ==================================

\* \* \* \* \* \* ==================================

\* \* \* \* \* ==================================

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**15.** Write a Java program to swap two variables.

**16.** Write a Java program to print a face.

Expected Output

+"""""+

[| o o |]

| ^ |

| '-' |

+-----+

**17.** Write a Java program to add two binary numbers.   
Input Data:  
Input first binary number: 10  
Input second binary number: 11  
Expected Output

Sum of two binary numbers: 101

**18.** Write a Java program to multiply two binary numbers   
Input Data:  
Input the first binary number: 10  
Input the second binary number: 11  
Expected Output

Product of two binary numbers: 110

**19.** Write a Java program to convert a decimal number to binary number.  Input Data:  
Input a Decimal Number : 5  
Expected Output

Binary number is: 101

**20.** Write a Java program to convert a decimal number to hexadecimal number.  Input Data:  
Input a decimal number: 15  
Expected Output

Hexadecimal number is : F

14/03/2023

1)Write a sample program for inheritance in java

2)Write a sample program for Single inheritance in java

3)Write a sample program for multilevel inheritance in java

4)Write a sample program for Hierarchical inheritance in java

5)Give me soma example for why java doesn’t support multiple inheritance in java

6)write a program for an Example of Abstract class that has an abstract method providea implementation in subclass

7)create a abstract class which will have shape method and provide multiple subclasses

8)write a program for Abstract class having constructor, data member and methods

1)write an example for method overloading

2)write an example for methodoverriding

3)write an example for operatoroverloading

4)write an example for Dynamic Polymorphism

5)write a program for Change in Software Requirement from page no:104 in the document

6)write an example for encapsulation in java.

7)write an example for super keyword using method,constructor and variable

8)write an example for this keyword using method,constructor and variable

9)write an example for final keyword for class,method and variable

**21.** Write a Java program to convert a decimal number to octal number.  Input Data:  
Input a Decimal Number: 15  
Expected Output

Octal number is: 17

**22.** Write a Java program to convert a binary number to decimal number.  Input Data:  
Input a binary number: 100  
Expected Output

Decimal Number: 4

**23.** Write a Java program to convert a binary number to hexadecimal number.  Input Data:  
Input a Binary Number: 1101  
Expected Output

HexaDecimal value: D

**24.** Write a Java program to convert a binary number to a Octal numberInput Data:  
Input a Binary Number: 111  
Expected Output

Octal number: 7

**25.** Write a Java program to convert a octal number to a decimal number.  Input Data:  
Input any octal number: 10  
Expected Output

Equivalent decimal number: 8

15/03/2023

1)write a program using Java String trim() method

2)write a program Java String startsWith() and endsWith() method

3)write a program using Java String charAt() Method

4)write a program using Java String length() Method

5)write a program using Java String intern() Method

6)write a program using Java String valueOf() Method

7)write a program using Java String replace() Method

8)write a program using Java String equals() method

9)Write a java program using java ==

10) Example of Java substring() method

11)write a example using String.split() method:

12)Example to create Immutable class

13) Example of Java toString() method

14) Example of Java Regular Expressions

15)example using Regular Expression Character classes and Quantifiers Example

16)example using Regular Expression Metacharacters Example

)write a program using try and catch block in exceptionhandling.

2)write a program using multiple catch blocks in exceptionhandling

3)write a program on How to Catch multiple exceptions

4)write a program on Nested try catch block in Java

5) Simple Example of finally block

6)write an example of finally block and return statement

7)write an example on Finally and Close()

8) Finally block without catch

9) Finally block and System.exit()

10) Examples of Try catch finally blocks

**26.** Write a Java program to convert a octal number to a binary number.  Input Data:  
Input any octal number: 7  
Expected Output

Equivalent binary number: 111

**27.** Write a Java program to convert a octal number to a hexadecimal number.  Input Data:  
Input a octal number : 100  
Expected Output

Equivalent hexadecimal number: 40

**28.** Write a Java program to convert a hexadecimal to a decimal number.  Input Data:  
Input a hexadecimal number: 25  
Expected Output

