Video Game Company Database

Deliverable 2

Oscar Martinez

West Texas A&M

CIDM-3350: DB SYS Design

Introduction

For this project, I chose to create a database for a small to medium-sized video game company. This database project will address data management issues, my motivation, the benefits, and potential users for a game company. I will also set business rules and user requirements. Then, I will create an enhanced entity relation diagram (EERD) and develop relations in the third normal form. Lastly, I will build the database in SQL to represent what it will look like to have a database for a game company.

Data Management Problems

The problems that come with data management in the entertainment industry are cybersecurity, legal issues, and operational inefficiency. Data mismanagement can cause cybersecurity issues in a database that could affect the video game company's ability to maintain the integrity of their data and protect them from data breaches. Managing data through a database can prevent future litigation for any information that gets leaked. If it is employee or customer data, the company will be subject to a lawsuit against them for not managing the data properly. The disorganization of data will cause inefficiencies in operating the company, leading to many missed project deadlines. Operational smoothness can lead a company's value to increase. As a video company continues to grow, they will face more of these problems.

Motivation

The motivation for this project is the growth in the market for video game companies. As video games enter the mainstream, more people will work for these companies. So, it is crucial to manage the integrity of the data to protect people who are vulnerable. Sometimes the public gets frustrated when anticipated game titles do not meet release dates. This might be due to data redundancy contributing to operational inefficiency. The video game industry is difficult to survive in because it tends to be risky and expensive. Companies can struggle to move from a small or medium company to a large one because they don't have the infrastructure to grow.

Benefits

Increased cybersecurity from having a database will be a major benefit for a game company because it can maintain the integrity of data, and we can create an audit trail from the changes in the database so we can track where any breaches or attacks came from and take care of the issue promptly. Other benefits include steering clear of any class action lawsuits for failure to protect the data due to mismanagement and increasing the efficiency of the development of projects that are currently being worked on because it will be easier to track the progress.

Users

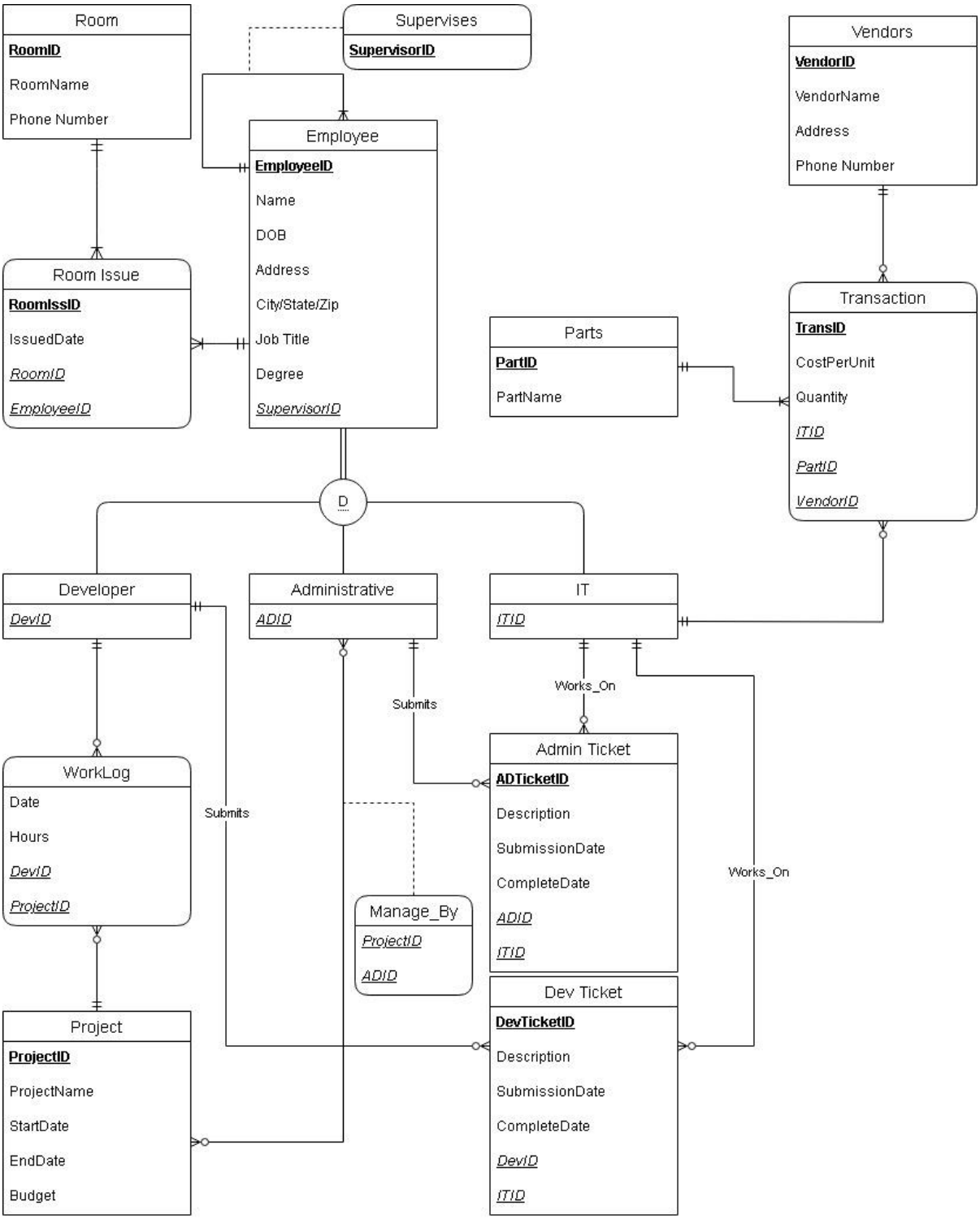
Some of the users that could benefit immensely from a database are all levels of management (i.e. company executives, managers, and leadership). This will help them track the employees that work under them and the progress of the projects being worked on. Regular company employees can benefit also (i.e. admin staff, HR, finance, marketing, and video game developers).

