

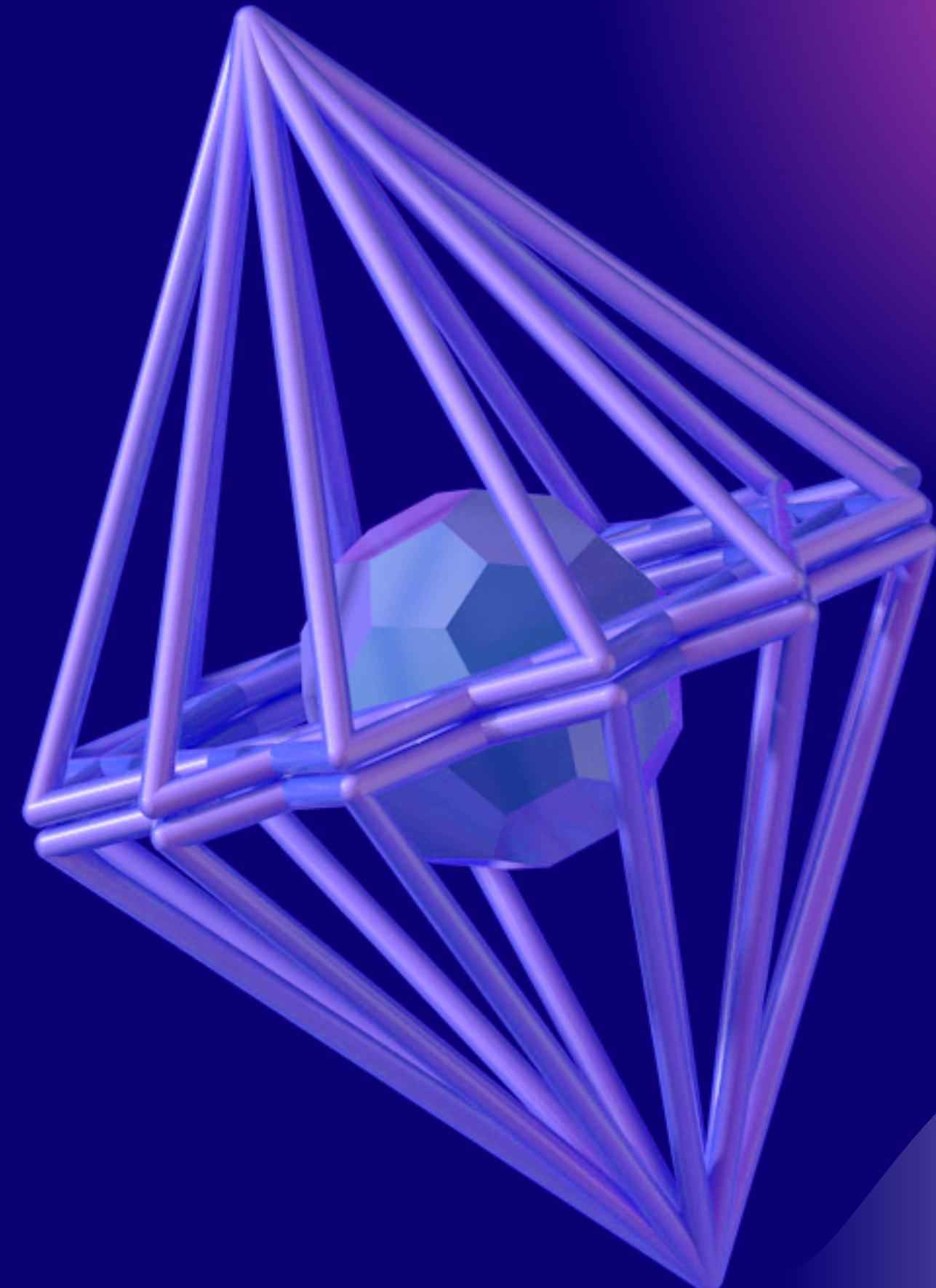
DATABASE SYSTEM

This is a database system for a university donor tracking system.

