

1)Write a java program to Convert int to following datatypes

int to long

long to float

float to double

Print all the converted values.

Sample Test Case:

Enter an Integer: 78

After widening values are:

Long value: 78

Float value: 78.0

Double value: 78.0

2)Imagine having a stock trading application that only shows double datatype stock prices.Users occasionally request estimated stock prices in the form of float, long, and int datatypes.

3)Write a java program which takes the stock price and converts the price to display approximately(Observe the Sample Test Case).

Sample Test Case:

Enter the number: 126.321

After narrowing values are:

Float value: 126.321

Long value: 126

Int value: 126

4)You are working on a software project that involves handling user input for various calculations. The user enters numeric values as strings, and you need to convert these strings to decimals for the calculations.

Note: Use Double.parseDouble(String) to convert String to double.

Sample Test Case:

Enter a double value: 14.36

Double value entered: 14.36

5)You are developing software for an inventory management system in a retail store. Part of the system involves entering and processing product prices, which are represented as decimal values. To optimise storage and facilitate calculations, Write a program to convert these prices to integers, rounding them to the nearest cent.

Sample Test case:

Enter a double value: 12.35

Original Value before Casting: 12.35

After Type Casting to short: 12

After Type Casting to int: 12

6)You are working on a software project for an international language education program. The project involves creating a program that allows users to enter keyboard shortcuts for various language characters and symbols. These shortcuts are represented as short data types, and you need to convert them to char data types to display the corresponding characters.

Sample Test Case:

Enter a short value: 65

Original short value: 65

Converted char value: A

7)Raju is a farmer. He wants to take a loan from a bank that offers a low Simple Interest Rate on a certain amount of capital. Raju needs help in calculating S.I with the given parameters p,r,t (prime, rate, time).

8)Write a java program based on above scenario to help Raju.

Sample Test Case:

Enter the principal amount: 850000.56

Enter the rate of interest (in percentage): 3.5

Enter the time (in years): 2.3

Simple Interest: 68425.04508

9)Sarah is learning about the Fibonacci sequence in her maths class. Her teacher asked to start the sequence with two initial values, which are 0 & 1. Sarah is fascinated by this sequence and wants to explore it further.

10)Write a java program that generates the first n numbers in the Fibonacci sequence in Recursive(with using recursion) and Non-recursive way(without using recursion), starting with the initial values of 0 and 1, and then prints them out.

Sample Test Case:

Enter the range: 10

Fibonacci Sequence (Recursive):

0 1 1 2 3 5 8 13 21 34

Fibonacci Sequence (Non-Recursive):

0 1 1 2 3 5 8 13 21 34