Equivalent decimal number is: 37

**29.** Write a Java program to convert a hexadecimal to a binary number.  Input Data:  
Enter Hexadecimal Number : 37  
Expected Output

Equivalent Binary Number is: 110111

**30.** Write a Java program to convert a hexadecimal to a octal number.  Input Data:  
Input a hexadecimal number: 40  
Expected Output

Equivalent of octal number is: 100

16/03/2023

1. example demonstrate the working of finally block when no exception occurs in try block
2. working of finally block when an exception occurs in try block but is not handled in the catch block:
3. When exception occurs in try block and handled properly in catch block
4. Examples of throw keyword
5. Example of throws Keyword
6. Exception propagation using throws keyword
7. throw and throws keyword example
8. When you don’t handle exception that is declared using throws
9. Example of User defined exception in Java

InnerClasses:

1. example of how you can declare inner classes in Java

### 2)example for Accessing Members of Outer Class within Inner Class

### 3)example for Static Inner Class

1. Java Thread Example by extending Thread class
2. Java Thread Example by implementing Runnable interface
3. Using the Thread Class: Thread(String Name)
4. Example of the sleep() method in Java : on the custom thread
5. Example of the sleep() Method in Java : on the main thread
6. Example of the sleep() Method in Java: When the sleeping time is -ive
7. Example: Create a new File
8. Example: Read a file using FileReader
9. Example: Write to file using FileWriter
10. Example: Delete a file

**31.** Write a Java program to check whether Java is installed on your computer.

Expected Output

Java Version: 1.8.0\_71

Java Runtime Version: 1.8.0\_71-b15

Java Home: /opt/jdk/jdk1.8.0\_71/jre

Java Vendor: Oracle Corporation

Java Vendor URL: http://Java.oracle.com/

Java Class Path: .

**32.** Write a Java program to compare two numbers.  Input Data:  
Input first integer: 25  
Input second integer: 39  
Expected Output

25 != 39

25 < 39

25 <= 39

**33.** Write a Java program and compute the sum of the digits of an integer.

Input Data:  
Input an integer: 25  
Expected Output

The sum of the digits is: 7

**34.** Write a Java program to compute the area of a hexagon.  Area of a hexagon = (6 \* s^2)/(4\*tan(π/6))  
where s is the length of a side  
Input Data:  
Input the length of a side of the hexagon: 6  
Expected Output

The area of the hexagon is: 93.53074360871938

**35.** Write a Java program to compute the area of a polygonArea of a polygon = (n\*s^2)/(4\*tan(π/n))  
where n is n-sided polygon and s is the length of a side  
Input Data:  
Input the number of sides on the polygon: 7  
Input the length of one of the sides: 6  
Expected Output

The area is: 130.82084798405722

17/03/2023

1: Primitive Types to Wrapper Objects

2: Wrapper Objects into Primitive Types

3) How to declare an array in Java?

4) How to Initialize Arrays in Java

5) How to Access Elements of an Array in Java?

6) Using the for-each Loop

7) Compute Sum and Average of Array Elements

8) How to initialize a 2d array in Java?

9) 2-dimensional Array example

10) Print all elements of 2d array Using Loop

11)what is the purpose of java comments

1)what is the purpose of collection framework in java

2)what is framework in java

3)example of arraylist

4)example of hashset

5) Example of linked list

6)example of linkedhashset

7)example of treeset

8)example hashmap

9)example of linkedhashmap

10)example of treemap

11)example of Change an element in ArrayList

12)example of Iterating ArrayList using for each loop

**36.** Write a Java program to compute the distance between two points on the surface of earth.

Distance between the two points [ (x1,y1) & (x2,y2)]  
d = radius \* arccos(sin(x1) \* sin(x2) + cos(x1) \* cos(x2) \* cos(y1 - y2))  
Radius of the earth r = 6371.01 Kilometers  
Input Data:  
Input the latitude of coordinate 1: 25  
Input the longitude of coordinate 1: 35  
Input the latitude of coordinate 2: 35.5  
Input the longitude of coordinate 2: 25.5  
Expected Output

The distance between those points is: 1480.0848451069087 km

**37.** Write a Java program to reverse a string.    
Input Data:  
Input a string: The quick brown fox  
Expected Output

Reverse string: xof nworb kciuq ehT

**38.** Write a Java program to count the letters, spaces, numbers and other characters of an input string.

Expected Output

The string is : Aa kiu, I swd skieo 236587. GH kiu: sieo?? 25.33

letter: 23

space: 9

number: 10

other: 6

**39.** Write a Java program to create and display unique three-digit number using 1, 2, 3, 4. Also count how many three-digit numbers are there.  Expected Output

123

124

...

