

# DISASTER MANAGEMENT SYSTEM

```
1  import java.util.ArrayList;
2  import java.util.List;
3  import java.util.Scanner;
4
5  public class Main {
6
7      // Class representing a User
8      static class User { 4 usages
9          String name; 3 usages
10         String location; 3 usages
11         String contactNumber; 3 usages
12
13         // Constructor to initialize user details1
14         User(String name, String location, String contactNumber) {
15             this.name = name;
16             this.location = location;
17             this.contactNumber = contactNumber;
18         }
19
20         // Display user details
21         public void displayUser() { no usages
22             System.out.println("User Name: " + name);
23             System.out.println("Location: " + location);
24             System.out.println("Contact: " + contactNumber);
25         }
26     }
27
28     // Class representing a Disaster
29     static class Disaster { 2 usages
30         String disasterType; 2 usages
31         int severityLevel; 4 usages
32         String locationAffected; 2 usages
33
34         Disaster(String disasterType, int severityLevel, String locationAffected) {
35             this.disasterType = disasterType;
36             this.severityLevel = severityLevel;
37             this.locationAffected = locationAffected;
38         }
39
40         // Display disaster details
41         public void displayDisaster() { 1 usage
42             System.out.println("\nDisaster Type: " + disasterType);
43             System.out.println("Severity Level: " + severityLevel);
44             System.out.println("Location Affected: " + locationAffected);
45         }
46
47         // Return alert message based on disaster severity
48         public String getAlertMessage() { 1 usage
49             if (severityLevel >= 8) {
50                 return "High Severity Disaster! Immediate action required.";
51             } else if (severityLevel >= 5) {
52                 return "Medium Severity Disaster. Prepare for action.";
53             } else {
54                 return "Low Severity Disaster. Monitoring the situation.";
55             }
56         }
57     }
58
59     // Main method to simulate the Disaster Management System
60     public static void main(String[] args) {
61         Scanner scanner = new Scanner(System.in);
```

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```
62
63 // List to hold registered users
64 List<User> users = new ArrayList<>();
65
66 // Register users
67 System.out.print("Enter the number of users to register: ");
68 int numUsers = scanner.nextInt();
69 scanner.nextLine(); // Consume newline
70
71 for (int i = 0; i < numUsers; i++) {
72     System.out.println("\nUser " + (i + 1) + " Registration:");
73
74     System.out.print("Enter Name: ");
75     String name = scanner.nextLine();
76
77     System.out.print("Enter Location: ");
78     String location = scanner.nextLine();
79
80     System.out.print("Enter Contact Number: ");
81     String contactNumber = scanner.nextLine();
82
83     User user = new User(name, location, contactNumber);
84     users.add(user);
85 }
86
87 // Create a Disaster object
88 System.out.println("\nEnter Disaster Details:");
89
90 System.out.print("Enter Disaster Type: ");
91 String disasterType = scanner.nextLine();
92
93 System.out.print("Enter Disaster Severity Level (1-10): ");
94 int severityLevel = scanner.nextInt();
95 scanner.nextLine(); // Consume newline
96
97 System.out.print("Enter Location Affected: ");
98 String locationAffected = scanner.nextLine();
99
100 Disaster disaster = new Disaster(disasterType, severityLevel, locationAffected);
101 disaster.displayDisaster();
102
103 // Send alerts to users in the affected location
104 System.out.println("\nSending Alerts...");
105
106 String alertMessage = disaster.getAlertMessage();
107 for (User user : users) {
108     if (user.location.equalsIgnoreCase(locationAffected)) {
109         System.out.println("\nAlert sent to " + user.name + " at " + user.contactNumber);
110         System.out.println("Message: " + alertMessage);
111     }
112 }
113
114 // Close scanner
115 scanner.close();
116 }
117 }
```

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## OUTPUT

```
Enter the number of users to register: 1
```

```
User 1 Registration:
```

```
Enter Name: John
```

```
Enter Location: trichy
```

```
Enter Contact Number: 9871230983
```

```
Enter Disaster Details:
```

```
Enter Disaster Type: Bridge Repair
```

```
Enter Disaster Severity Level (1-10): 2
```

```
Enter Location Affected: samayapuram
```

```
Disaster Type: Bridge Repair
```

```
Severity Level: 2
```

```
Location Affected: samayapuram
```

```
Sending Alerts...
```

```
Process finished with exit code 0
```