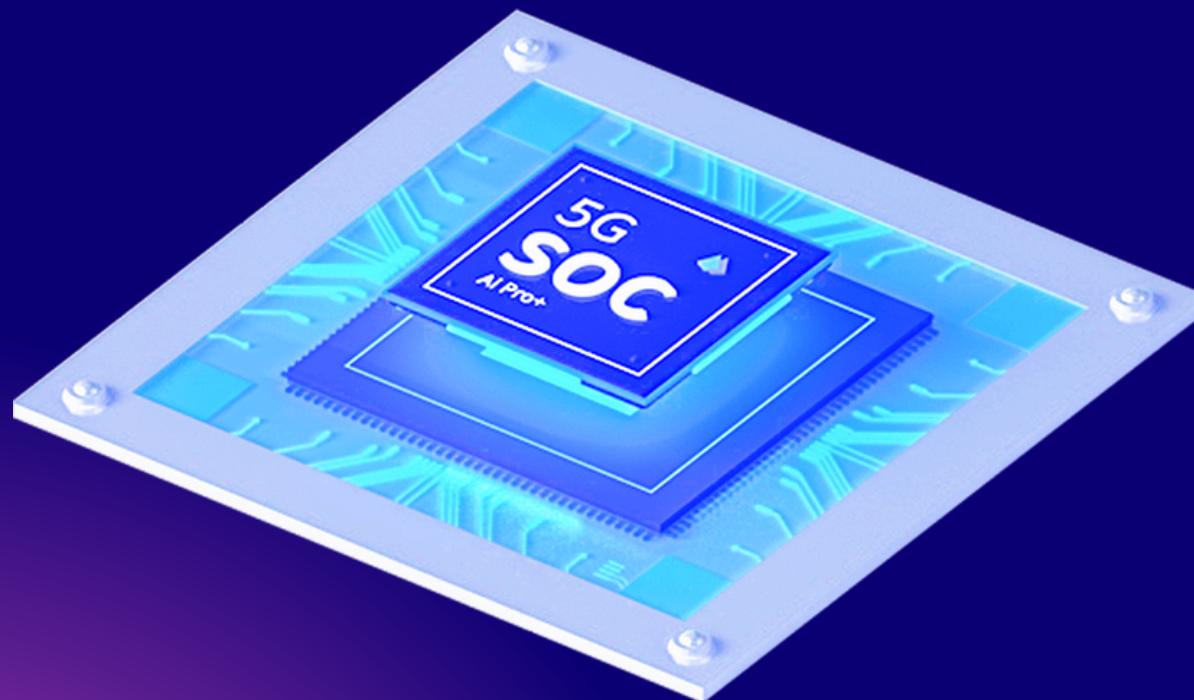


OVERVIEW

This presentation showcases a semester-long database system developed for university donor management. The system models donor information, pledges, donations, events, donor circles, and organizational relationships. It follows the full database lifecycle from initial requirements to secure implementation.



