1. A description of the database, how the data will be used, and a general description of the data to be stored

The database I designed is for a game store. The store stocks various games that are sold across multiple platforms (e.g. Xbox, PlayStation, etc.). The store has a number of employees, and these employees conduct sales of the games.

Data stored:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  | | --- | --- | | Game ID | Primary key for identifying games | | Game name | The name of the game in string form | | Game price | Monetary value representing the price of the game | | Current stock | An integer indicating the number of copies of the game in stock | | Platform ID | Foreign key that makes up a composite key along with Game ID, the value indicates the platform that the game copy can be run on |   Game: | |  |  | | --- | --- | | Platform ID | Primary key for identifying the platform | | Platform name | The name of the platform in string form | | Manufacturer | The name of the manufacturer that produces the platform |   Platform: |
| |  |  | | --- | --- | | Sale ID | Primary key for identifying individual sales | | Employee ID | Employee ID for the employee that made the sale | | Game ID | ID of the game that has been sold | | Sale Date | Date that the sale took place |   Sale: | Employee:   |  |  | | --- | --- | | Employee ID | Primary key for identifying individual employees | | First Name | First name of the employee | | Last Name | Last name of the employee | | Contact Number | Contact number in case of emergencies/if a supervisor needs to call someone | | Salary | The salary the employee currently works at | |

The data will be used to monitor the sales of the games stocked by the store, with info on the platform being included to allow queries on which console is currently selling the most games.

The game includes the number of copies in stock to monitor when the stocks of a game are running low, and more should be ordered.

Sale date is included to allow for the querying of dates when certain games are sold (e.g. to see if a particular game hasn’t sold any copies in the past 6 months), and to see which employees are carrying out the most sales (less relevant in a non-commission job, but still a useful metric for the employer).

Employee name and contact details are recorded to provide context for the sales figures (if there was just the employee number, a manager would have to say something like “Employee #32, good job on this month’s sales figures!” which is silly).

1. A list of all entities and attributes, including keys, data types, and required attributes

The format is: name of the attribute, key type (if applicable), data type, required or not.

**Game:**

GameID, Primary Key, INT, required

GameName, N/A, VARCHAR(64), required

GamePrice, N/A, DECIMAL(2), required

Stock, N/A, INT, not required

PlatformID, Primary Key & Foreign Key, INT, required

**Platform:**

PlatformID, Primary Key, INT, required

PlatformName, N/A, VARCHAR(32), required

Manufacturer, N/A, VARCHAR(32), not required

**Sale:**

SaleID, Primary Key, INT, required

EmployeeID, Foreign Key, INT, required

GameID, Primary Key & Foreign Key, INT, required

TransactionDate, N/A, DATE, required

**Employee:**

EmployeeID, Primary Key, INT, required

FirstName, N/A, VARCHAR(32), required

LastName, N/A, VARCHAR(32), required

Salary, N/A, DECIMAL(2), required

ContactNumber, N/A, VARCHAR(13), not required

1. ERD diagram showing the entities and their relationships

Diagram

Description automatically generated

**For reference, bold attributes are required attributes (not nullable)**