

Automated Online Examination System

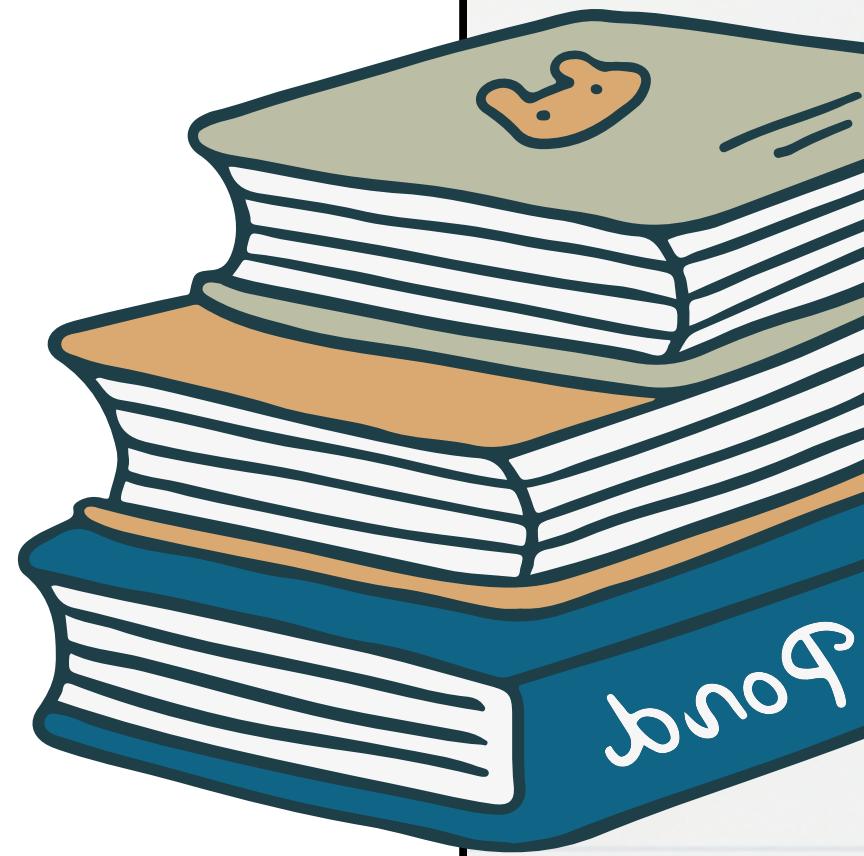
Team Members:

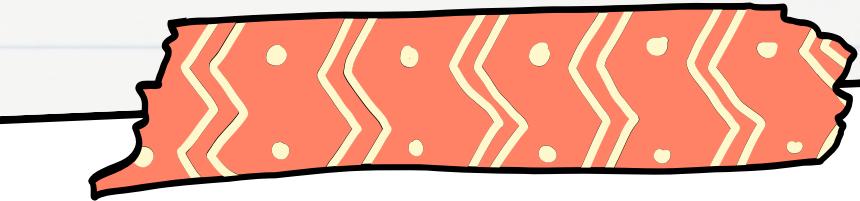
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Agenda

- Introduction
- System Components
- Database Design
- Stored Procedures
- DWH Design
- Reports
- Power BI Dashboards
- Web Application
- Conclusions

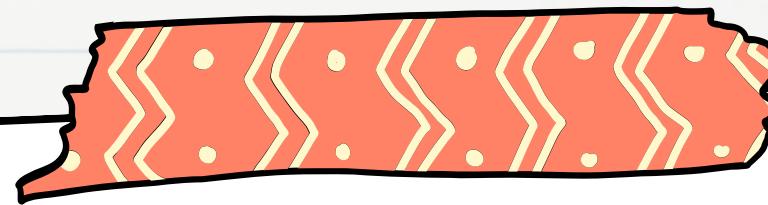




Introduction

- Overview of the project goals and objectives.
- Importance of an automated examination system in modern education.