INTRODUCTION & REQUIREMENT

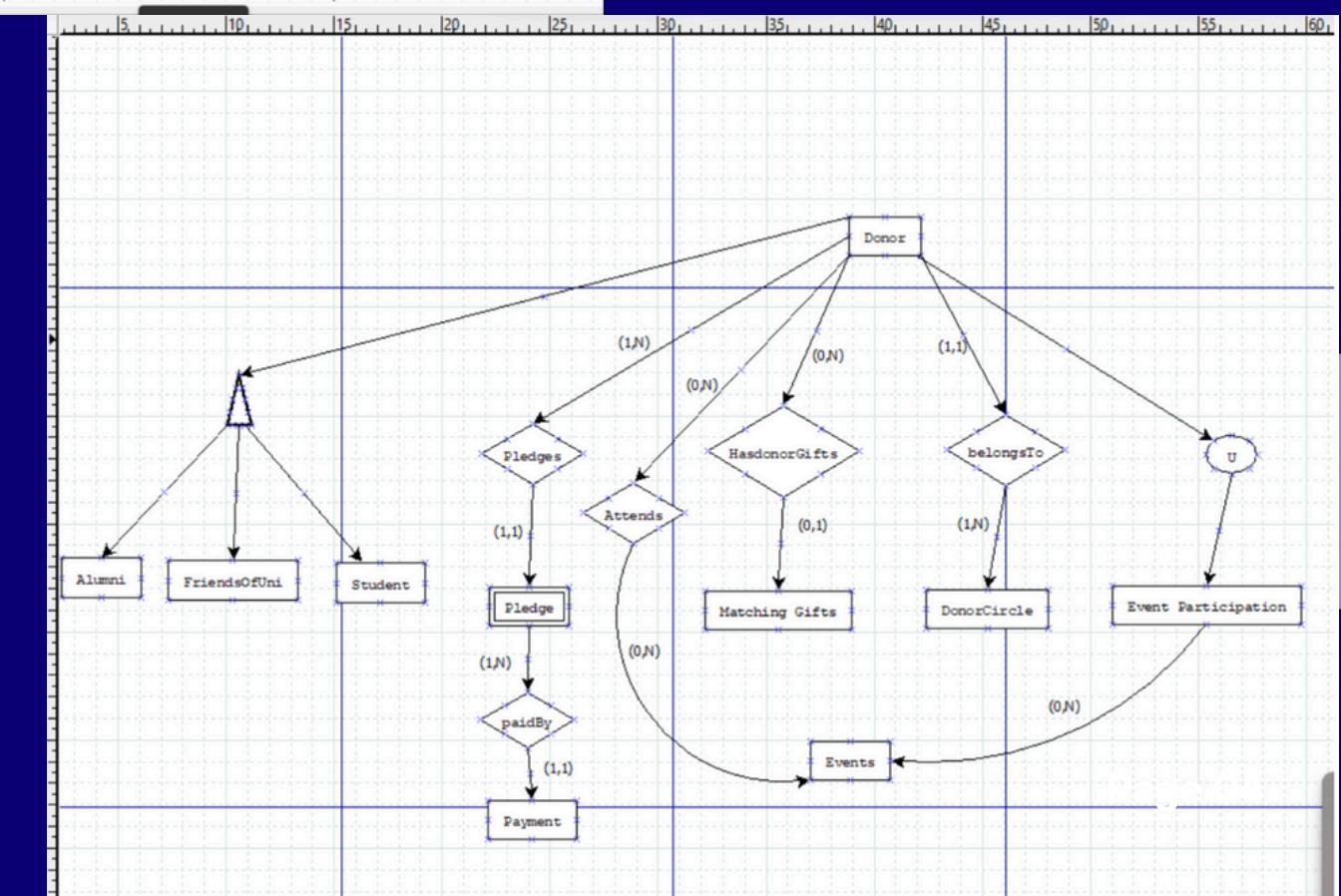
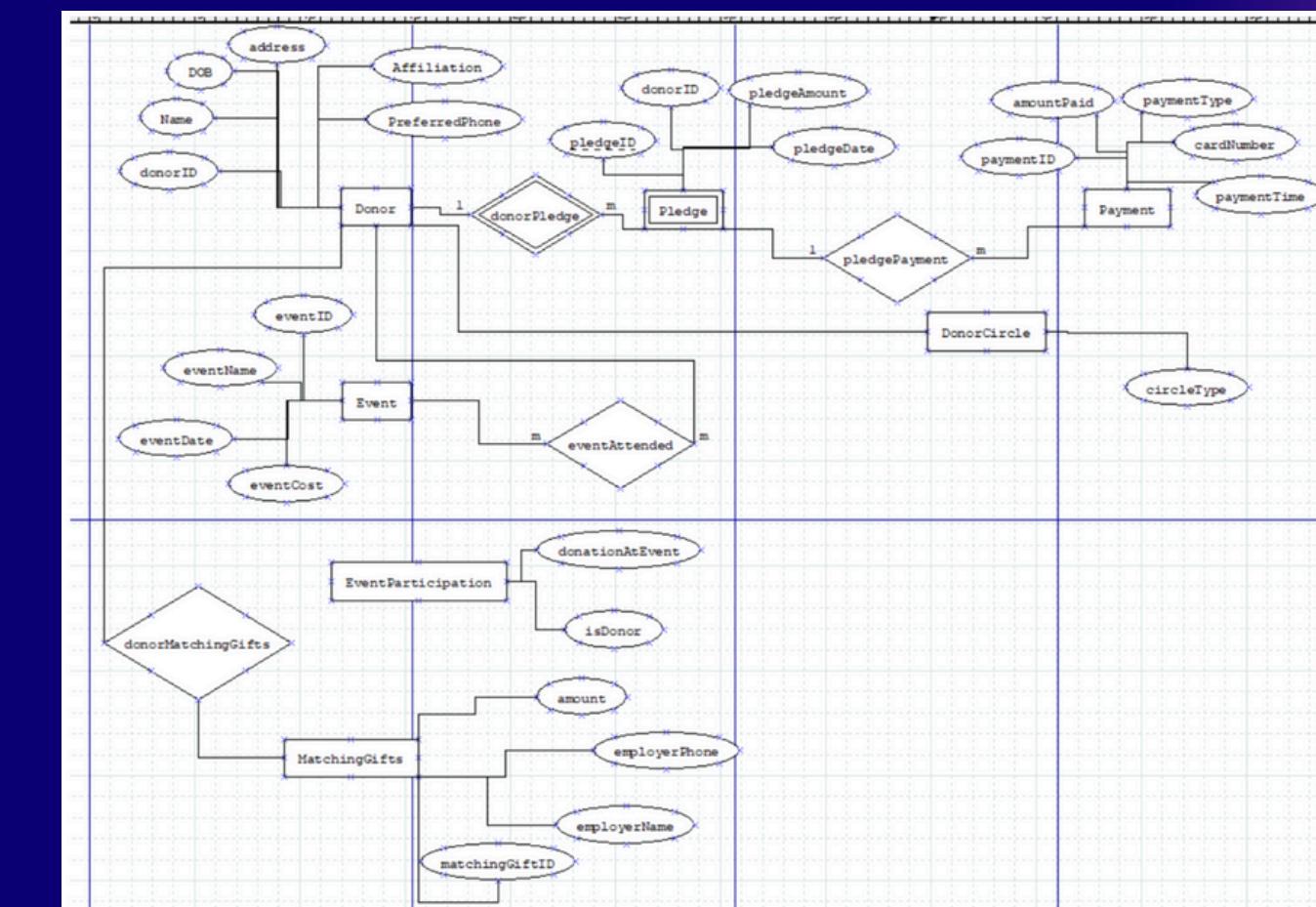


