

Asignatura: Análisis y Diseño de Algoritmo - Laboratorio 'B'

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Semestre: 2021 - B

Este breve informe complementa lo desarrollado en el **Laboratorio 10**. Aquí se encontrarán las capturas de pantalla para los casos de pruebas de los ejercicios mientras que el código y documentación respectiva se encuentran en GitHub.

- **Comentario:** Se utilizó el lenguaje C++ debido a que al intentar resolver los ejercicios usando el lenguaje Java el tiempo de ejecución superaba el límite establecido en la Página Web de 1 segundo. Se intentó mejorar el tiempo de ejecución en el lenguaje Java, pero no se obtuvo ningún resultado positivo. Se adjunta una captura como evidencia de la problemática mencionada.

Submission details

Task:	Road Reparation
Sender:	ahincho
Submission time:	2021-12-17 01:42:50
Language:	Java
Status:	READY
Result:	TIME LIMIT EXCEEDED

Test results ▲

test	verdict	time	
#1	ACCEPTED	0.14 s	»
#2	ACCEPTED	0.14 s	»
#3	ACCEPTED	0.14 s	»
#4	ACCEPTED	0.13 s	»
#5	ACCEPTED	0.13 s	»
#6	TIME LIMIT EXCEEDED	--	»
#7	TIME LIMIT EXCEEDED	--	»
#8	TIME LIMIT EXCEEDED	--	»
#9	TIME LIMIT EXCEEDED	--	»
#10	TIME LIMIT EXCEEDED	--	»
#11	ACCEPTED	0.95 s	»
#12	ACCEPTED	0.13 s	»
#13	ACCEPTED	0.13 s	»
#14	ACCEPTED	0.13 s	»

Code ▲

```
1
2 import java.util.PriorityQueue;
3 import java.util.Scanner;
4
5 public class RoadReparation {
6
7     static int[] path;
```

Code ▲

```
1
2 import java.util.PriorityQueue;
3 import java.util.Scanner;
4
5 public class RoadReparation {
6
7     static int[] path;
8
9     public static void main(String[] args) {
10
11         Scanner sc = new Scanner(System.in);
12
13         int n = sc.nextInt();
14         int m = sc.nextInt();
15         long minimalCost = 0;
16         int edgeCount = 0;
17
18         path = new int[n];
19
20         for(int i = 0; i < n; i++) {
21             path[i] = -1;
22         }
23
24         PriorityQueue<Edge> edges = new PriorityQueue<Edge>();
25
26         for(int i = 0; i < m; i++) {
27             edges.add(new Edge(sc.nextInt(), sc.nextInt(), sc.nextInt()));
28         }
29
30         sc.close();
```

1. Road Reparation - Casos de Prueba

CSES

ahincho

CSES Problem Set

Road Reparation

TASK | SUBMIT | RESULTS | STATISTICS | HACKING

Task: Road Reparation

Code: RoadReparation.cpp

Language: Option:

Submit

Graph Algorithms

...

Planets Queries I

Planets Queries II

Planets Cycles

Road Reparation

Road Construction

Flight Routes Check

Planets and Kingdoms

Giant Pizza

...

Your submissions

2021-12-18 00:35:05

2021-12-17 02:23:25

2021-12-17 02:22:14

2021-12-17 02:19:27

2021-12-17 02:16:33

2021-12-17 01:46:52

2021-12-17 01:42:50

2021-12-16 06:55:18

2021-12-16 06:55:04

2021-12-16 06:51:57

2. Shortest Routes I - Casos de Prueba

CSES

ahincho

CSES Problem Set

Shortest Routes I

TASK | SUBMIT | RESULTS | STATISTICS | HACKING

Task: Shortest Routes I

Code: ShortestRoute1.cpp

Language: Option:

Submit

Graph Algorithms

...

Building Teams

Round Trip

Monsters

Shortest Routes I

Shortest Routes II

High Score

Flight Discount

Cycle Finding

...

