**DBS211 Final Project**

**Video Game Retail Industry**

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**DBS211 Business Proposal**

**Introduction:**

The industry of choice for this proposal is the video game retail industry. These days there are many people out there that play video games from the young to the old and video games are the most interactive creative medium there is. This topic was chosen because the group has individual experience with playing video games and are highly passionate about it. One of the group members also has experience coding some basic video game applications. It seems like an exciting opportunity to explore the retail side of the video game business.

**Problem Statement:**

The problem is a local video game business with a small number of employees is lacking an efficient way to properly manage its sales and keep track of the stock it has on hand. Employees struggle to be accurate using an outdated paper method of writing everything down and it causes many errors and discrepancies in the process. The local business has a hard time knowing how successful it is overall with profits and it accepts cash only payments.

**Solution:**

The solution is to make a point of sales software application for accurate tracking of sales information, to make detailed data reports to help the business grow and have records of inventory stored. It will help tremendously in being much easier to process different kinds of payments like debit or credit cards and looking up the prices of products. It will be simpler to store the information of all orders and who ordered what. The employees will be able to make supply purchases from the software, track customer information and which employee is working the register for personal responsibility to the benefit of the manager.

**The Requirements:**

* Inventory management
* Report for the amount of processing time taken for customer orders
* Report for the amount of processing time taken for any orders from the supplier with the retail business
* Report on all employees in the company with their names and contact information
* Report for individual stock quantity of items to know when to order when supplies are running low
* Payment processing for transactions and history, if customer is paying with credit or debit card or cash customer could lose their receipt so they can make return even if they don’t have the receipt
* Customer records
* Employee information
* Login system
* Product information look-up
* Publisher information of the video game
* Returns and refunds
* Printing receipts to the customer
* Product prices can vary with time in terms of discounts provided

**Data Dictionary:**

**CUSTOMERS**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Column  Name | Column  DataType | Size, Precision | Default  Value | PK/FK | Not  Null | Range | Sample  Data | Notes |
| custID | NUMBER | 8 |  | PK | ✓ | 1-99999999 | 12345678 | Autonumbered  identity |
| firstName | VARCHAR | 20 | NULL |  |  |  | “David” | In-store purchase with cash makes it an optional field |
| lastName | VARCHAR | 30 | NULL |  |  |  | “Davenport” | In-store purchase with cash makes it an optional field |
| phoneNumber | NUMBER | 10 | NULL |  |  | 2000000000-  9999999999 | 9055551212 | Assuming North American Phone Number |
| email | VARCHAR | 50 | NULL |  |  |  | “abc@mail.com” |  |
| address | VARCHAR | 50 | NULL |  |  |  | “99 test st., Markham, ON” | Assuming North American Address |

**EMPLOYEES**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Column  Name | Column  DataType | Size, Precision | Default  Value | PK/FK | Not  Null | Range | Sample  Data | Notes |
| empID | NUMBER | 4 |  | PK | ✓ | 1-9999 | 1234 | Autonumbered  identity |
| firstName | VARCHAR | 20 |  |  | ✓ |  | “Bob” |  |
| lastName | VARCHAR | 30 |  |  | ✓ |  | “Mackenzie” |  |
| userName | VARCHAR | 30 |  |  | ✓ |  | “BMack” |  |
| password | VARCHAR | 20 |  |  | ✓ |  | “MacBobK12” |  |
| sin | NUMBER | 9 |  |  | ✓ | 000000001-  999999999 | 123456789 |  |
| dob | DATE |  |  |  | ✓ |  | 1972/05/16 | Date of Birth  (YYYY/MM/DD) |
| email | VARCHAR | 50 |  |  | ✓ |  | def@mail.com |  |
| phoneNumber | NUMBER | 10 |  |  | ✓ | 2000000000-  9999999999 | 9055551212 | Assuming North American Phone Number |