Business Rules and User Requirements

Business Rules

- Every employee has a unique number (Employee ID) assigned by the company. The name, date of birth, address, City/State/Zip, job title, and skills must be stored.
    - Some employees are supervisors to other employees. A supervisor must supervise at least one or more employees. If an employee is a supervisor, the SupervisorID must be stored.
- There are only three types of employees: Developers, Administrative staff, and IT. An employee can only belong to only one type of employee.
- Developers and Administrative staff can work on a project, multiple projects or no projects. A project can be worked on or not be worked on.
    - The project must store Project ID, project name budget, start date and end date.
    - Developers need to track the hours worked and the date.
    - Administrators need to track what project they are managing.
- A room is identified by RoomID, has a phone number and room name.
    - Some employees can work in multiple rooms but most work in one.
    - Employees are issued a workspace in a room identified by RoomIssID, with a date attribute.
- Transactions made by IT Employees need to be tracked, identified by TransID and store cost per unit, and quantity. The parts will be identified by PartID and store part name. Vendors are identified by VendorID. The vendor's name, address, and phone number.
    - Each IT employee can supply themselves with any number of parts from more than one vendor.
    - Each part can be supplied by any number of vendors to more than one IT employees, but each part must be supplied by at least one vendor to an IT employee.
    - Each vendor can supply many parts to any number of IT employees or not any.
- Tickets submitted by Administrative and Developer ticketing system and handled by IT employees.
    - The ticket systems ticket needs to have a description, submission date, completion date and include IDs of the Admin/Dev and IT handler.

