


<b>Project Case</b>	
ISYS6169   ISYS6279   ISYS6280   T0206 Database Systems	
<b>Information Systems</b>	<b>O202-ISYS6169-AS04-00</b>
<i>Valid on Odd Semester Year 2019/2020</i>	<b>Revision 00</b>

1. Seluruh kelompok tidak diperkenankan untuk:

*The whole group is not allowed to:*

- Melihat sebagian atau seluruh proyek kelompok lain,  
*Seeing a part or the whole project from other groups*
- Menyadur sebagian maupun seluruh proyek dari buku,  
*Adapted a part or the whole project from the book*
- Mendownload sebagian maupun seluruh proyek dari internet,  
*Downloading a part or the whole project from the internet,*
- Mengerjakan soal yang tidak sesuai dengan tema yang ada di soal proyek,  
*Working with another theme which is not in accordance with the existing theme in the matter of the project,*
- Melakukan tindakan kecurangan lainnya,  
*Committing other dishonest actions,*
- Secara sengaja maupun tidak sengaja melakukan segala tindakan kelalaian yang menyebabkan hasil karyanya berhasil dicontek oleh orang lain / kelompok lain.  
*Accidentally or intentionally conduct any failure action that cause the results of the project was copied by someone else / other groups.*

2. Jika kelompok terbukti melakukan tindakan seperti yang dijelaskan butir 1 di atas, maka **nilai kelompok** yang melakukan kecurangan (menyontek maupun dicontek) akan di – **NOL** – kan.

*If the group is proved to the actions described in point 1 above, the score of the group which committed dishonest acts (cheating or being cheated) will be "Zero"*

3. Perhatikan jadwal pengumpulan proyek, segala jenis pengumpulan proyek di luar jadwal tidak dilayani.

*Pay attention to the submission schedule for the project, all kinds of submission outside the project schedule will not be accepted*

4. Jangan lupa untuk melihat kriteria penilaian proyek yang ditempel di papan pengumuman, atau tanya asisten anda.

*Don't forget to look at the project assessment criteria that posted on the announcement board, or ask your teaching assistant.*

5. Persentase penilaian untuk matakuliah ini adalah sebagai berikut:

*Marking percentage for this subject is described as follows:*

<b>Tugas Mandiri</b> <i>Assignment</i>	<b>Proyek</b> <i>Project</i>	<b>UAP</b> <i>Final Exam</i>
30%	40%	30%

6. Software yang digunakan pada matakuliah ini adalah sebagai berikut:

*Software will be used in this subject are described as follows:*

<b>Software</b> <i>Software</i>
Microsoft SQL Server Enterprise 2016 Microsoft Office 365 (Word, Excel) Microsoft Office Visio 2013

7. Ekstensi file yang harus disertakan dalam pengumpulan tugas mandiri dan proyek untuk matakuliah ini adalah sebagai berikut:

*File extensions should be included in assignment and project collection for this subject are described as follows:*

<b>Tugas Mandiri</b> <i>Assignment</i>	<b>Proyek</b> <i>Project</i>	<b>UAP</b> <i>Final Exam</i>
-	VSD / VSDX, Image Files (JPG / PNG), SQL	SQL

**Soal***Case***Hermosa**

**Hermosa** is a gown renting shop managed by your friend, Angel. Angel manage all of activities that belongs to **Hermosa** like **renting a gown to member** and **purchasing the gown with the supplier**.

