

## IF184401 Design & Analysis of Algorithms (E)

### Quiz 1

Starting date: 22 February 2020  
Deadline: 29 February 2020, 23:59 WIB. **Penalty: 0.15% of grade/minute of tardiness.**  
Exam type: Open  
Send to: MM Irfan Subakti <yifana@gmail.com>  
CC to Christopher Andrew <andrew.public107@gmail.com> & Karina Soraya Puspitasari <karinasoraya.ks@gmail.com> with the subject: IF184401\_DAA(E)\_Q1\_StudentID\_Name  
File type and format: A full report of the title, problem description, problem abstraction, solution and source code; in PDF format  
Filename format: IF184401\_DAA(E)\_Q1\_StudentID\_Name.PDF

#### Instruction

Please do these steps as in the following.

1. Two problems need to be solved are in the following.

(1) 7704 Civil Engineering: <https://www.spoj.com/problems/CIVIL/>

(2) 12746 Colorful Circle (EASY): [https://www.spoj.com/problems/CRCLE\\_UI/](https://www.spoj.com/problems/CRCLE_UI/)

2. For each problem above, please explain in detail these following sections.

- The title of the problem
- Problem description
- Problem abstraction
- Solution
- Source code for SPOJ

(1) 7704 Civil Engineering: use the variations of integral and differential which should already be discussed from Calculus lectures.

(2) 12746 Colorful Circle (EASY): use the recurrences relations which should already be discussed from Discrete Math lectures.

3. If you don't have an account in SPOJ.com, please sign up on [www.spoj.com](http://www.spoj.com). Make a proper account's name and location (*country*: Indonesia, *city*: Surabaya). Most importantly, please don't forget to put "Institut Teknologi Sepuluh Nopember" for the *institution*.

4. Please also write in your report, your SPOJ account's **name & password**, as in the following.

SPOJ's account's name: <write\_your\_account\_name\_here>

SPOJ's account's password: <write\_your\_account\_password\_here>

5. Once you got a SPOJ's account, please solve these problems as in the following. Submit your solution's code to SPOJ and make sure it's **accepted by SPOJ** for each problem.

6. To avoid plagiarism/cheating, every student needs to pledge and declare, then she/he must submit her/his **signed pledge and declaration** as in the following. Failed to do so will be resulted in getting 0 (zero) grade. Attach the **scanned/photo** of your *declaration* in your report.

“By the name of Allah (God) Almighty, herewith I pledge and truly declare that I have solved quiz 1 by myself, didn’t do any cheating by any means, didn’t do any plagiarism, and didn’t accept anybody’s help by any means. I am going to accept all of the consequences by any means if it has proven that I have been done any cheating and/or plagiarism.”

[Place, e.g., Surabaya], [date, e.g., 29 February 2020]

<Signed>

[Full name, e.g., Ayu Larasati]

[StudentID, e.g., 05111840000xxx]

7. Have a wonderful day, guys! Good luck! 😊