EERD Relationship Diagram



Relations 3rd Normal Form

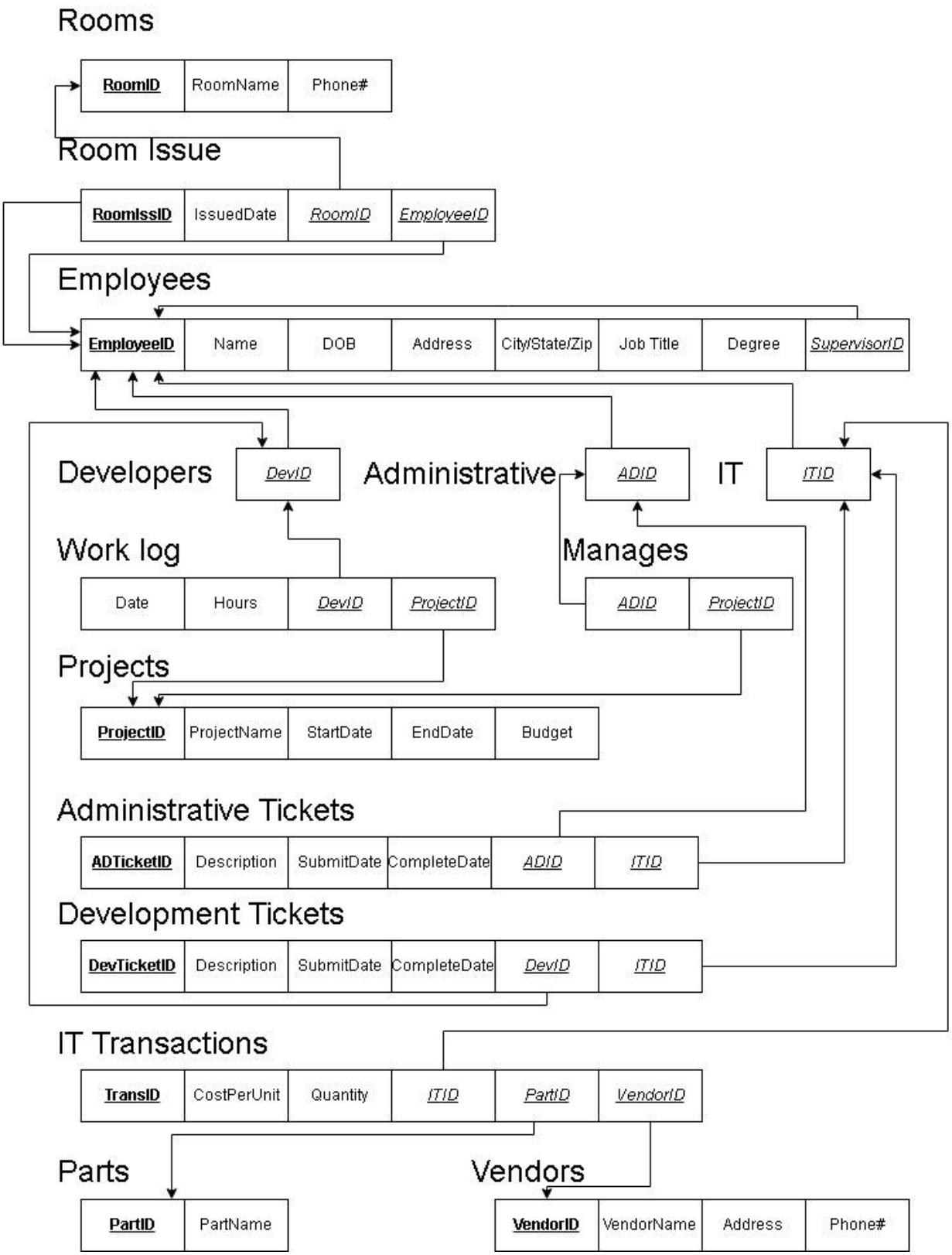


Table Creation Queries

CREATE TABLE EMPLOYEE_T (EMPLOYEE_ID INT NOT NULL, EMP_NAME VARCHAR(25), EMP_DOB DATE, ADDRESS VARCHAR(30), CITY_STATE_ZIP VARCHAR(30), JOB_TITLE VARCHAR(25), DEGREE VARCHAR(30), EMPLOYEE_SUPERVISOR_ID INT NOT NULL, CONSTRAINT EMPLOYEE_PK PRIMARY KEY (EMPLOYEE_ID));

CREATE TABLE ROOM_T (ROOM_ID INT NOT NULL, ROOM_NAME VARCHAR(25), PHONE_NUM VARCHAR(15), CONSTRAINT ROOM_PK PRIMARY KEY(ROOM_ID));

CREATE TABLE ROOM_ISSUE_T (ROOMISS_ID INT NOT NULL, ISSUED_DATE DATE, ROOM_ID INT NOT NULL, EMPLOYEE_ID INT NULL, CONSTRAINT ROOM_ISSUE_PK PRIMARY KEY(ROOMISS_ID), CONSTRAINT ROOM_ISSUE_FK1 FOREIGN KEY(ROOM_ID) REFERENCES ROOM_T(ROOM_ID), CONSTRAINT ROOM_ISSUE_FK2 FOREIGN KEY(EMPLOYEE_ID) REFERENCES EMPLOYEE_T(EMPLOYEE_ID));

CREATE TABLE DEVELOPER_T (DEV_ID INT NOT NULL, CONSTRAINT DEVELOPER_PK PRIMARY KEY (DEV_ID), CONSTRAINT DEVELOPER_FK1 FOREIGN KEY (DEV_ID) REFERENCES EMPLOYEE_T(EMPLOYEE_ID));

CREATE TABLE ADMINISTRATIVE_T (AD_ID INT NOT NULL, CONSTRAINT ADMINISTRATIVE_PK PRIMARY KEY (AD_ID), CONSTRAINT ADMINISTRATIVE_FK1 FOREIGN KEY (AD_ID) REFERENCES EMPLOYEE_T(EMPLOYEE_ID));

CREATE TABLE IT_T (IT_ID INT NOT NULL, CONSTRAINT IT_PK PRIMARY KEY (IT_ID), CONSTRAINT IT_FK1 FOREIGN KEY (IT_ID) REFERENCES EMPLOYEE_T(EMPLOYEE_ID));

CREATE TABLE PROJECT_T (PROJECT_ID INT NOT NULL, PROJECT_NAME VARCHAR(25), START_DATE DATE, END_DATE DATE NULL, BUDGET FLOAT, CONSTRAINT PROJECT_PK PRIMARY KEY (PROJECT_ID));

CREATE TABLE WORK_LOG_T (LOG_DATE DATE, HOURS FLOAT, DEV_ID INT NOT NULL, PROJECT_ID INT NOT NULL, CONSTRAINT WORK_LOG_FK1 FOREIGN KEY (DEV_ID) REFERENCES DEVELOPER_T(DEV_ID), CONSTRAINT WORK_LOG_FK2 FOREIGN KEY (PROJECT_ID) REFERENCES PROJECT_T(PROJECT_ID));

CREATE TABLE MANAGE_BY_T (PROJECT_ID INT NOT NULL, AD_ID INT NOT NULL, CONSTRAINT MANAGE_BY_FK1 FOREIGN KEY (PROJECT_ID) REFERENCES PROJECT_T(PROJECT_ID), CONSTRAINT MANAGE_BY_FK2 FOREIGN KEY (AD_ID) REFERENCES ADMINISTRATIVE_T(AD_ID));

CREATE TABLE ADMIN_TICKET_T (ADTICKET_ID INT NOT NULL, DESCRIPTION VARCHAR(400) NOT NULL, SUBMISSION_DATE DATE, COMPLETION_DATE DATE, AD_ID INT NOT NULL, IT_ID INT NOT NULL, CONSTRAINT ADMIN_TICKET_PK PRIMARY KEY (ADTICKET_ID), CONSTRAINT ADMIN_TICKET_FK1 FOREIGN KEY (AD_ID) REFERENCES ADMINISTRATIVE_T(AD_ID), CONSTRAINT ADMIN_TICKET_FK2 FOREIGN KEY (IT_ID) REFERENCES IT_T(IT_ID));

CREATE TABLE DEV_TICKET_T (DEVTICKET_ID INT NOT NULL, DESCRIPTION VARCHAR(400) NOT NULL, SUBMISSION_DATE DATE, COMPLETION_DATE DATE, DEV_ID INT NOT NULL, IT_ID INT NOT NULL, CONSTRAINT DEV_TICKET_PK PRIMARY KEY (DEVTICKET_ID), CONSTRAINT DEV_TICKET_FK1 FOREIGN

