

What is an array? Explain different type of arrays and also discuss its advantages.
Write a program in java that create and initialize four integer elements in an array and find the sum and average.
Create a java application to get N numbers of string and display them using an array.
Write a java program to demonstrate the array concepts in java.
Write a java program to implement the different array declarations.
Write about conditional statements? Discuss various type with an example.
Create a java program to implement nested for loop.
Discuss various control statement (along with their syntax) available in java with an example code.
Discuss various control statements available in java with flow chart.
Explain about various operator available in java with an example.
What is Inheritance? Discuss its uses and hierarchical abstractions?
What is an inheritance? Explain the benefits of inheritance with an example.
List different types of inheritance in java. Explain each of them in detail with an example program.
Explain different types of inheritance in java using a suitable example.
What is final keyword? Explain its importance in java with an example program.
What is package? Explain different type of packages.
Discuss in detail how packages can be defined and accessed.
Discuss in detail about creating and importing packages with an example.

Write a program to accept number from command line and print square root of the number.

Explain the usage of package in java with an example program.

Write a generic program to bring out the purpose of bounded types and explain.

Write a generic program to read two data items of different data types and display it on screen.

Write a program to find the sum and average of numbers in a generic array.

Write a Generic method to print array of data which belongs to any class type. Analyse generics working with primitive types.

Write a program to find the average of numbers in a generic array.

Explain byte stream and character stream in detail with a example java program.

Explain standard I/O streams which is automatically created with the console with example java program.

Write a java program to illustrate reading input from the user in the command line environment (console) using Buffered Reader class and Scanner class.

Write a java program to illustrate reading input from the user in the command line environment (console) using Console class. List out advantages.

Write a java program to demonstrate various Scanner class methods to read primitive data.

Explain lambda expression with example.

Explain the implementation of functional interface with example.

How the lambda expression provides the implementation of an interface? Give suitable example.

With an example demonstrate the following:

- i. Lambda expression with no parameter (6)

ii. Lambda expression with single parameter (7)
Write the syntax and explain lambda expression with / without parameters.
Explain the various collection interfaces in java with example.
Describe the methods declared in collection interface with example.
Explain the hierarchy of collection framework.
Define an ArrayList and explain its methods.
Explain the List interface with suitable example.
With an example demonstrate the use of PreparedStatement interface.
Write a java application to implement the PreparedStatement using JDBC.
Implement PreparedStatement interface in JDBC.
Write a java program to print all the department names starting with C using PreparedStatement interface.
Write a java program to print all the student names starting with A using PreparedStatement interface.
Create a payroll system using JDBC.
Create a student management system using JDBC.
Create a employee management system using JDBC.
Explain embedded SQL.
Explain JDBC Resultsets.
<b><u>Part – C ( 1 x 15 = 15 Marks)</u></b>
Develop a java application to compute the EB bill amount using the following tariff.  First 100 units - Rs. 2 per unit 101-200 units - Rs. 4.50 per unit 201 -500 units - Rs. 6 per unit > 501 units - Rs. 7 per unit

Write a java application to compute the EB bill amount using the following tariff.

First 100 units - Rs. 1 per unit

101-200 units - Rs. 2.50 per unit

201 -500 units - Rs. 4 per unit

> 501 units - Rs. 6 per unit

Generate an EB Bill using Java for the following tariff.

First 150 units - Rs. 2 per unit

151-250 units - Rs. 7 per unit

251 -1000 units - Rs. 9 per unit

> 1001 units - Rs. 14 per unit

Create a JAVA application to generate a report of the bill using the following tariff.

First 150 units - Rs. 4 per unit

151-250 units - Rs. 8 per unit

251 -1000 units - Rs. 12 per unit

> 1001 units - Rs. 15 per unit

Write a java program to create a bill for the following tariff.

First 150 units - Rs. 4 per unit

151-250 units - Rs. 8 per unit

251 -1000 units - Rs. 12 per unit

> 1001 units - Rs. 15 per unit

Write a program to obtain a string and identify whether it is a palindrome or not.

**Input**

madam

**Output**

madam is a Palindrome

Write a program to obtain a string, substring, and the string that has to replace the substring and print the modified string.

**Input format**

The first line of the input consists of a string.

The second line of the input consists of a substring.

The third line of the input consists of a string that has to replace the substring.

**Input**

audacious

cio

aaa

**Output**

audaaaaus

Write a program to accept a string and convert the first character of each word to uppercase.

**Input**

india is my country

**Ouput**

India Is My Country

Write a program to accept a string and count the number of vowels, consonants present in it.

**Input**

Hello world

**Ouput**

Vowels: 3

Consonants: 7