Requirements & Planning

- Studied "Beta University" environment
- Identified user needs for donor tracking, event management, and pledge/payments
- Created initial reports, forms, and transaction lists
- Built a full data dictionary

ER AND EER MODELING

- Conceptual model created using ER diagrams
- Extended model using EER (specialization, categories)
- Final model represented all donor-related processes



The screenshot shows the Oracle APEX interface with the SQL Workshop module selected. The script editor contains the following SQL code:

```
1  DROP TABLE MatchingGift1 CASCADE CONSTRAINTS;
2  DROP TABLE EventParticipation1 CASCADE CONSTRAINTS;
3  DROP TABLE Payment1 CASCADE CONSTRAINTS;
4  DROP TABLE Pledge1 CASCADE CONSTRAINTS;
5  DROP TABLE Event1 CASCADE CONSTRAINTS;
6  DROP TABLE Donor1 CASCADE CONSTRAINTS;
7  DROP TABLE DonorCircle1 CASCADE CONSTRAINTS;
8
9
10 CREATE TABLE DonorCircle1(
11   circleType VARCHAR2(50),
12   minAmount NUMBER(10,2),
13   maxAmount NUMBER(10,2),
14   CONSTRAINT DonorCircle1_pk PRIMARY KEY (circleType)
15 );
16
17 CREATE TABLE Donor1(
18   donorId NUMBER GENERATED ALWAYS AS IDENTITY,
19   name VARCHAR2(50) NOT NULL,
20   DOB DATE,
21   address VARCHAR2(100) NOT NULL,
22   affiliation VARCHAR2(100),
23   preferredPhone VARCHAR2(16),
24   circleType VARCHAR2(50),
25   CONSTRAINT Donor1_pk PRIMARY KEY (donorId),
26   CONSTRAINT Donor1_circleType_fk FOREIGN KEY (circleType)
27     REFERENCES DonorCircle1(circleType) ON DELETE SET NULL
28 );
29
```

The script editor includes standard navigation and search tools. At the bottom, there are links for user profiles and system status, along with a copyright notice.

