

# [Presentation outline](https://assignbuster.com/presentation-outline/)

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Presentation outline Presentation outline INTRODUCTION I. Goals of the database design II. Definition of terms III. Significanceof 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
Beaulieu, A. (2009). Learning SQL. Sebastopol, CA: O’Reilly Media.
Conger, Steve. (2010). Hands on Database: An Introduction to Database Design and Development. Retrieved from http://mousegraphixdesign. com/school\_projects/databases/HANDS%20ON%20DATABASE. pdf
Coronel, C., Morris, S. & Rob, P. (2012). Database Systems: Design, Implementation, and Management. Stamford, CT: Cengage Learning.
Date, C. J. (2012). Database Design and Relational Theory. Sebastopol, CA: O’Reilly Media.