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KEY (DEV_ID) REFERENCES DEVELOPER_T(DEV_ID), CONSTRAINT DEV_TICKET_FK2 FOREIGN KEY (IT_ID)
REFERENCES IT_T(IT_ID) );

CREATE TABLE VENDOR_T (VENDOR_ID INT NOT NULL, VENDOR_NAME VARCHAR(25), ADDRESS
VARCHAR(30), PHONE_NUM VARCHAR(15), CONSTRAINT VENDOR_PK PRIMARY KEY (VENDOR_ID) );

CREATE TABLE PART_T (PART_ID INT NOT NULL, PART_NAME VARCHAR(25), CONSTRAINT PART_PK
PRIMARY KEY (PART_ID) );

CREATE TABLE TRANSACTION_T (TRANS_ID INT NOT NULL, COST_PER_UNIT Decimal(6,2), QUANTITY INT
NOT NULL, IT_ID INT NOT NULL, PART_ID INT NOT NULL, VENDOR_ID INT NOT NULL, CONSTRAINT
TRANSACTION_PK PRIMARY KEY (TRANS_ID), CONSTRAINT TRANSACTION_FK1 FOREIGN KEY (IT_ID)
REFERENCES IT_T(IT_ID), CONSTRAINT TRANSACTION_FK2 FOREIGN KEY (PART_ID) REFERENCES
PART_T(PART_ID), CONSTRAINT TRANSACTION_FK3 FOREIGN KEY (VENDOR_ID) REFERENCES
VENDOR_T(VENDOR_ID) );
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Insert Queries

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INSERT INTO EMPLOYEE_T (EMPLOYEE_ID, EMP_NAME, EMP_DOB, ADDRESS, CITY_STATE_ZIP,
JOB_TITLE, DEGREE, EMPLOYEE_SUPERVISOR_ID) VALUES (1, 'Oscar Martinez', '2000-06-22', '123 Elm
Street', 'Amarillo, Texas, 79101', 'CEO', 'CIS Business Admin', 1);

INSERT INTO EMPLOYEE_T (EMPLOYEE_ID, EMP_NAME, EMP_DOB, ADDRESS, CITY_STATE_ZIP,
JOB_TITLE, DEGREE, EMPLOYEE_SUPERVISOR_ID) VALUES (2, 'Emily Johnson', '1997-08-20', '456 Oak
Avenue', 'Amarillo, Texas, 79102', 'ACOUNTANT', 'FINANCE', 1);

INSERT INTO EMPLOYEE_T (EMPLOYEE_ID, EMP_NAME, EMP_DOB, ADDRESS, CITY_STATE_ZIP,
JOB_TITLE, DEGREE, EMPLOYEE_SUPERVISOR_ID) VALUES (3, 'Michael Smith', '1995-11-07', '789 Maple
Lane', 'Amarillo, Texas, 79103', 'Lead Game Designer', 'Game Design', 1);

INSERT INTO EMPLOYEE_T (EMPLOYEE_ID, EMP_NAME, EMP_DOB, ADDRESS, CITY_STATE_ZIP,
JOB_TITLE, DEGREE, EMPLOYEE_SUPERVISOR_ID) VALUES (4, 'Sarah Davis', '1996-04-12', '1011 Pine
Road', 'Amarillo, Texas, 79104', 'Lead Artist', 'Graphic Design', 1);

INSERT INTO EMPLOYEE_T (EMPLOYEE_ID, EMP_NAME, EMP_DOB, ADDRESS, CITY_STATE_ZIP,
JOB_TITLE, DEGREE, EMPLOYEE_SUPERVISOR_ID) VALUES (5, 'Matthew Rodriguez', '1998-05-13', '2122
Juniper Boulevard', 'Amarillo, Texas, 79105', 'IT Lead', 'CIS', 1);

INSERT INTO EMPLOYEE_T (EMPLOYEE_ID, EMP_NAME, EMP_DOB, ADDRESS, CITY_STATE_ZIP,
JOB_TITLE, DEGREE, EMPLOYEE_SUPERVISOR_ID) VALUES (6, 'Jessica Brown', '2000-12-30', '1314 Cedar
Court', 'Amarillo, Texas, 79106', 'Sr. Game Designer', 'Game Design', 3);

INSERT INTO EMPLOYEE_T (EMPLOYEE_ID, EMP_NAME, EMP_DOB, ADDRESS, CITY_STATE_ZIP,
JOB_TITLE, DEGREE, EMPLOYEE_SUPERVISOR_ID) VALUES (7, 'David Wilson', '2001-03-18', '1516 Birch
Drive', 'Amarillo, Texas, 79107', 'Artist', 'Graphic Design', 4);
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INSERT INTO EMPLOYEE_T (EMPLOYEE_ID, EMP_NAME, EMP_DOB, ADDRESS, CITY_STATE_ZIP, JOB_TITLE, DEGREE, EMPLOYEE_SUPERVISOR_ID) VALUES (8, 'Amanda Taylor', '2002-06-01', '1718 Willow Way', 'Amarillo, Texas, 79108', 'Programmer', 'Computer Science', 3);