Every staff that hired by **Hermosa** have a task to **serve a member who wants to rent a gown** and **purchase a gown from supplier**. Every staff must be following the procedures to become a staff, which are:

- Every staff hired must have a personal information like name, gender, salary, email, phone number and address. Every staff has an identification number with the following format:

“STXXX” X => number between 0 – 9
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- Staff can purchase a gown from the supplier.
- Every **purchase transaction** made with the supplier have all the information about staff, supplier, transaction date, gown purchased, the quantity of each the gown, and the payment information. Every **purchase transaction** has an identification number with the following format:

“PDXXX” X => number between 0 – 9
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- Every **purchase transaction** has information of the payment which will include the payment type as well as the payment amount of the transaction. Every **payment** has an identification number with the following format:

“PYXXX” X => number between 0 – 9
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- Every gown purchased from supplier have its own type, color, their specific renting price to be rented later on by the member, and the quantity of the gown in the warehouse. Every **gown** has an identification number with the following format:

“GWXXX” X => number between 0 – 9
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- Every gown purchased will have their own specific type and, in this case, the type will have the type name as well as the type description that explains the type. Every **gown type** has an identification number with the following format:

<p style="text-align: center;">“GTXXX” X =&gt; number between 0 – 9</p>
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- Staff can also serve a member who wants to rent a gown.
- Every **rent transaction** made by the member have all the information about staff, member, start and return date of the rent transaction, gown rented, and the quantity of each gown rented. Every **rent transaction** has an identification number with the following format:

<p style="text-align: center;">“REXXX” X =&gt; number between 0 – 9</p>
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Every member that wants to rent gown at **Hermosa** must be following the **rent transaction procedures**, those are:

- Every member that wants to rent a product must already completed personal information like name, phone number, gender, and email. Every member has an identification number with the following format:

<p style="text-align: center;">“MMXXX” X =&gt; number between 0 – 9</p>
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- Member can rent **more than one product** in every transaction.

Every supplier that wants to sell their gown must be following the **purchase transaction procedures**, those are:

- Every supplier that wants to sell their gown must already completed personal information like name, contact number, email and address. Every supplier has an identification number with the following format:

<p style="text-align: center;">“VDXXX” X =&gt; number between 0 – 9</p>
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- Supplier can sell **more than one gown** in every transaction.

**Notes:**

- All gender must be either “Male” or “Female” (without quote).
- All phone number must start with “+62”
- Payment type will only have the following options:
  - “OVO”
  - “GOPAY”
  - “BCA”
  - “CASH”
- Gown type description must not extend the length more than 50 characters
- Staff cannot purchase or rent more than 5 quantity of the same gown in one transaction

Now **Hermosa** still using manual management system to maintain the **rent** and **purchase transactions**. You as her precious friend wants to help **Hermosa** to create a database system that can store data and maintain the **rent** and **purchase transactions**. The tasks that you must do are:

- a. Create Entity Relationship Diagram to maintain **rent** and **purchase transactions**.
- b. Create a database system using DDL syntax that relevant with **rent** and **purchase transactions**.  
The database system must include database and tables with the required procedures.
- c. Create query using DML syntax to fill the tables in database systems with data based on the following conditions:
  - **Master** table must be filled with more than or equals 10 data.
  - **Transaction** table must be filled with more than or equals 15 data.
  - **Transaction detail** table must be filled with more than or equals 25 data.

- For the **Gown Type** table, the table must be filled with the following data:

Gown Type Names	
Mermaid Style	Jacket Gown
A-line	The Sheath
Tea Length	Ball Gown
Exaggerated	Princess Gown
Empire Waist	Asymmetrical

- d. Create query using DML syntax to simulate the transactions process for **rent** and **purchase transactions**.

**Note:** DML syntax to **fill database** and DML syntax to **simulate the transactions process** should be a **different query**.