Your submissions

2021-12-18 05:40:45

2021-12-18 05:40:28

2021-12-18 05:19:31

2021-12-18 02:16:31

2021-12-18 02:12:58

2021-12-17 03:11:45

2021-12-17 03:11:23

2021-12-17 03:10:41

2021-12-17 03:05:00

2021-12-17 03:01:05

ahincho

CSES Problem Set

Shortest Routes I

[TASK](#)
[SUBMIT](#)
[RESULTS](#)
[STATISTICS](#)
[HACKING](#)

Submission details

Task:

ahincho

Sender:

ahincho

Submission time:

2021-12-18 05:41:36

Language:

C++11

Status:

READY

Result:

ACCEPTED

Test results

test	verdict	time	
#1	ACCEPTED	0.01 s	>>
#2	ACCEPTED	0.01 s	>>
#3	ACCEPTED	0.01 s	>>
#4	ACCEPTED	0.01 s	>>
#5	ACCEPTED	0.01 s	>>
#6	ACCEPTED	0.26 s	>>
#7	ACCEPTED	0.25 s	>>
#8	ACCEPTED	0.26 s	>>
#9	ACCEPTED	0.25 s	>>
#10	ACCEPTED	0.25 s	>>
#11	ACCEPTED	0.15 s	>>
#12	ACCEPTED	0.13 s	>>
#13	ACCEPTED	0.01 s	>>

Graph Algorithms

...

Building Teams

Round Trip

Monsters

Shortest Routes I

Shortest Routes II

High Score

Flight Discount

Cycle Finding

...

Your submissions

2021-12-18 05:41:36

2021-12-18 05:40:45

2021-12-18 05:40:28

2021-12-18 05:19:31

2021-12-18 02:16:31

2021-12-18 02:12:58

2021-12-17 03:11:45

2021-12-17 03:11:23

2021-12-17 03:10:41

2021-12-17 03:05:00

3. Shortest Routes II - Casos de Prueba

ahincho

CSES Problem Set

Shortest Routes II

[TASK](#)
[SUBMIT](#)
[RESULTS](#)
[STATISTICS](#)
[HACKING](#)

Task: Shortest Routes II

Code:

Seleccionar archivo

ShortestRoutes2.cpp

Language:

C++

Option:

C++11

Submit

Graph Algorithms

...

Round Trip

Monsters

Shortest Routes I

Shortest Routes II

High Score

Flight Discount

Cycle Finding

Flight Routes

...

Your submissions

2021-12-18 07:19:38

2021-12-18 07:18:31

2021-12-18 07:18:06

2021-12-18 07:16:48

2021-12-18 07:16:32

2021-12-18 07:15:53

2021-12-18 07:13:03

2021-12-18 07:12:19

2021-12-18 07:10:59

2021-12-18 07:10:02

ahincho

CSES Problem Set

Shortest Routes II

[TASK](#)
[SUBMIT](#)
[RESULTS](#)
[STATISTICS](#)
[HACKING](#)

Submission details

Task:

ahincho

Sender:

ahincho

Submission time:

2021-12-18 07:23:13

Language:

C++11

Status:

READY

Result:

ACCEPTED

Test results

test	verdict	time	
#1	ACCEPTED	0.01 s	>>
#2	ACCEPTED	0.01 s	>>
#3	ACCEPTED	0.01 s	>>
#4	ACCEPTED	0.01 s	>>
#5	ACCEPTED	0.01 s	>>
#6	ACCEPTED	0.39 s	>>
#7	ACCEPTED	0.38 s	>>
#8	ACCEPTED	0.38 s	>>
#9	ACCEPTED	0.38 s	>>
#10	ACCEPTED	0.38 s	>>
#11	ACCEPTED	0.40 s	>>
#12	ACCEPTED	0.42 s	>>
#13	ACCEPTED	0.01 s	>>

Graph Algorithms

...

Round Trip

Monsters

Shortest Routes I

Shortest Routes II

High Score

Flight Discount

Cycle Finding

Flight Routes

...

Your submissions

2021-12-18 07:23:13

2021-12-18 07:19:38

2021-12-18 07:18:31

2021-12-18 07:18:06

2021-12-18 07:16:48

2021-12-18 07:16:32

2021-12-18 07:15:53

2021-12-18 07:13:03

2021-12-18 07:12:19

2021-12-18 07:10:59

4. Longest Flight Route - Casos de Prueba

CSES

ahincho — ⓘ ↗

CSES Problem Set

Longest Flight Route

TASK

SUBMIT

RESULTS

STATISTICS

HACKING

Task: Longest Flight Route

Code:

Seleccionar archivo

 LongestFlightRoute.cpp

Language:

C++

 Option:

C++11

Submit

Graph Algorithms

...

Flight Routes

Round Trip II

Course Schedule

Longest Flight Route

Game Routes

Investigation

Planets Queries I

Planets Queries II

...

