

## IF184981 Special Topic

# Final Exam

Starting date: 4 April 2020  
Deadline: 11 April 2020, 23:59 WIB. **Penalty: 0.15 points for each minute of tardiness.**  
Exam type: Open  
Send to: MM Irfan Subakti <yifana@gmail.com>  
CC to M. Ryanda Nugraha M.  
<muhammadryandanm@gmail.com> with the subject:  
IF184981\_ST\_FIN\_StudentID\_Name  
File type and format: A full report of the program, its results & its comprehensive analysis in PDF format  
Filename format: IF184981\_ST\_FIN\_StudentID\_Name.PDF

### Instruction

Please do these steps as in the following.

1. From the presentation files about AIS (*Artificial Immune*) and DE (*Differential Evolution*), where the files can be downloaded from [https://subakti.com/?page\\_id=1872](https://subakti.com/?page_id=1872) > Presentation Files > Lecture #12 (AIS) & Lecture #14 (DE), please implement the following by using any computer programming you have been mastering at (e.g., Java, C, C++, etc.).

[1] AIS, or

[2] DE, or

[3] The combination of AIS & DE.

So, you only need to implement one of the above systems, e.g., only [1], or only [2], or only [3].

2. Once you have picked a system, please give your best for the following features.
  - The background why you have chosen a particular system [ 5%],
  - The motivation behind the decision of choosing the system [ 5%],
  - Idea(s) for utilise/make use of the system [ 5%],
  - 
  - The algorithm(s) design & its explanation [15%],
  - Flow chart(s) & its explanation [ 5%],
  - Pseudo code(s) & (parts of) source code & its explanation [ 5%],
  - The output of the program (text, graphic, table, diagram, any useful information & its explanation [ 5%],
  - 
  - Evaluation and analysis of algorithm(s), program & its output [50%],
  - Conclusion [ 5%].

3. 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 final exam 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., 11 April 2020]

<Signed>

[Full name, e.g., Wilujeng Sriwati Dindasari]

[StudentID, e.g., 05111840000xxx]

4. Please write down your assignment with a word processing program in the form of good report and professional. Along with the declaration above (e.g., Declaration.PDF), save as your full report in the PDF format, with the filename format IF184981\_ST\_FIN\_StudentID\_Name.PDF. Send to: MM Irfan Subakti <yifana@gmail.com> CC to M. Ryanda Nugraha M. <muhammadryandanm@gmail.com> by 11 April 2020, 23:59 WIB. Please don’t be late, because there’s a penalty: **0.15 points for each minute of tardiness**.
5. Have a wonderful day, guys! Good luck! 😊