INSERT INTO EMPLOYEE_T (EMPLOYEE_ID, EMP_NAME, EMP_DOB, ADDRESS, CITY_STATE_ZIP, JOB_TITLE, DEGREE, EMPLOYEE_SUPERVISOR_ID) VALUES (9, 'Daniel Thompson', '2002-09-14', '1920 Spruce Circle', 'Amarillo, Texas, 79109', 'Assistant', 'Business Admin', 1);

INSERT INTO EMPLOYEE_T (EMPLOYEE_ID, EMP_NAME, EMP_DOB, ADDRESS, CITY_STATE_ZIP, JOB_TITLE, DEGREE, EMPLOYEE_SUPERVISOR_ID) VALUES (10, 'Ashley Garcia', '2003-09-25', '2324 Sycamore Street', 'Amarillo, Texas, 79109', 'IT Intern', 'CIS', 5);


INSERT INTO ROOM_T (ROOM_ID, ROOM_NAME, PHONE_NUM) VALUES (1, 'Game Devs', '(806) 555-0101');

INSERT INTO ROOM_T (ROOM_ID, ROOM_NAME, PHONE_NUM) VALUES (2, 'Administrative Room', '(806) 555-2323');

INSERT INTO ROOM_T (ROOM_ID, ROOM_NAME, PHONE_NUM) VALUES (3, 'IT Room', '(806) 555-4545');

INSERT INTO ROOM_T (ROOM_ID, ROOM_NAME, PHONE_NUM) VALUES (4, 'Artist Room', '(806) 555-6767');


INSERT INTO ROOM_ISSUE_T (ROOMISS_ID, ISSUED_DATE, ROOM_ID, EMPLOYEE_ID) VALUES (1, '2024-05-12', 1, 3);

INSERT INTO ROOM_ISSUE_T (ROOMISS_ID, ISSUED_DATE, ROOM_ID, EMPLOYEE_ID) VALUES (2, '2024-05-12', 1, 6);

INSERT INTO ROOM_ISSUE_T (ROOMISS_ID, ISSUED_DATE, ROOM_ID, EMPLOYEE_ID) VALUES (3, '2026-02-21', 1, 8);

INSERT INTO ROOM_ISSUE_T (ROOMISS_ID, ISSUED_DATE, ROOM_ID, EMPLOYEE_ID) VALUES (4, NULL, 1, NULL);

INSERT INTO ROOM_ISSUE_T (ROOMISS_ID, ISSUED_DATE, ROOM_ID, EMPLOYEE_ID) VALUES (5, '2024-05-12', 2, 1);

INSERT INTO ROOM_ISSUE_T (ROOMISS_ID, ISSUED_DATE, ROOM_ID, EMPLOYEE_ID) VALUES (6, '2024-05-12', 2, 2);

INSERT INTO ROOM_ISSUE_T (ROOMISS_ID, ISSUED_DATE, ROOM_ID, EMPLOYEE_ID) VALUES (7, '2027-11-15', 2, 9);
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INSERT INTO ROOM_ISSUE_T (ROOMISS_ID, ISSUED_DATE, ROOM_ID, EMPLOYEE_ID) VALUES (8, NULL, 2, NULL);

INSERT INTO ROOM_ISSUE_T (ROOMISS_ID, ISSUED_DATE, ROOM_ID, EMPLOYEE_ID) VALUES (9, NULL, 2, NULL);

INSERT INTO ROOM_ISSUE_T (ROOMISS_ID, ISSUED_DATE, ROOM_ID, EMPLOYEE_ID) VALUES (10, '2024-05-12', 3, 5);

INSERT INTO ROOM_ISSUE_T (ROOMISS_ID, ISSUED_DATE, ROOM_ID, EMPLOYEE_ID) VALUES (11, '2027-03-24', 3, 10);

INSERT INTO ROOM_ISSUE_T (ROOMISS_ID, ISSUED_DATE, ROOM_ID, EMPLOYEE_ID) VALUES (12, NULL, 3, NULL);

INSERT INTO ROOM_ISSUE_T (ROOMISS_ID, ISSUED_DATE, ROOM_ID, EMPLOYEE_ID) VALUES (13, NULL, 3, NULL);

INSERT INTO ROOM_ISSUE_T (ROOMISS_ID, ISSUED_DATE, ROOM_ID, EMPLOYEE_ID) VALUES (14, '2024-05-12', 4, 4);

INSERT INTO ROOM_ISSUE_T (ROOMISS_ID, ISSUED_DATE, ROOM_ID, EMPLOYEE_ID) VALUES (15, '2026-10-01', 4, 7);

INSERT INTO ROOM_ISSUE_T (ROOMISS_ID, ISSUED_DATE, ROOM_ID, EMPLOYEE_ID) VALUES (16, NULL, 4, NULL);


INSERT INTO DEVELOPER_T (DEV_ID) VALUES (3);

INSERT INTO DEVELOPER_T (DEV_ID) VALUES (4);

INSERT INTO DEVELOPER_T (DEV_ID) VALUES (6);

INSERT INTO DEVELOPER_T (DEV_ID) VALUES (7);

INSERT INTO DEVELOPER_T (DEV_ID) VALUES (8);


INSERT INTO ADMINISTRATIVE_T (AD_ID) VALUES (1);

INSERT INTO ADMINISTRATIVE_T (AD_ID) VALUES (2);

INSERT INTO ADMINISTRATIVE_T (AD_ID) VALUES (9);


INSERT INTO IT_T (IT_ID) VALUES (5);
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INSERT INTO IT_T (IT_ID) VALUES (10);


