Java Coding Activity - Transport Fare Calculation

Question Statement:

You are required to design and implement a simple transport booking system using Java interfaces and classes. The objective is to demonstrate the use of interfaces, constants, and polymorphism in calculating transport fares for different types of transport.

What is Given to the User:

You are provided with a 'Transport' interface. This interface contains:

1. Constants for base fare and per km fare for Bus, Train, and Flight.
2. An abstract method 'void bookTicket(String source, String destination)'.
3. An abstract method 'double calcFare(int distance)'.

Example constants in Transport interface:

```
double BUS_BASE_FARE = 50;
double BUS_PER_KM = 1.5;
double TRAIN_BASE_FARE = 100;
double TRAIN_PER_KM = 1.0;
double FLIGHT_BASE_FARE = 500;
double FLIGHT_PER_KM = 5.0;
```

What to Implement:

1. Create three classes 'Bus', 'Train', and 'Flight' that implement the Transport interface.
2. In each class, implement the 'bookTicket' method to display a booking message.
3. Implement the 'calcFare' method to calculate fare using the constants defined in the Transport interface.
4. Create a 'BookingPortal' class that contains a method 'openPortal'.
5. The 'openPortal' method should accept a Transport object, source, destination, and distance as parameters.
6. Inside 'openPortal', call the 'bookTicket' method, then call 'calcFare' to display the calculated fare.

Method Signatures in BookingPortal Class:

```
public void openPortal(Transport t, String source, String destination, int distance)
```