BINUS University

Academic Career: ***Undergraduate / ~~Master / Doctoral / BINUS Online~~*)**	**Class Program:** ***Regular/ ~~Global Class~~*)**
☒ **Mid Exam** ☐ **Others Exam : _____** ☐ **Final Exam**	**Term : ~~Odd~~ / Even / ~~Compact~~ *)** **Period (Only for *BINUS Online/ Master*): 1 / 2 *)**
☒ **Kemanggisan** ☐ **Senayan** ☐ **Semarang** ☒ **Alam Sutera** ☐ **Bandung** ☐ **Medan** ☒ **Bekasi** ☐ **Malang** ☐ **BiOn**	**Academic Year :** **2024 / 2025**

Exam Type*	:	~~Onsite~~ / ~~Online~~ / Take Home	Faculty / Dept.	:	School of Computer Science
Day / Date**	:	Tuesday / April 22nd, 2025	Code - Course	:	COMP6696001 – Research Methodology in Computer Science
Time**	:	13:00			
Exam Specification***	:	☐ Open Book ☐ Open Notes ☐ Close Book ☐ Oral Test ☐ Open E-Book	Class	:	All Classes
Equipment***	:	☐ Examination Booklet ☐ Calculator ☐ Dictionary ☐ Laptop ☐ Tablet ☐ Smartphone ☐ Drawing Paper – A3 ☐ Drawing Paper – A2 ☐ Notes: _____sheet	Student ID ***	:	
			Name ***	:	
			Signature ***	:	

*) *Strikethrough the unnecessary items* **) *For Online Exam, this is the due date* ***) *Only for Onsite Exam*

Please insert the test paper into the examination booklet and submit both papers after the test.*

The penalty for CHEATING is DROP OUT!

Learning Outcome

LO 1: Understand the fundamentals of scientific research and the research lifecycle.
LO 2: Analyze research topics, literature, and theoretical frameworks.
LO 3: Apply appropriate research methods to generate valid and reproducible results.
LO 4: Compose research findings in formats suitable for high-impact journals and conferences.

The lecturer has the right to score you zero if any kind of plagiarism is detected. Make sure to write your own answer. Submit your answer in one zip file (NIM_Name.zip).

I. Project – Group (70%)

In this section, submit two pdf files: one to answer questions 1 – 4 (Project_YourGroupName/Number.pdf), one to answer question 5 (Research Proposal Draft_YourGroupName/Number.pdf). Make sure to mention the group members' NIM and Name in the file.

1. Research Topic & Problem Formulation

a. **[LO 2 – 3 Points]** Explain the real-world relevance or computing challenge that your group seeks to address.
b. **[LO 2 – 4 Points]** Present your research problem concisely (2-3 sentences) and discuss how you arrived at your problem statement.

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c. **[LO 2 – 3 Points]** Highlight why this problem needs attention in computer science and the potential impact of solving it.

2. Literature Review & Citation Management

a. **[LO 2 – 5 Points]** Provide 6 – 8 critical research papers that directly inform your research problem (closely related papers) using table of comparison. You may add other columns as necessary.

No	Paper Title	Research Objectives	Data	Method	Result	Future direction	Link to paper

b. **[LO 2 – 10 Points]** For each paper, explain in paragraphs:
   i. How it aligns or conflict with your proposed research direction.
   ii. One limitation or unanswered question in the paper that your study might address.

c. **[LO 2 – 5 Points]** Indicate which citation manager tool you are using and provide the proof (screenshot).

3. Research Design & Methodology

a. **[LO 3 – 5 Points]** State whether you plan a descriptive, correlational, experimental, or case study design for your research. Explain how your chosen design aligns with your research objectives. Justify with your findings in literature review.

b. **[LO 3 – 5 Points]** State whether you plan a quantitative, qualitative, or mixed-method approach. Explain how your chosen approach will help you generate valid and reproducible findings. Justify with your findings in literature review.

c. **[LO 3 – 10 Points]** Propose your solution based on your approach and research design. Plan on how you get your expected result.

4. Data Handling & Analysis

a. **[LO 3 – 5 Points]** Outline the type of data (structured, unstructured, or both) you expect to gather and explain how you will get them.

b. **[LO 3 – 5 Points]** Describe one data cleaning technique you plan to use and the analysis tool (or language) you find most suitable (e.g., Python, R, MATLAB). Explain why these choices fit your project.

5. **[LO 4 – 10 Points]** Draft an outline for your research proposal covering introduction, literature review (if applicable), methodology, and expected results. Do not forget to also include the references. **Use the template that's agreed with your lecturer.**

II. Essay – Individual (30%)

In this section, submit one pdf file that answer all the questions (Essay_NIM_Name.pdf).

1. Personal Alignment with the Group Project
   a. **[LO 1 – 5 Points]** Why is this research topic meaningful to you personally?
   b. **[LO 1 – 5 Points]** How do your own interests, prior experiences, or career goals intersect with the group's chosen research problem?

2. Analytical Insight
   a. **[LO 1 – 5 Points]** Select one key insight or concept from **each** of the following sessions—1, 2, 3, 4, 5, 6, 7—that has most influenced your understanding of research design and execution.

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b. **[LO 1 – 5 Points]** For each session, briefly describe how you have applied (or plan to apply) that insight in your group's project. You can reference lecture notes or reading materials.

3. Critical Reflection

a. **[LO 1 – 5 Points]** Discuss any challenges or gaps you've identified in your group's current approach. What specific steps do you propose (as an individual) to strengthen the project moving forward?

b. **[LO 1 – 5 Points]** Reflect on how you will use the skills from Sessions 1–7 to address these challenges and enhance the final outcome.

--Good Luck--

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