INSERT INTO PROJECT_T (PROJECT_ID, PROJECT_NAME, START_DATE, END_DATE, BUDGET) VALUES
(1,'CrazyRunNGun', '2024-05-12', '2025-09-03', 50000.00);

INSERT INTO PROJECT_T (PROJECT_ID, PROJECT_NAME, START_DATE, END_DATE, BUDGET) VALUES
(2,'AngryPlatformer', '2025-04-03', NULL, 100000.00);

INSERT INTO PROJECT_T (PROJECT_ID, PROJECT_NAME, START_DATE, END_DATE, BUDGET) VALUES
(3,'AngryPlatformer', '2027-01-14', NULL, 300000.00);


INSERT INTO WORK_LOG_T (LOG_DATE, HOURS, DEV_ID, PROJECT_ID) VALUES ('2025-11-18', 7.5, 4, 2);

INSERT INTO WORK_LOG_T (LOG_DATE, HOURS, DEV_ID, PROJECT_ID) VALUES ('2026-07-02', 4.0, 6, 2);

INSERT INTO WORK_LOG_T (LOG_DATE, HOURS, DEV_ID, PROJECT_ID) VALUES ('2026-12-25', 8.0, 3, 2);

INSERT INTO WORK_LOG_T (LOG_DATE, HOURS, DEV_ID, PROJECT_ID) VALUES ('2027-01-30', 6.0, 6, 3);

INSERT INTO WORK_LOG_T (LOG_DATE, HOURS, DEV_ID, PROJECT_ID) VALUES ('2027-02-26', 7.0, 8, 3);


INSERT INTO MANAGE_BY_T (PROJECT_ID, AD_ID)  VALUES (1, 1);

INSERT INTO MANAGE_BY_T (PROJECT_ID, AD_ID)  VALUES (1, 2);

INSERT INTO MANAGE_BY_T (PROJECT_ID, AD_ID)  VALUES (2, 1);

INSERT INTO MANAGE_BY_T (PROJECT_ID, AD_ID)  VALUES (2, 2);

INSERT INTO MANAGE_BY_T (PROJECT_ID, AD_ID)  VALUES (3, 1);

INSERT INTO MANAGE_BY_T (PROJECT_ID, AD_ID)  VALUES (3, 2);

INSERT INTO MANAGE_BY_T (PROJECT_ID, AD_ID)  VALUES (3, 9);


INSERT INTO ADMIN_TICKET_T (ADTICKET_ID, DESCRIPTION, SUBMISSION_DATE, COMPLETION_DATE,
AD_ID, IT_ID) VALUES (1, 'My pc doesnt turn on.', '2025-10-25', '2025-12-05', 2, 5);

INSERT INTO ADMIN_TICKET_T (ADTICKET_ID, DESCRIPTION, SUBMISSION_DATE, COMPLETION_DATE,
AD_ID, IT_ID) VALUES (2, 'I need to update my drivers.', '2025-03-15', '2025-03-20', 9, 10);


INSERT INTO DEV_TICKET_T (DEVTICKET_ID, DESCRIPTION, SUBMISSION_DATE, COMPLETION_DATE,
DEV_ID, IT_ID) VALUES (1, 'I need a password reset.', '2025-03-30', '2025-04-01', 6, 5);
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INSERT INTO DEV_TICKET_T (DEVTICKET_ID, DESCRIPTION, SUBMISSION_DATE, COMPLETION_DATE, DEV_ID, IT_ID) VALUES (2, 'I need a new state of the art game design workstation.', '2025-07-09', '2025-07-28', 3, 5);

INSERT INTO DEV_TICKET_T (DEVTICKET_ID, DESCRIPTION, SUBMISSION_DATE, COMPLETION_DATE, DEV_ID, IT_ID) VALUES (3, 'My monitor is showing no signal.', '2026-02-25', '2026-03-04', 6, 5);


INSERT INTO VENDOR_T (VENDOR_ID, VENDOR_NAME, ADDRESS, PHONE_NUM) VALUES (1, 'NewByte', '2526 Magnolia Avenue, 79111', '(806) 555-7878');

INSERT INTO VENDOR_T (VENDOR_ID, VENDOR_NAME, ADDRESS, PHONE_NUM) VALUES (2, 'Rio.com', NULL, NULL);

INSERT INTO VENDOR_T (VENDOR_ID, VENDOR_NAME, ADDRESS, PHONE_NUM) VALUES (3, 'BELL PCs', '2930 Pinecrest Drive, 79113', '(806) 555-2323');


INSERT INTO PART_T (PART_ID, PART_NAME) VALUES (1, 'Pre-Built');

INSERT INTO PART_T (PART_ID, PART_NAME) VALUES (2, 'Accessories');

INSERT INTO PART_T (PART_ID, PART_NAME) VALUES (3, 'Case');

INSERT INTO PART_T (PART_ID, PART_NAME) VALUES (4, 'PSU');

INSERT INTO PART_T (PART_ID, PART_NAME) VALUES (5, 'MOBO');

INSERT INTO PART_T (PART_ID, PART_NAME) VALUES (6, 'CPU');

INSERT INTO PART_T (PART_ID, PART_NAME) VALUES (7, 'GPU');

INSERT INTO PART_T (PART_ID, PART_NAME) VALUES (8, 'Cooler');

INSERT INTO PART_T (PART_ID, PART_NAME) VALUES (9, 'Monitor');


