FINAL EXAM ODD SEMESTER ACADEMIC YEAR 2022/2023
INFORMATION SYSTEMS STUDY PROGRAM
FACULTY OF ENGINEERING AND INFORMATICS
UNIVERSITAS MULTIMEDIA NUSANTARA

Subject	:	**IS545 – Data Warehouse (Theory)**	**Date**	:	
Lecturer(s)	:	**Iwan Prasetiawan, S.Kom.,M.M.** **Jansen Wiratama, S.Kom., M.Kom.** **Irmawati, S.Kom., MMSI**	**Time**	:	**4 days calendar**
Form	:	**~~Essay~~ / Project**	**Type**	:	**~~Onsite~~ / Takehome**

EXAM CONDITIONS / INSTRUCTIONS:

1. Give a straightforward and complete **answer in accordance with the requirements** given to each question (*read all questions carefully, do not rush to answer them*),
2. Please remember! **answer all questions in accordance** with the field of business you choose in **the answers to the previous IS-545 Theory** Mid-Semester Exam/**UTS**.
3. **The answer to UAS** IS-545 Data Warehouse is **in the form of a journal that contains an analysis of the implementation of the Data Warehouse**, with a writing format that is in accordance with the *general journal writing rules*.
4. The **business case material submitted must not be the same as** the example given in the **lecture material**, if the same case material is found, it will not get a value,
5. If there are several **students with identical UAS answers**, then these **students do not get a score (zero)**,
6. The format for naming the UAS IS-545 **answer file** collected is "**NIM-Name of UAS Data Warehouse Theory Odd 2022-2023.doc/docx**" sent via e-learning@**UMN according to the schedule for** the Final Semester Exam (**UAS**). has been established.

COURSE SUB LEARNING OUTCOMES (SUB-CLO):

SUB LEARNING OUTCOMES (SUB-CLO)		**ELO**
Code	***Description***	
CLO-2 Sub-CLO-1	Students are able to **describe** general concepts and descriptions of Data Warehouse and Business Intelligence environments including the 4 levels of accompanying knowledge–C2;	ELO-C
CLO-2 Sub-CLO-2	Students are understanding and be able to **represent** the role and characteristics of single source of truth, data mart, ETL and BI to support decision making-C3;	
CLO-3 Sub-CLO-3	Students are understanding and be able to implement ETL functions to reshape relevant data from source systems for storage in data warehouses–C3;	ELO-D
CLO-3 Sub-CLO-9	Students are able to represent how to design an OLAP cube **to identify** business analysis needs using Pentaho Schema Workbench-C4;	
CLO-3 Sub-CLO-14	Students are able to **manage** data incoming from multiple sources, route it to alternative streams and load it into Datamart, including time dimensions, other dimension types and fact tables- C4.	

Background

Following up on your work as a Data Warehouse Developer at UMN IT Consulting, where you are currently assigned to handle Data Warehouse implementation projects for corporate clients.

Each of the answers below, both subject, object and data are in accordance with the company's client question field that you chose when answering the previous UTS/Middle Semester Exam questions.

For students who used to be UTS did not choose corporate clients, please have a look, and select the following industry fields:

KELAS IS545-A	KELAS IS545-B	KELAS IS545-C
a) Bisnis Perumahan	a) Jasa Logistik	a) Jasa Asuransi
b) Produsen Sepatu	b) Produsen Mobil	b) Produsen Sepeda Motor
c) Produsen Alat2 Pertanian	c) Produsen Alat2 Rumah Tangga	c) Produsen Ban Kendaraan
d) Produsen Furnitur	d) Produsen Alat tulis	d) Produsen Obat-obatan
e) Produsen Pakaian/ Fashion	e) Produsen Alat2 Olah raga	e) Produsen Kerajinan/ Etnik
f) Jasa Transportasi	f) Bisnis Online / e-Commerce	f) Jasa Pergudangan

list the business of your chosen field and name the company "……/ ……" for answer the following questions.

