

## ASSIGNMENT – COURIER MANAGEMENT SYSTEM

### Coding

#### Task 3: Arrays and Data Structures

**7. Create an array to store the tracking history of a parcel, where each entry represents a location update.**

```
import java.util.*;

public class TrackingHistory {

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);

        System.out.print("Enter number of tracking updates: ");

        int n = sc.nextInt();

        sc.nextLine();

        String[] trackingHistory = new String[n];

        for (int i = 0; i < n; i++) {

            System.out.print("Enter location update " + (i + 1) + ": ");

            trackingHistory[i] = sc.nextLine();

        }

        System.out.println("\n Tracking History:");

        for (int i = 0; i < n; i++) {

            System.out.println((i + 1) + ". " + trackingHistory[i]);

        }

        sc.close();

    }

}
```

```
Enter number of tracking updates: 4
Enter location update 1: Bangalore
Enter location update 2: Chennai Port
Enter location update 3: Local Distribution Centre
Enter location update 4: Out for delivery

Tracking History:
1. Bangalore
2. Chennai Port
3. Local Distribution Centre
4. Out for delivery
```

**8. Implement a method to find the nearest available courier for a new order using an array of couriers.**

```
import java.util.*;
```

```
public class NearestCourier {
    public static int findNearestCourier(int[] courierDistances) {
        int nearestIndex = 0;
        int minDistance = courierDistances[0];

        for (int i = 1; i < courierDistances.length; i++) {
            if (courierDistances[i] < minDistance) {
                minDistance = courierDistances[i];
                nearestIndex = i;
            }
        }

        return nearestIndex;
    }

    public static void main(String[] args) {
        Scanner scanner = new Scanner(System.in);
```

```

System.out.print("Enter number of couriers: ");

int n = scanner.nextInt();

int[] courierDistances = new int[n];


for (int i = 0; i < n; i++) {

    System.out.print("Enter distance of courier: ");

    courierDistances[i] = scanner.nextInt();

}


int nearest = findNearestCourier(courierDistances);

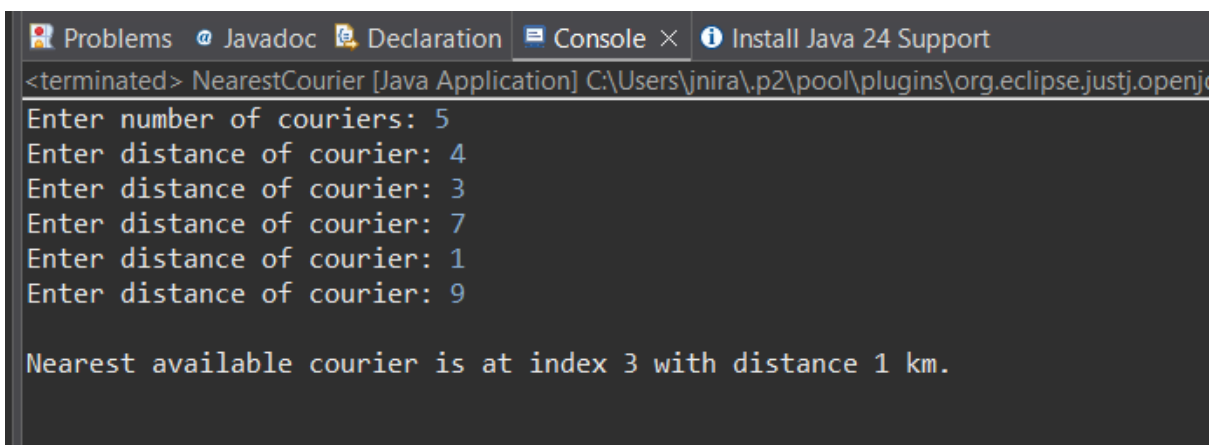

System.out.println("\nNearest available courier is at index " + nearest +
                    " with distance " + courierDistances[nearest] + " km.");


scanner.close();

}

}

```



```

Problems  Javadoc  Declaration  Console ×  Install Java 24 Support
<terminated> NearestCourier [Java Application] C:\Users\jnira\.p2\pool\plugins\org.eclipse.justj.openj
Enter number of couriers: 5
Enter distance of courier: 4
Enter distance of courier: 3
Enter distance of courier: 7
Enter distance of courier: 1
Enter distance of courier: 9

Nearest available courier is at index 3 with distance 1 km.

```

