SOURCE CODE

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import java.awt.*;
import java.awt.event.*;
import java.util.HashMap;
import java.util.Map;
import java.util.Random;
public class ParcelTrackingAWT extends Frame {
    static Map<String, Parcel> parcels = new HashMap<>();
    static String[] locations = {
        "Chennai", "Coimbatore", "Madurai", "Trichy", "Salem", "Erode",
        "Tirunelveli", "Vellore", "Thoothukudi", "Dindigul"
    };
    TextField parcelIdField, senderField, receiverField;
    TextArea statusArea;
    Button addParcelButton, trackParcelButton;
    static class Parcel {
        String sender;
        String receiver;
        String status;
        String currentLocation;
        String receiverLocation;
        Parcel(String sender, String receiver, String currentLocation, String
receiverLocation) {
            this.sender = sender;
            this.receiver = receiver;
            this.status = "Dispatched";
            this.currentLocation = currentLocation;
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        this.receiverLocation = receiverLocation;
    }
}
public ParcelTrackingAWT() {
    setTitle("Parcel Tracking System");
    setSize(500, 400);
    setLayout(new FlowLayout());
    add(new Label("Parcel ID:"));
    parcelIdField = new TextField(20);
    add(parcelIdField);
    add(new Label("Sender:"));
    senderField = new TextField(20);
    add(senderField);
    add(new Label("Receiver:"));
    receiverField = new TextField(20);
    add(receiverField);
    addParcelButton = new Button("Add Parcel");
    trackParcelButton = new Button("Track Parcel");
    add(addParcelButton);
    add(trackParcelButton);
    statusArea = new TextArea(10, 40);
    statusArea.setEditable(false);
    add(statusArea);
    addParcelButton.addActionListener(e -> addParcel());
    trackParcelButton.addActionListener(e -> trackParcel());

    addWindowListener(new WindowAdapter() {
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            public void windowClosing(WindowEvent e) {
                System.exit(0);
            }
        });
    }
    void addParcel() {
        String parcelId = parcelIdField.getText();
        if (parcels.containsKey(parcelId)) {
            statusArea.setText("Parcel ID already exists!");
            return;
        }
        String sender = senderField.getText();
        String receiver = receiverField.getText();
        Random random = new Random();
        String currentLocation = locations[random.nextInt(locations.length)];
        String receiverLocation = locations[random.nextInt(locations.length)];
        while (currentLocation.equals(receiverLocation)) {
            receiverLocation = locations[random.nextInt(locations.length)];
        }
        Parcel parcel = new Parcel(sender, receiver, currentLocation,
receiverLocation);
        parcels.put(parcelId, parcel);
        statusArea.setText("Parcel added successfully!\n" +
                           "Current Location: " + currentLocation + "\n" +
                           "Receiver Location: " + receiverLocation);
    }
    void trackParcel() {
        String parcelId = parcelIdField.getText();
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    if (!parcels.containsKey(parcelId)) {
        statusArea.setText("Parcel ID not found!");
        return;
    }
    Parcel parcel = parcels.get(parcelId);
    statusArea.setText("Tracking Parcel: " + parcelId);
    new Thread(() -> {
        try {
            parcel.status = "In Transit";
            updateStatus(parcelId, parcel);
            Thread.sleep(60000);
            parcel.status = "Out for Delivery";
            updateStatus(parcelId, parcel);
            Thread.sleep(60000);
            parcel.status = "Delivered";
            parcel.currentLocation = parcel.receiverLocation;
            updateStatus(parcelId, parcel);
        } catch (InterruptedException ex) {
            ex.printStackTrace();
        }
    }).start();
}
void updateStatus(String parcelId, Parcel parcel) {
    statusArea.setText("Tracking Parcel: " + parcelId + "\n" +
                       "Status: " + parcel.status + "\n" +
                       "Current Location: " + parcel.currentLocation + "\n" +
                       "Receiver Location: " + parcel.receiverLocation);
```

```
    }
    public static void main(String[] args) {
        new ParcelTrackingAWT().setVisible(true);
    }
}
```