431

432

Total number of the three-digit-number is 24

**40.** Write a Java program to list the available character sets in charset objects.

Expected Output

List of available character sets:

Big5

Big5-HKSCS

CESU-8

EUC-JP

EUC-KR

GB18030

GB2312

GBK

...

x-SJIS\_0213

x-UTF-16LE-BOM

X-UTF-32BE-BOM

X-UTF-32LE-BOM

x-windows-50220

x-windows-50221

x-windows-874

x-windows-949

x-windows-950

x-windows-iso2022jp

20/03/2023

13)how to sort the arraylist in java

14) Java example of removing elements from the LinkedList

15) How to loop LinkedList in Java

16) A Simple Example of HashSet in Java

17) Adding duplicate elements

18) Removing elements

19)example of Adding elements from other Collection

20) How to Iterate over a Set/HashSet

1. How to convert a HashSet to a TreeSet
2. Convert HashSet to a List/ArrayList
3. Example of LinkedHashSet
4. TreeSet Example
5. Java HashMap Example
6. Java HashMap example to add() elements
7. Java HashMap example to remove() elements
8. Java HashMap example to replace() elements
9. Java HashMap Example: Book with customized class
10. Java LinkedHashMap Example
11. Java LinkedHashMap Example:remove()
12. Java TreeMap Example
13. Java TreeMap Example: Book with customized class
14. Java Collections Example
15. Example to sort string objects in reverse order
16. Example to sort Wrapper class objects
17. Example to sort user-defined class objects
18. Java Comparable interface example
19. Java Comparator Example

**41.** Write a Java program to print the ascii value of a given character.  Expected Output

The ASCII value of Z is :90

**42.** Write a Java program to input and display your password   
Expected Output

Input your Password:

Your password was: abc@123

**43.** Write a Java program to print the following string in a specific format (see the output).   
Sample Output

Twinkle, twinkle, little star,

How I wonder what you are!

Up above the world so high,

Like a diamond in the sky.

Twinkle, twinkle, little star,

How I wonder what you are

**44.** Write a Java program that accepts an integer (n) and computes the value of n+nn+nnn.  Sample Output:

Input number: 5

5 + 55 + 555

**45.** Write a Java program to find the size of a specified file.

Sample Output:

/home/students/abc.txt : 0 bytes

/home/students/test.txt : 0 bytes

**46.** Write a Java program to display the system time.    
Sample Output:

Current Date time: Fri Jun 16 14:17:40 IST 2017

**47.** Write a Java program to display the current date time in specific format.  Sample Output:

Now: 2017/06/16 08:52:03.066

**48.** Write a Java program to print the odd numbers from 1 to 99. Prints one number per line

Sample Output:

1

3

5

7

9

11

....

91

93

95

97

99

**49.** Write a Java program to accept a number and check the number is even or not. Prints 1 if the number is even or 0 if the number is odd.    
Sample Output:

Input a number: 20

1

**50.** Write a Java program to print numbers between 1 to 100 which are divisible by 3, 5 and by both.   
Sample Output:

Divided by 3:

3, 6, 9, 12, 15, 18, 21, 24, 27, 30, 33, 36, 39, 42, 45, 48, 51, 54, 57

, 60, 63, 66, 69, 72, 75, 78, 81, 84, 87, 90, 93, 96, 99,

Divided by 5:

5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, 60, 65, 70, 75, 80, 85, 90,

95,

Divided by 3 & 5:

15, 30, 45, 60, 75, 90,

<https://www.w3resource.com/java-exercises/basic/index.php>