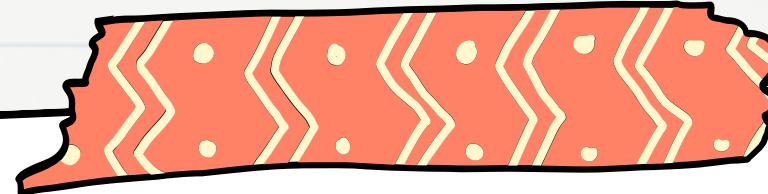




System Components

- Database Management System (DBMS): SQL for data storage and retrieval.
- Reporting Tools: SSRS for generating comprehensive reports.
- Power bi Dashboards
- Web Application: Interface for managing exams, questions, and student data.

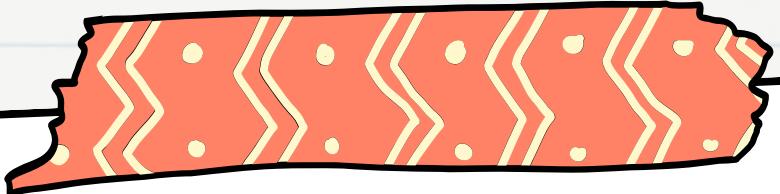




Database Design

- Entity-Relationship Diagram (ERD) for visualizing database structure.
- Database Schema to ensure our data is well-organized, accurate, and secure, making it easier to use and maintain.

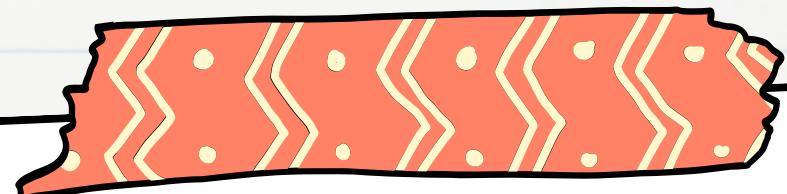




Database Generation

- We used the Faker library to quickly create realistic sample data. It makes testing faster, speeds up development, and improves quality.

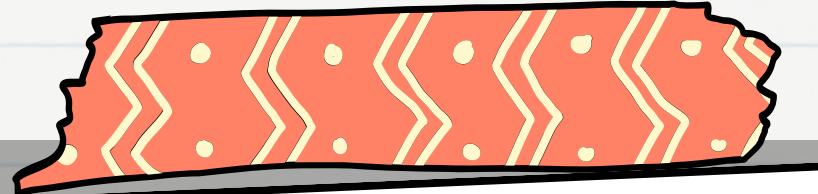




Stored Procedures

- We create Stored Procedures to Perform Select, Insert, Update, and Delete operations on any table.
- We Create Stored Procedures to perform Exam generation,answers,Correction
- We Create Stored Procedures to perform Reports



