

ActivitySelection.java

```

1  package com.example.array;
2
3  import java.util.ArrayList;
4  import java.util.Arrays;
5  import java.util.Comparator;
6
7  public class ActivitySelection {
8      // Function to perform activity selection
9      public static ArrayList<Integer> activitySelection(int startTimes[], int endTimes[]) {
10         int n = startTimes.length;
11         int activities[][] = new int[n][3];
12
13         for (int i = 0; i < n; i++) {
14             activities[i][0] = i; // Assign activity index
15             activities[i][1] = startTimes[i]; // Assign start time
16             activities[i][2] = endTimes[i]; // Assign end time
17         }
18
19         // Sort activities by their end times in ascending order.
20         Arrays.sort(activities, Comparator.comparingDouble(activity -> activity[2]));
21         int lastEndTime;
22         ArrayList<Integer> selectedActivities = new ArrayList<>();
23         selectedActivities.add(activities[0][0]);
24         lastEndTime = activities[0][2];
25
26         // Iterate through sorted activities to select compatible ones.
27         for (int i = 1; i < n; i++) {
28             if (activities[i][1] >= lastEndTime) {
29                 selectedActivities.add(activities[i][0]);
30                 lastEndTime = activities[i][2];
31             }
32         }
33         return selectedActivities;
34     }
35 }

```

Mutations

- [13](#) 1. changed conditional boundary → KILLED
- 2. negated conditional → KILLED
- [20](#) 1. removed call to java/util/Arrays::sort → SURVIVED
- 2. replaced double return with 0.0d for com/example/array/ActivitySelection::lambda\$activitySelection\$0 → SURVIVED
- [27](#) 1. changed conditional boundary → KILLED
- 2. negated conditional → KILLED
- [28](#) 1. changed conditional boundary → KILLED
- 2. negated conditional → KILLED
- [33](#) 1. replaced return value with null for com/example/array/ActivitySelection::activitySelection → KILLED

Active mutators

- CONDITIONALS_BOUNDARY
- EMPTY_RETURNS
- FALSE_RETURNS
- INCREMENTS
- INVERT_NEGS
- MATH
- NEGATE_CONDITIONALS
- NULL_RETURNS
- PRIMITIVE_RETURNS
- TRUE_RETURNS
- VOID_METHOD_CALLS

Tests examined

- com.example.array.ActivitySelectionTest.testSingleActivity(com.example.array.ActivitySelectionTest) (0 ms)
- com.example.array.ActivitySelectionTest.testActivitySelection(com.example.array.ActivitySelectionTest) (0 ms)
- com.example.array.ActivitySelectionTest.testNoOverlap(com.example.array.ActivitySelectionTest) (0 ms)

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