Your submissions

2021-12-19 02:17:43

2021-12-19 02:17:17

2021-12-19 02:16:32

2021-12-19 02:16:08

2021-12-19 02:13:30

2021-12-19 02:09:25

2021-12-18 17:03:04

2021-12-18 16:55:58

2021-12-18 16:55:08

2021-12-18 16:54:43

CSES

ahincho — ⓘ ↗

CSES Problem Set

Longest Flight Route

TASK

SUBMIT

RESULTS

STATISTICS

HACKING

Submission details

Task: [Longest Flight Route](#)

Sender: ahincho

Submission time: 2021-12-19 02:19:33

Language: C++11

Status: READY

Result: **ACCEPTED**

Test results ▲

test	verdict	time	
#1	ACCEPTED	0.01 s	»
#2	ACCEPTED	0.01 s	»
#3	ACCEPTED	0.01 s	»
#4	ACCEPTED	0.01 s	»
#5	ACCEPTED	0.01 s	»
#6	ACCEPTED	0.15 s	»
#7	ACCEPTED	0.16 s	»
#8	ACCEPTED	0.16 s	»
#9	ACCEPTED	0.16 s	»
#10	ACCEPTED	0.15 s	»
#11	ACCEPTED	0.14 s	»
#12	ACCEPTED	0.15 s	»
#13	ACCEPTED	0.01 s	»

Graph Algorithms

...

Flight Routes

Round Trip II

Course Schedule

Longest Flight Route

Game Routes

Investigation

Planets Queries I

Planets Queries II

...

Your submissions

2021-12-19 02:19:33

2021-12-19 02:17:43

2021-12-19 02:17:17

2021-12-19 02:16:32

2021-12-19 02:16:08

2021-12-19 02:13:30

2021-12-19 02:09:25

2021-12-18 17:03:04

2021-12-18 16:55:58

2021-12-18 16:55:08

5. Flight Discount - Casos de Prueba

CSES

ahincho — ⓘ ↗

CSES Problem Set

Flight Discount

TASK

SUBMIT

RESULTS

STATISTICS

HACKING

Task: Flight Discount

Code:

Seleccionar archivo

 FlightDiscount.cpp

Language:

C++

 Option:

C++11

Submit

Graph Algorithms

...

Shortest Routes I

Shortest Routes II

High Score

Flight Discount

Cycle Finding

Flight Routes

Round Trip II

Course Schedule

...

Your submissions

2021-12-19 05:02:52

2021-12-19 05:01:57

2021-12-19 05:01:50

2021-12-19 05:01:34

2021-12-19 05:01:27

2021-12-19 05:00:57

2021-12-19 05:00:48

2021-12-19 04:59:57

2021-12-19 04:58:10

2021-12-19 04:57:16

CSES Problem Set

Flight Discount

[TASK](#) | [SUBMIT](#) | [RESULTS](#) | [STATISTICS](#) | [HACKING](#)

Submission details

Task:	Flight Discount
Sender:	ahincho
Submission time:	2021-12-19 05:04:36
Language:	C++11
Status:	READY
Result:	ACCEPTED

Test results ▲

test	verdict	time	
#1	ACCEPTED	0.01 s	»
#2	ACCEPTED	0.01 s	»
#3	ACCEPTED	0.01 s	»
#4	ACCEPTED	0.14 s	»
#5	ACCEPTED	0.22 s	»
#6	ACCEPTED	0.14 s	»
#7	ACCEPTED	0.18 s	»
#8	ACCEPTED	0.26 s	»
#9	ACCEPTED	0.15 s	»
#10	ACCEPTED	0.01 s	»
#11	ACCEPTED	0.01 s	»
#12	ACCEPTED	0.01 s	»
#13	ACCEPTED	0.13 s	»

Graph Algorithms

...	
Shortest Routes I	✓
Shortest Routes II	✓
High Score	—
Flight Discount	✓
Cycle Finding	—
Flight Routes	—
Round Trip II	—
Course Schedule	—
...	

Your submissions

2021-12-19 05:04:36	✓
2021-12-19 05:02:52	✓
2021-12-19 05:01:57	✓
2021-12-19 05:01:50	✓
2021-12-19 05:01:34	✓
2021-12-19 05:01:27	✓
2021-12-19 05:00:57	✓
2021-12-19 05:00:48	✓
2021-12-19 04:59:57	✗
2021-12-19 04:58:10	✗