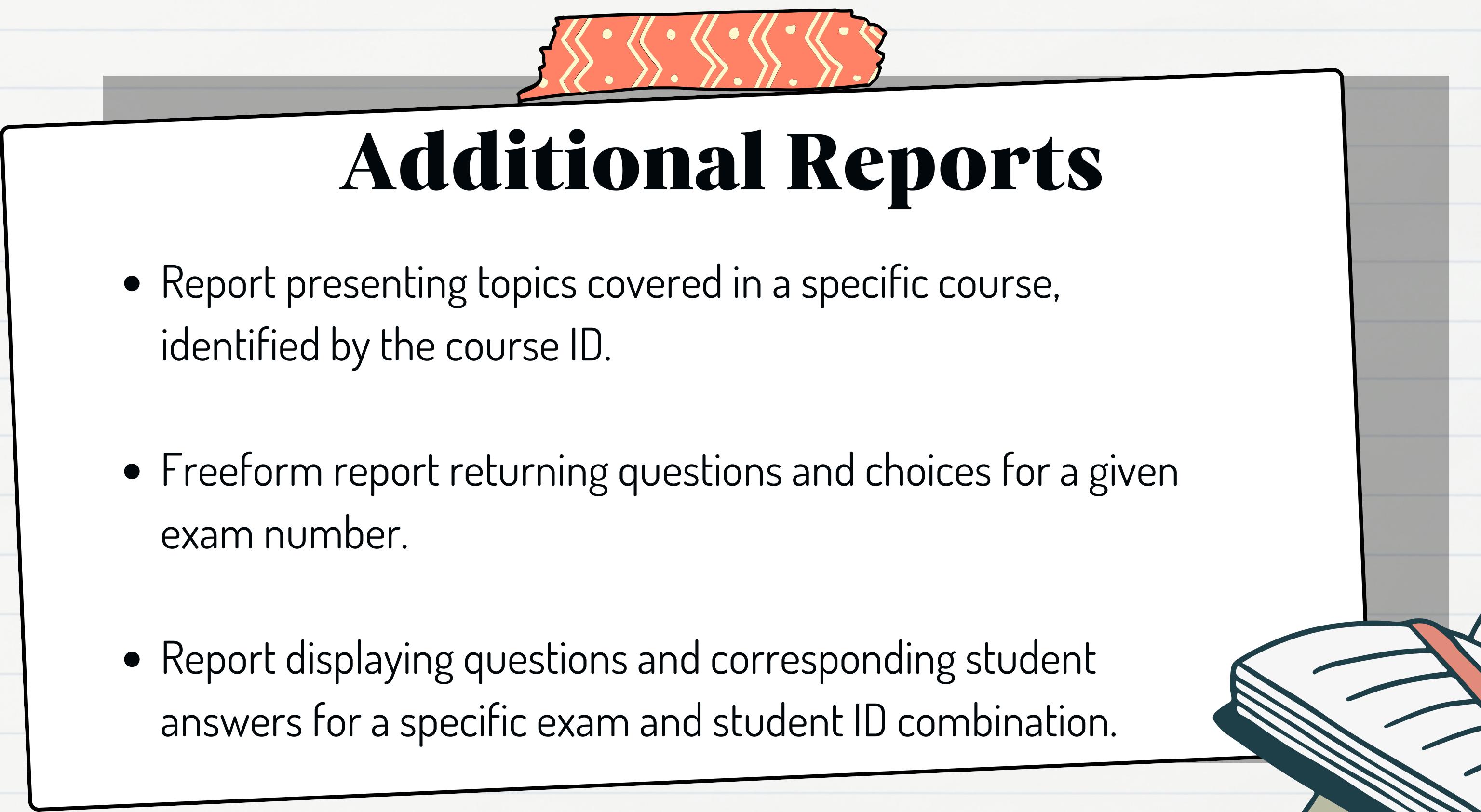


Reports

We utilize SSRS to generate the following reports:

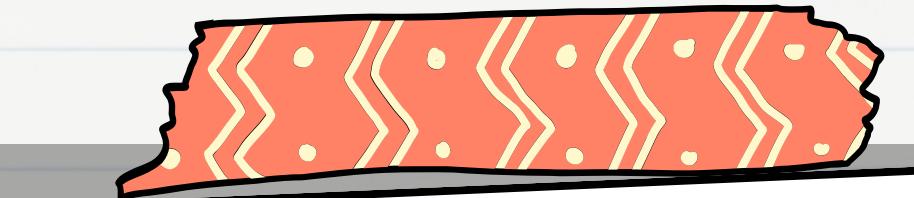
- Report providing student details based on a specified Department Number parameter.
- Report displaying the grades of a student across all courses, given the student ID.
- Report listing courses taught by an instructor along with the number of students enrolled in each course, identified by the instructor's I





