

First Weekly Assignment on Java

1. Build a class which has references to other classes. Instantiate these reference variables and invoke instance methods.
2. Write a program in java to create a class name studinfo accept the student information by the member method getdata and inherit it in the base class name marks create method to get marks in derived class and calculate the percentage and display the complete information of student do this for three students.
3. Write a Java program to create an abstract class Instrument with abstract methods play() and tune(). Create subclasses for Piano and Guitar that extend the Instrument class and implement the respective methods to play and tune each instrument.
4. Write a Java program to create an abstract class GeometricShape with abstract methods area() and perimeter(). Create subclasses Triangle and Rectangle that extend the GeometricShape class and implement the respective methods to calculate the area and perimeter of each shape.
5. Write a Java program to demonstrate Upcasting Vs Downcasting
6. Write a java program to create a demo application to understand the role of access modifiers.
7. Write a Java program to demonstrate multiple inner classes(Member, Local and Anonymous Inner class).
8. Write a Java program to create consumer-producer applications by using multiple consumers as well as multiple producers.
9. Write a java program to display your initials on the screen in block letters as shown. For example the name Tapan Kumar.

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T	K K
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T	K K
T	K K
T	K K

10. Create an array of integers and initialize it with some values.

- i) Calculate the sum and average of the array elements.
- ii) Find the maximum and minimum values in the array.
- iii) Print the results.