INSERT INTO TRANSACTION_T (TRANS_ID, COST_PER_UNIT, QUANTITY, IT_ID, PART_ID, VENDOR_ID) VALUES (1, 459.99, 1, 5, 1, 3);

INSERT INTO TRANSACTION_T (TRANS_ID, COST_PER_UNIT, QUANTITY, IT_ID, PART_ID, VENDOR_ID) VALUES (2, 94.56, 1, 5, 2, 1);

INSERT INTO TRANSACTION_T (TRANS_ID, COST_PER_UNIT, QUANTITY, IT_ID, PART_ID, VENDOR_ID) VALUES (3, 75.99, 1, 5, 3, 1);
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INSERT INTO TRANSACTION_T (TRANS_ID, COST_PER_UNIT, QUANTITY, IT_ID, PART_ID, VENDOR_ID)
VALUES (4, 81.50, 1, 5, 4, 2);

INSERT INTO TRANSACTION_T (TRANS_ID, COST_PER_UNIT, QUANTITY, IT_ID, PART_ID, VENDOR_ID)
VALUES (5, 130.50, 1, 5, 5, 2);

INSERT INTO TRANSACTION_T (TRANS_ID, COST_PER_UNIT, QUANTITY, IT_ID, PART_ID, VENDOR_ID)
VALUES (6, 259.99, 1, 5, 6, 1);

INSERT INTO TRANSACTION_T (TRANS_ID, COST_PER_UNIT, QUANTITY, IT_ID, PART_ID, VENDOR_ID)
VALUES (7, 609.99, 1, 5, 7, 2);

INSERT INTO TRANSACTION_T (TRANS_ID, COST_PER_UNIT, QUANTITY, IT_ID, PART_ID, VENDOR_ID)
VALUES (8, 52.76, 1, 5, 8, 1);

INSERT INTO TRANSACTION_T (TRANS_ID, COST_PER_UNIT, QUANTITY, IT_ID, PART_ID, VENDOR_ID)
VALUES (9, 130.52, 1, 5, 9, 1);

INSERT INTO TRANSACTION_T (TRANS_ID, COST_PER_UNIT, QUANTITY, IT_ID, PART_ID, VENDOR_ID)
VALUES (10, 150.21, 1, 10, 9, 2);
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Table Pictures

TABLE - EMPLOYEE_T

EMPLOYEE_ID	EMP_NAME	EMP_DOB	ADDRESS	CITY_STATE_ZIP	JOB_TITLE	DEGREE	EMPLOYEE_SUPERVISOR_ID
10	Ashley Garcia	2003-09-25	2324 Sycamore Street	Amarillo, Texas, 79109	IT Intern	CIS	5
9	Daniel Thompson	2002-09-14	1920 Spruce Circle	Amarillo, Texas, 79109	Assistant	Business Admin	1
8	Amanda Taylor	2002-06-01	1718 Willow Way	Amarillo, Texas, 79108	Programmer	Computer Science	3
7	David Wilson	2001-03-18	1516 Birch Drive	Amarillo, Texas, 79107	Artist	Graphic Design	4
6	Jessica Brown	2000-12-30	1314 Cedar Court	Amarillo, Texas, 79106	Sr. Game Designer	Game Design	3
5	Matthew Rodriguez	1998-05-13	2122 Juniper Boulevard	Amarillo, Texas, 79105	IT Lead	CIS	1
4	Sarah Davis	1996-04-12	1011 Pine Road	Amarillo, Texas, 79104	Lead Artist	Graphic Design	1
3	Michael Smith	1995-11-07	789 Maple Lane	Amarillo, Texas, 79103	Lead Game Designer	Game Design	1
2	Emily Johnson	1997-08-20	456 Oak Avenue	Amarillo, Texas, 79102	ACOUNTANT	FINANCE	1
1	Oscar Martinez	2000-06-22	123 Elm Street	Amarillo, Texas, 79101	CEO	CIS Business Admin	1

TABLE - ROOM_T

ROOM_ID	ROOM_NAME	PHONE_NUM
4	Artist Room	(806) 555-6767
3	IT Room	(806) 555-4545
2	Administrative Room	(806) 555-2323
1	Game Devs	(806) 555-0101

TABLE - ROOM_ISSUE_T

ROOMISS_ID	ISSUED_DATE	ROOM_ID	EMPLOYEE_ID
16	NULL	4	NULL
15	2026-10-01	4	7
14	2024-05-12	4	4
13	NULL	3	NULL
12	NULL	3	NULL
11	2027-03-24	3	10
10	2024-05-12	3	5
9	NULL	2	NULL
8	NULL	2	NULL
7	2027-11-15	2	9
6	2024-05-12	2	2
5	2024-05-12	2	1
4	NULL	1	NULL
3	2026-02-21	1	8
2	2024-05-12	1	6
1	2024-05-12	1	3

TABLE - DEVELOPER_T

DEV_ID
8
7
6
4
3

TABLE - ADMINISTRATIVE_T

AD_ID
9
2
1

TABLE - IT_T

IT_ID
10
5

TABLE - PROJECT_T

PROJECT_ID	PROJECT_NAME	START_DATE	END_DATE	BUDGET
3	AngryPlatformer	2027-01-14	NULL	300000
2	AngryPlatformer	2025-04-03	NULL	100000
1	RunNGun	2024-05-12	2025-09-03	50000