Additional Reports

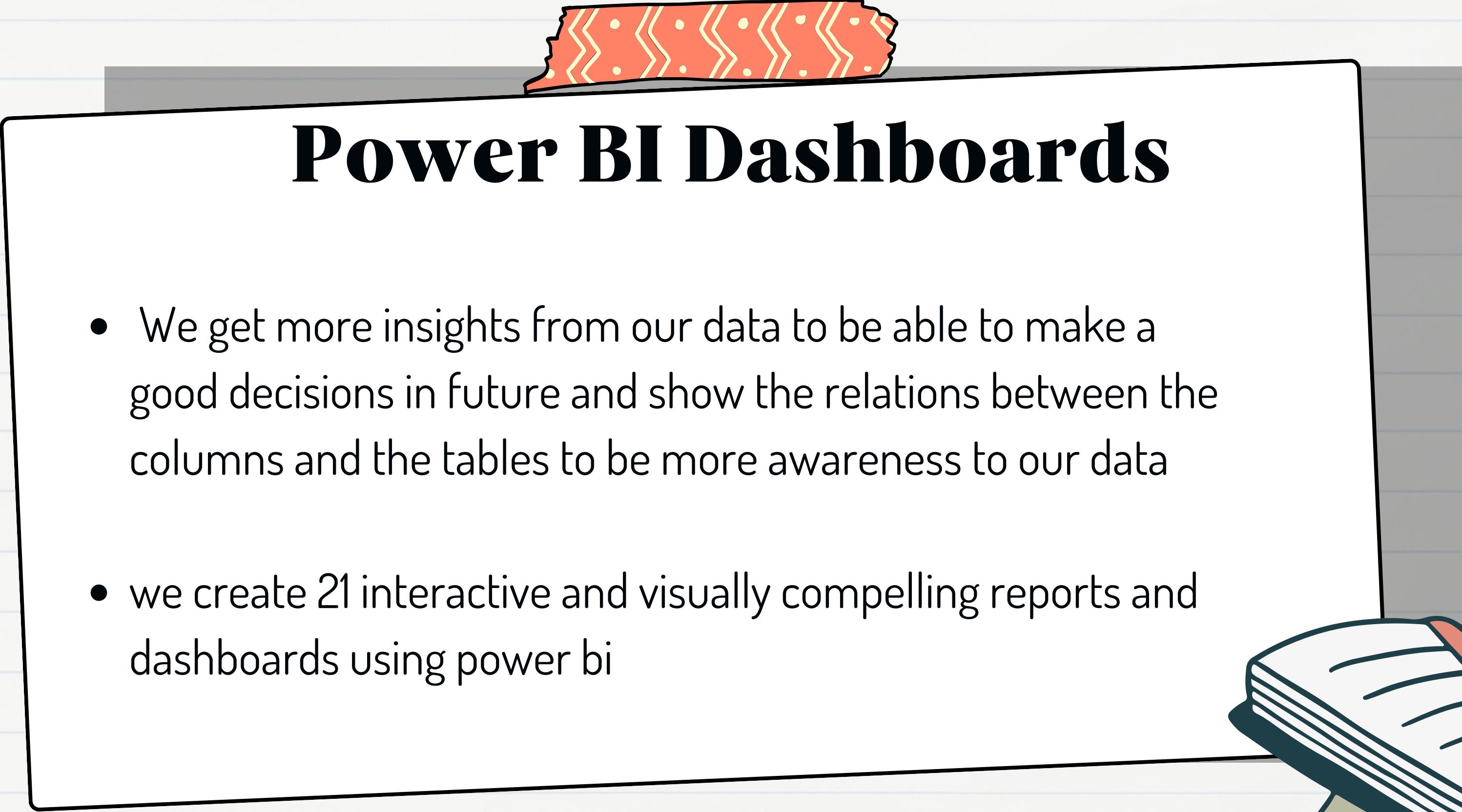
- Report presenting topics covered in a specific course, identified by the course ID.
- Freeform report returning questions and choices for a given exam number.
- Report displaying questions and corresponding student answers for a specific exam and student ID combination.



DWH Design

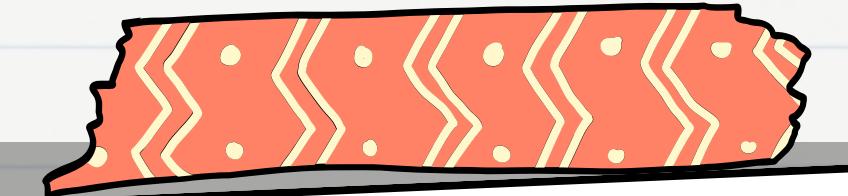
- We Create DWH Design in SQL Server then we use ETL process to transform data from database source to DWH.





Power BI Dashboards

- We get more insights from our data to be able to make a good decisions in future and show the relations between the columns and the tables to be more awareness to our data
- we create 21 interactive and visually compelling reports and dashboards using power bi



Web Application

- We use the Streamlit library to develop a web application for our examination system.
- Streamlit simplifies the process, allowing us to create interactive and user-friendly interfaces using Python, without the need for extensive web development expertise.



Conclusions

01



Recap of system
components and features.

02



Benefits of the automated
examination system for ITI
staff and students.



Thank You !