*** *For answers that are equipped with workflow diagrams and picture illustrations, it will be obtain the added value for your exam assessment result.*

QUESTIONS:

The management of the company you work for (UMN IT Consulting) requires you to publish your UTS IS545 Data Warehouse answers resulting from of the Data Warehouse implementation process that you carried out on corporate clients in a general journal writing format.
(*See IS545 Journal Materials-supplementary materials*).

1. **CLO-2 Sub-CLO-1, Weight 20%.**
   Journal writing in parts I and II contains an explanation of the Business background/research materials and literature on data warehouse implementation

Assessment rubric (Portfolio):

RATING	SCORE	ASSESSMENT CRITERIA
Very less	≤ 20	The **content** of the article **does not match the discussion theme** in the previous **UTS answer** and **does not use the general format** of journal writing
Not enough	21-40	The **content** of the article is **quite in accordance** with the discussion theme in the previous **UTS answer**, but the **article writing is not in accordance** with the **general format of journal** writing
Enough	41-60	The **content** of the article is **in accordance with** the discussion theme in the previous **UTS answer** and the **article writing is quite in accordance** with the **general format of journal** writing
Well	61-80	The **content** of the article is **in accordance with** the discussion theme in the previous **UTS answer** and **article writing is in accordance** with the **general format of journal** writing
Very good	≥ 81	The **content** of the article is **in accordance with** the discussion theme in the previous **UTS answer** and the **article writing** is **in accordance** with the **general format of journal** writing and is **more innovative**

2. CLO-2 Sub-CLO-2 and CLO-3 Sub-CLO-3, Weight 30%.

Journal writing in parts II contains an explanation in detail the intent and purpose of the Dimension and Fact tables used in the star schema in your previous UTS answer.

Assessment rubric (Portfolio):

RATING	SCORE	ASSESSMENT CRITERIA
Very less	≤ 20	Summarizing the thinking **concepts and methodologies** used in journal writing is **not appropriate**
Not enough	21-40	**Inappropriate in** summarizing the **concepts of thought and methodologies** used in journal writing
Enough	41-60	**Quite precise in** summarizing the **concepts of thought and methodology** used in journal writing
Well	61-80	The accuracy of summarizing the **concepts of thought and methodologies** used in journal writing has **met the requirements**
Very good	≥ 81	The accuracy of summarizing the **concepts of thought and methodologies** used in journal writing is **very appropriate and innovative**

3. CLO-3 Sub-CLO-9 and CLO-3 Sub-CLO-14, Weight 50%.

Journal writing in sections III and IV contains an explanation of the next stages of the data warehouse development process, especially on aspects:

a) The implementation of the ETL process for the availability of fact tables and related dimension tables
b) Represent the star schema that you created earlier using a multidimensional database solution to serve SOA applications to your client users.

Hint: Describe the logical model of the data warehouse that you built in full, ending with an explanation of the execution results and their interpretation so that it is easily understood by related parties in your company's clients.

Assessment rubric (Portfolio):

RATING	SCORE	ASSESSMENT CRITERIA
Very less	≤ 20	The accuracy of summarizing the **results and conclusions** of the data warehouse implementation process is **not in accordance** with the discussion
Not enough	21-40	The accuracy of summarizing the **results and conclusions** of the data warehouse implementation process is **less precise** with the discussion
Enough	41-60	The accuracy of summarizing the **results and conclusions** of the data warehouse implementation process is **quite in accordance** with the discussion
Well	61-80	The accuracy of summarizing the **results and conclusions** of the data warehouse implementation process is **in accordance with the discussion**
Very good	≥ 81	The accuracy of summarizing the discussion of the **results and conclusions** of the data warehouse implementation process is **appropriate and innovative**

References:	Created by:	Approved by:
1. Lecture Materials I to XIV 2. Teaching Reference Book	**on behalf of the Lecturer Team** **(Iwan Prasetiawan, S.Kom., M.M.)** **Course Coordinator**	 **(Ririn Ikana Desanti, S.Kom., M.Kom.)** **Head of Study Program**