

IF184401 Design & Analysis of Algorithms (IUP)

Quiz 1

Starting date: 23 September 2021
Deadline: 30 September 2021, 23:59 WIB. **Penalty: 0.15% of grade/minute of tardiness.**
Exam type: Open
Send to: MM Irfan Subakti <yifana@gmail.com>
CC to Dickson Alfarsius Novian <dicksenan@gmail.com> & Jason Andrew Gunawan <jasandgun@gmail.com> with the subject: **IF184401_DAA(IUP)_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(IUP)_Q1_StudentID_Name.PDF

Instruction

Please do these steps as in the following.

- Two problems that need to be solved are in the following.
 - (1) SPOJ Classical 9034 - Help Tohu
<https://www.spoj.com/problems/TOHU/>
Time complexity: $O(1)$
 - (2) SPOJ Classical 14138 - Amazing Factor Sequence
<https://www.spoj.com/problems/AFS/>
Time complexity: $O(vn)$
- For each problem above, please explain in detail these following sections.
 - The title of the problem (2%)
 - Problem description (3%)
 - Problem abstraction (10%)
 - Solution (75%)
 - Details of the strategy of the algorithm: observations and theory references
 - Any relevant concept(s) used for solving the algorithm's design
 - Design of algorithm in the pseudocode representation
 - Source code for SPOJ (10%)
- If you don't have an account in SPOJ.com, please sign up on www.spoj.com. Make a proper account's name and location (*country*: Indonesia; *city*, e.g., Surabaya). Most importantly, please don't forget to put "Institut Teknologi Sepuluh Nopember" for the *institution's* name.
- 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. You have to include the evidence of the submission and the "accepted" verdict in your report.
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 a 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., 30 September 2021]

<Signed>

[Full name, e.g., Ajeng Sriningsih]

[StudentID, e.g., 05112040000xxx]

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