TABLE - WORK_LOG_T

LOG_DATE	HOURS	DEV_ID	PROJECT_ID
2027-02-26	7	8	3
2027-01-30	6	6	3
2026-12-25	8	3	2
2026-07-02	4	6	2
2025-11-18	7.5	4	2

TABLE - MANAGE_BY_T

PROJECT_ID	AD_ID
1	1
1	1
1	2
2	1
2	2
3	1
3	2
3	9

TABLE - ADMIN_TICKET_T

ADTICKET_ID	DESCRIPTION	SUBMISSION_DATE	COMPLETION_DATE	AD_ID	IT_ID
1	My pc doesnt turn on.	2025-10-25	2025-12-05	2	5
2	My PC is slow.	2027-03-15	2025-03-20	9	10

TABLE - DEV_TICKET_T

DEVTICKET_ID	DESCRIPTION	SUBMISSION_DATE	COMPLETION_DATE	DEV_ID	IT_ID
1	I need a password reset.	2025-03-30	2025-04-01	6	5
2	I need a new state of the art game design work...	2025-07-09	2025-07-28	3	5
3	My monitor is showing no signal.	2026-02-25	2026-03-04	6	5

TABLE - VENDOR_T

VENDOR_ID	VENDOR_NAME	ADDRESS	PHONE_NUM
1	NewByte	2526 Magnolia Avenue, 79111	(806) 555-7878
2	Rio.com	NULL	NULL
3	BELL PCs	2930 Pinecrest Drive, 79113	(806) 555-2323

TABLE - PART_T

PART_ID	PART_NAME
1	Pre-Built
2	Accessories
3	Case
4	PSU
5	MOBO
6	CPU
7	GPU
8	Cooler
9	Monitor

TABLE - TRANSACTION_T

TRANS_ID	COST_PER_UNIT	QUANTITY	IT_ID	PART_ID	VENDOR_ID
10	150.21	1	10	9	2
9	130.52	1	5	9	1
8	52.76	1	5	8	1
7	609.99	1	5	7	2
6	259.99	1	5	6	1
5	130.50	1	5	5	2
4	81.50	1	5	4	2
3	75.99	1	5	3	1
2	94.56	1	5	2	1
1	499.99	1	5	1	3

Select Queries & Pictures

1. **List of Employees with Their Job Titles.**

SELECT EMP_NAME AS 'Employee', JOB_TITLE AS 'Job Title' FROM EMPLOYEE_T;

Employee	Job Title
Oscar Martinez	CEO
Emily Johnson	ACOUNTANT
Michael Smith	Lead Game Designer
Sarah Davis	Lead Artist
Matthew Rodriguez	IT Lead
Jessica Brown	Sr. Game Designer
David Wilson	Artist
Amanda Taylor	Programmer
Daniel Thompson	Game Designer
Ashley Garcia	IT Intern

2. **Total Money Spent on Transactions by IT.**

SELECT SUM(COST_PER_UNIT * QUANTITY) AS 'Total Spending' FROM TRANSACTION_T WHERE IT_ID IN (SELECT IT_ID FROM IT_T);

Total Spending
1706.01

3. **List of Projects Managed by Administrators**

SELECT PROJECT_NAME, EMP_NAME AS Administrator_Name FROM PROJECT_T INNER JOIN MANAGE_BY_T ON PROJECT_T.PROJECT_ID = MANAGE_BY_T.PROJECT_ID INNER JOIN EMPLOYEE_T ON MANAGE_BY_T.AD_ID = EMPLOYEE_T.EMPLOYEE_ID GROUP BY PROJECT_NAME, Administrator_Name;

PROJECT_NAME	Administrator_Name
RunNGun	Oscar Martinez
RunNGun	Emily Johnson
AngryPlatformer	Oscar Martinez
AngryPlatformer	Emily Johnson
AngryPlatformer	Daniel Thompson

4. **Number of Dev Tickets Submitted by Each Developer**

SELECT EMP_NAME AS Developer_Name, COUNT(DEVTICKET_ID) AS Total_Tickets_Submitted FROM EMPLOYEE_T LEFT JOIN DEV_TICKET_T ON EMPLOYEE_T.EMPLOYEE_ID = DEV_TICKET_T.DEV_ID GROUP BY EMPLOYEE_T.EMPLOYEE_ID, EMP_NAME;

Developer_Name	Total_Tickets_Submitted
Oscar Martinez	0
Emily Johnson	0
Michael Smith	1
Sarah Davis	0
Matthew Rodriguez	0
Jessica Brown	2
David Wilson	0
Amanda Taylor	0
Daniel Thompson	0
Ashley Garcia	0

5. **Average Budget for Projects managed by Each Administrator**

SELECT EMP_NAME AS Administrator_Name, AVG(BUDGET) AS Average_Project_Budget FROM EMPLOYEE_T LEFT JOIN MANAGE_BY_T ON EMPLOYEE_T.EMPLOYEE_ID = MANAGE_BY_T.AD_ID LEFT JOIN PROJECT_T ON MANAGE_BY_T.PROJECT_ID = PROJECT_T.PROJECT_ID WHERE EMPLOYEE_T.EMPLOYEE_ID IN (SELECT AD_ID FROM ADMINISTRATIVE_T) GROUP BY EMPLOYEE_T.EMPLOYEE_ID, EMP_NAME;

Administrator_Name	Average_Project_Budget
Oscar Martinez	125000
Emily Johnson	150000
Daniel Thompson	300000