

# Presentation outline

[Technology](#), [Information Technology](#)



Presentation outline Presentation outline INTRODUCTION I. Goals of the database design II. Definition of terms III. Significance of a database design

Eliminates redundant data

Consistency

Enhances application performance

Enables easier maintenance

IV. Thesis statement: Database design has become a fundamental part in the development of efficient applications and programs all over the world.

BODY

I. Overview of the database design

1. Detailed explanation about the benefits of the design

2. Explanation of the challenges faced during the design of the database

Table ratio

Data stability

Data and query complexity

II. Chapter one: Who Needs a Database?

1. Overview of individuals who need database management systems

2. The relational model

3. The history of the relational model as proposed by Edgar F. in the late 1960s

4. An brief introduction of the Microsoft SQL Express program

5. The role of SQL in relational databases

6. Statement of the scope for the database

III. Chapter two: Gathering Information

1. Prepare relevant documents required in the database design

## 2. Gather all the data required for developing the tables and reports

The data can be obtained by checking the relevant documents, performing interviews or preparing a questionnaire.

## 3. Documentation

The documentation process helps in keeping data records during the design process. It contains a summary of the vital data contained in the application.

The entity-relation diagrams are also included in the documentation.

## IV. Chapter three: Requirements and Business Rules

### 1. Overview of the database requirements

Data requirements

Report requirements

Security requirements

### 2. The UML Diagram

Overview of the UML diagrams (Use Case Diagrams)

Develop the UML diagrams

### 3. Review the requirements and business rules

### 4. Determine the amount of data to be stored in the database

## V. Chapter four: Database Design

### 1. The Design Process

Determine the main purpose of designing the database management system

Gather and organize the data that is to be recorded

Appropriately divide related pieces of data in separate tables and define the data type for the data entered in the table

Select a suitable primary key for each table and also set up the relationships

among the tables

Add redundant tables and relationships

Develop entities and add attributes

Create the appropriate relationship between the entities

Develop the entity-relationship diagram and resolve the relationships using linking tables in the design template of the software

Resolve issues with the cardinality of table relationships

## 2. Error Checking

Perform an error check and make the necessary adjustments in the design

## VI. Chapter five: Normalization and Design Review

1. Adjust the entity-relationship diagram against the three normal forms by inserting, updating and deleting anomalies

2. Making adjustments to the tables

## CONCLUSION

Designing a database is a procedure aimed at creating a comprehensive data model. In this relational model, tables are used to store and generate the information needed. The process of database design encompasses knowing the target market, gathering the required information from appropriate sources, defining the requirements of the database, the design itself and reviewing among others. This is because database design has become an essential part in the development of effective applications globally.

## References

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