- e. To support database management process in **Hermosa**, Angel asked you to provide some query that resulting important data. The requirements that asked from her are:
1. Display the MemberID, MemberName and the Total Rent Quantity (Obtained from the total sum of rent quantity) for every transaction that had been done on June and the number on member id is between one and five.
  2. Display StaffID, StaffName and their Total Purchase Transaction (Obtained from the total count of purchase transaction) for every transaction that the PaymentAmount is more than 1000000 and the Purchase Transaction occurred in May.
  3. Display Member Name (Obtained by adding 'Mrs.' In front of the member name), Renting Cost (Obtained from the total sum of the gown rent price multiplied with the day difference between the rent start date and rent return date), Total Gown Rented (Obtained from the total count of the rented quantity) for every member whose gender is female and did the transaction of the 15<sup>th</sup>. Then combine it with, Display Member Name (Obtained by adding 'Mr. ' in front of the member name), Renting Cost (Obtained from the total sum of the gown rent price multiplied with the day difference between the rent start date

- and rent return date), Total Gown Rented (Obtained from the total count of the rented quantity) for every member whose gender is male and did the transaction of the 15<sup>th</sup>.
4. Display StaffID, First Name (Obtained from the first word of StaffName), and Total Purchasing Amount (Obtained from total sum of Payment Amount) For every Staff whose id is ST001 and had purchased items from the supplier at least once.
  5. Display StaffID, StaffName and Staff Gender (Obtained from the first word of the Staff Gender), Staff Salary (Obtained by adding “Rp. ” in front of Staff Salary) for every Staff whose salary is higher than average salary of all the Staffs and the StaffName starts with an “A”. Then display this based on StaffID in descending order.  
**(alias subquery)**
  6. Display GownID, the Rented Total Times (Obtained from the total count of transaction in which the Gown has been rented and added with word ‘ time(s)’ at the end), GownColor, GownTypeName, and Description Length (Obtained from the length of the GownTypeDescription) with a condition where the return date of the rent is June and having the length of description below than the average length of description.  
**(alias subquery)**
  7. Display Gown Number based on GownID (Obtained by replacing ‘GW’ from GownID into “Gown”), GownTypeName, and GownRentPrice obtained by adding “Rp. ” in front of GownRentPrice, Gown Rented Times(Obtained from the total gown that have been rented), and the GownColor for every gown that the GownRentPrice is higher than the average of all GownRentPrice and the transaction is done on June. Then, display this data based on the ascending order of the GownID.  
**(alias subquery)**
  8. Display the Purchase Date obtained from purchase date in ‘Mon dd, yyyy’ format , Staff Number (Obtained by replacing “ST” in StaffID into “Staff”), PurchaseID, PaymentID, Payment Amount (Obtained by adding “Rp. ” in front of PaymentAmount), and Total

Gown Rented (Obtained from the total gown that had been rented) for a purchase transaction that has the highest Payment Amount and occurred in May.

(**alias subquery**)

9. Create a view named 'MemberTotalTransaction' to display MemberID, MemberName, Total Rent (Obtained from the total count of rent transaction by each customer) and Total Purchase Amount (Obtained by the total sum of gown rent price multiplied by the day difference between rent start date and rent end date. For every member whose id is "MM001" and the renting period of the gown is more than a day.
10. Create a view named 'StaffInvolvement' to display the StaffID, StaffName, Staff Purchase Involvement (Obtained by the total count of purchase transaction), and Staff Total Expense (Obtained by the total sum of PaymentAmount). For every Staff who done the transaction in May and the Staff Total Expense is more than 1000000.



**File that must be collected:**

1. Entity Relationship Diagram (.vsdx, .png)
2. Query to create the database system. (.sql)
3. Query to insert data into tables. (.sql)
4. Query to simulate the transactions processes. (.sql)
5. Query to answer the 10 cases. (.sql)

**Here are the rules that you must follow to create your project:**

1. Use appropriate software for this subject based on **Sistem Praktikum** that can be downloaded from Binusmaya.
2. Use the techniques taught during practicum.
3. Collect appropriate files for this subject based on **Sistem Praktikum** that can be downloaded from Binusmaya.
4. Include the other files that can support your project, such as:
  - All files in your project
  - Other files (image, audio, video, etc.) used in your project
  - \*.DOC file (documentation of your project) that contains the reference links of additional files (image, audio, video, etc.) used in your project