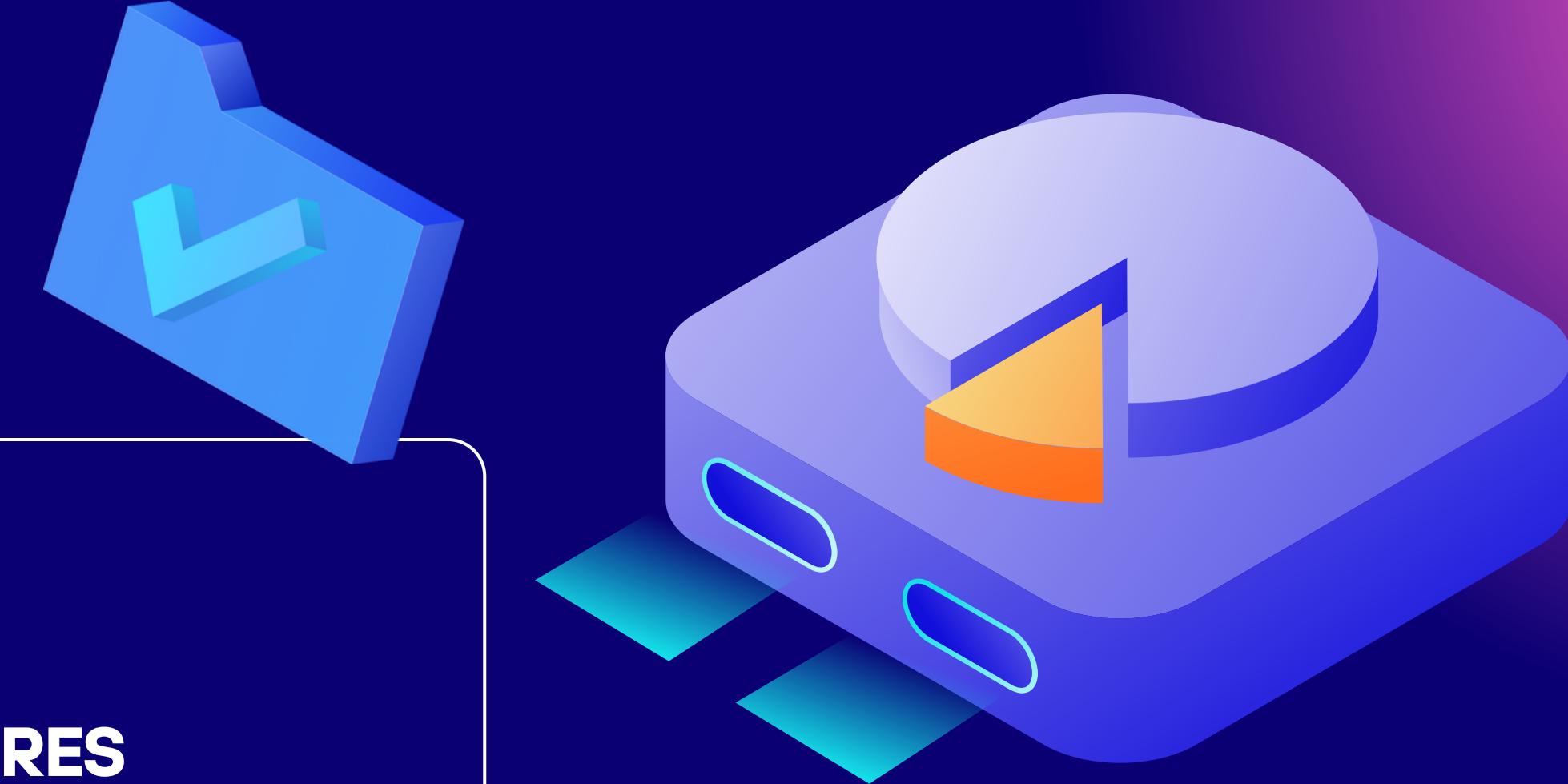
SQL IMPLEMENTATION

- Created tables in Oracle SQL
- Inserted sample donor, pledge, payment, and event data
- Tested database operations with SQL queries



SECURITY FEATURES

- Created roles and privileges
- Restricted access to sensitive donor information
- Added user-level access controls in Oracle



THANK YOU