**package** GreedyAlgorithmLab;

**import** java.util.ArrayList;

**import** java.util.Collections;

**class** activitySelectionUsingGreedy **implements** Comparable<activitySelectionUsingGreedy>

{

**public int activityNumber**;

**public int start**;

**public int end**;

**public** activitySelectionUsingGreedy(**int** activityNumber, **int** start, **int** end) {

**this**.**activityNumber** = activityNumber;

**this**.**start** = start;

**this**.**end** = end;

}

@Override

**public int** compareTo(activitySelectionUsingGreedy o) {

**if** (**this**.**end**>o.**end**) **return** 1;

**else return** -1;

}

}

**class** findActivity

{

**public** ArrayList<activitySelectionUsingGreedy> **arrayList**;

**public int index**;

**public int count**;

**public int check**;

**public** findActivity(ArrayList<activitySelectionUsingGreedy> arrayList) {

**this**.**arrayList** = arrayList;

**this**.**count** = 0;

**this**.**check** = 0;

}

**public void** giveActivity()

{

**for** (activitySelectionUsingGreedy print : **arrayList**)

{

checkActivity(print.**activityNumber**, print.**start**, print.**end**);

}

}

**public void** checkActivity(**int** activityName, **int** start, **int** end)

{

**if** (**count** == 0)

{

**check** = end;

System.***out***.println(**"Activity Number "**+activityName+**", it's start time is "**+start+**" and end time is "**+end);

**count** = **count** + 1;

}

**else**

{

**if** (**check**<start)

{

System.***out***.println(**"Activity Number "**+activityName+**", it's start time is "**+start+**" and end time is "**+end);

**check** = end;

}

}

}

}

**public class** ActivitySelection {

**public static void** main(String[] args) {

**int**[] start = {1,2,4,1,5,8,9,11,13};

**int**[] end = {3,5,7,8,9,10,11,14,16};

ArrayList<activitySelectionUsingGreedy> arrayList = **new** ArrayList<>();

**for** (**int** i=0;i<start.**length**;i++)

{

arrayList.add(**new** activitySelectionUsingGreedy((i+1),start[i],end[i]));

}

Collections.*sort*(arrayList);

findActivity activity = **new** findActivity(arrayList);

activity.giveActivity();

}

}