## MIDTERM EXAM – Second Term 2019/2020 TK2ICM: LOGIC PROGRAMMING (CSH4Y3)

Undergraduate Informatics Major



Midterm – Second Term – 2019/2020 TK2ICM: Logic Programming (CSH4Y3)

Tuesday, March 10, 2020, 13:00-15:30 (estimated, maximum)

(150 minutes, including submission, CeLoE LMS time)

Instructor: M. Arzaki.

This exam is **open all**, but you must not cooperate with other class participants.

This exam is an individual evaluation.

Submit your work to the provided submission slots at CeLoE LMS.

Use these exam papers for scribbles and scratch works.

Name:	Student ID No.:	Class:	Exam Room:
		ICM-40-GAB	IFLAB-05

Rewrite and sign the following statements.	Student's Signature			
I attest that I do not conduct any academic infringement during this exam.				
I am aware that any violation to this rule				
may lead to the failing grade (E) for this course.				
You must rewrite and sign the above statement.				

*Program Outcome* (PO): **PO 5**: the ability to apply the knowledge in mathematics, sciences, languages, information technology, and engineering to obtain a comprehensive understanding regarding the principles of informatics engineering.

Course Learning Outcome (CLO):

- (a). **CLO 1**: elementary syntax and semantics of Prolog.
- (b). CLO 2: elementary Prolog features: recursion, arithmetic, operators, and lists.

General instructions:

- 1. Read these instructions before the exam takes place.
- 2. You may pray to God or any entity that you believe will guide you during the exam before the exam starts.
- 3. You may not borrow or lend anything from other participants during the exam.
- 4. You must not overreact with problem. Overreaction includes, but not limited to: laughing out loud, sobbing, crying, and yelling.
- 5. You must not distract other participants physically or verbally during the exam.
- 6. You may not go to the toilet during the exam. Please do your toilet business before or after the exam.
- 7. You may use the predicates that you write for the homework.
- 8. You are not allowed to discuss this problems with other participants.
- 9. You may use any reference (books, slides, internet) as well as discuss with other students who are not enrolled in this class. However, utilization of chatting applications, such as LINE, WhatsApp, Telegram, or Google Talk is prohibited. Your discussion with other non-participant students is only allowed by email correspondence or discussion forum (e.g.: Stack Overflow forum).
- 10. Any cooperation with other class participants during the exam will lead to a failing grade (E).
- 11. Type your answer neatly and legibly. You may give comments of your program in Bahasa or English. *If your Prolog script does not work, but you provide comments for your code, a partial credit might be considered.*
- 12. Write your program for each problem in a separate file.
- 13. There are **6** (**six**) **problems**, each with different points. You have **150 minutes** (CeLoE LMS time) to complete this exam (including submission).
- 14. You **may not leave the exam room** before **120 minutes** of this exam has elapsed (if the exam starts at 13:00, you may leave the room only after 15:00).
- 15. Each problem is worth differently. The maximum points in this exam is **110 points**. The additional **10 points** will be considered as a bonus point for the problem sets or homeworks.
- 16. For problem number n, submit your work under the file name: Mid-P<n>-<your\_iGraciasID>.pl. For example, a student named Albert whose iGracias ID is Albert submit his response to Problem 6 under the file name: Mid-P6-albert.pl.
- 17. Submit your response for each problem into its corresponding submission slot at CeLoE LMS. <u>Any</u> misplaced submission will affect your exam grades.

- 18. Important: write the predicate of the problem literally. Use the predicate name as described in each of the problem. The name of the predicate must be precisely identical. Typographical error may lead to the cancellation of your points. Any modification (changing the case, the letter, punctuation, or space) might affect your grades of the corresponding problem.
- 19. If you think a test case is wrong, you can just ignore it.

Good luck and may the odds be in your favor!

No.	1	2	3	4
(points)	(20)	(20)	(20)	(20)
Your				
point(s)				

No.	5	6	TOTAL	FINAL
(points)	(15)	(15)	(110)	(100)
Your				
point(s)				

Midterm Exam 2020 CONTENTS

## **Contents**

1	Herbivore and Carnivore	5
2	Binary Checkerboard	7
3	Contagion	9
4	Tetration	12
5	Kelipatan	14
6	Adding Fractions	16