**ORDERS**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Column  Name | Column  DataType | Size, Precision | Default  Value | PK/FK | Not  Null | Range | Sample  Data | Notes |
| orderID | INT |  |  | PK | ✓ |  | 122333 | Autonumbered  identity |
| custID | NUMBER | 8 |  | FK | ✓ | 1-99999999 | 12345678 |  |
| empID | NUMBER | 4 |  | FK | ✓ | 1-9999 | 1234 |  |
| status | VARCHAR | 10 |  |  | ✓ | “Processing”, “Shipped”, “Delivered”, “Completed”, “Cancelled”  “Pending”  “Delayed”  “Returned” | “Completed” | Status of Customer Purchasing |
| dateOfPurchase | DATE |  |  |  | ✓ |  | 2023/07/29 | Ordered Date  (YYYY/MM/DD) |
| dateShipped | DATE |  | NULL |  |  |  | 2023/07/31 | Shipped Date  (YYYY/MM/DD)  Could be NULL if order has not shipped yet |
| transactionType | VARCHAR | 10 |  |  | ✓ | “Cash”, Credit”, “Debit” | “Credit” |  |

**PUBLISHERS**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Column  Name | Column  DataType | Size, Precision | Default  Value | PK/FK | Not  Null | Range | Sample  Data | Notes |
| publisherID | NUMBER | 5 |  | PK | ✓ | 1-99999 | 54321 | Autonumbered  identity |
| companyName | VARCHAR | 30 |  |  | ✓ |  | “Microsoft” |  |
| country | CHAR | 3 |  |  | ✓ |  | “USA” | Country Code |
| contactEmail | VARCHAR | 50 |  |  | ✓ |  | valve@mail.com |  |

**VIDEOGAMES**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Column  Name | Column  DataType | Size, Precision | Default  Value | PK/FK | Not  Null | Range | Sample  Data | Notes |
| gameID | INT |  |  | PK | ✓ |  | 987654 | Autonumbered  identity |
| productName | VARCHAR | 30 |  |  | ✓ |  | “Among Us” |  |
| genre | VARCHAR | 10 |  |  | ✓ |  | “FPS” |  |
| sellingPrice | NUMBER | 10, 2 | 0.00 |  | ✓ |  | 123.45 | Monetary value |
| ageRating | CHAR | 1 |  |  | ✓ | “E”  “T”  “M”  “A” | “E” |  |
| stockQuantity | INT |  | NULL |  |  |  | 20 | If a new product isn’t available in stock yet it’s a null value |
| supplierCost | NUMBER | 10, 2 |  |  | ✓ |  | 123.45 | Monetary value |
| publisherID | NUMBER | 5 |  | FK | ✓ | 1-99999 | 54321 |  |
| releaseDate | DATE |  |  |  | ✓ |  | 2023/07/29 | Release Date  (YYYY/MM/DD) |
| platformID | NUMBER | 4 |  | FK | ✓ | 1-9999 | 1234 |  |

**PLATFORMS**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Column  Name | Column  DataType | Size, Precision | Default  Value | PK/FK | Not  Null | Range | Sample  Data | Notes |
| platformID | NUMBER | 4 |  | PK | ✓ | 1-9999 | 1234 | Autonumbered  identity |
| platformName | VARCHAR | 30 |  |  | ✓ |  | “Nintendo Switch” |  |

**SUPPLY\_ORDERS**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Column  Name | Column  DataType | Size, Precision | Default  Value | PK/FK | Not  Null | Range | Sample  Data | Notes |
| supplyOrderID | INT |  |  | PK | ✓ |  | 111223 | Autonumbered  identity |
| empID | NUMBER | 4 |  | FK | ✓ | 1-9999 | 1234 |  |
| status | VARCHAR | 10 |  |  | ✓ | “Processing”, “Shipped”, “Delivered”, “Completed”, “Cancelled”  “Pending”  “Delayed”  “Returned” | “Processing” | Status of Product Supply Purchasing |
| dateOfPurchase | DATE |  |  |  | ✓ |  | 2023/07/29 | Ordered Date  (YYYY/MM/DD) |
| storeAddress | VARCHAR | 50 |  |  | ✓ |  | “Bellevue,  Washington  , US" |  |
| paidPrice | NUMBER | 10, 2 | 0.00 |  | ✓ |  | 123.45 | Monetary value |
| dateShipped | DATE |  | NULL |  |  |  | 2023/07/31 | Shipped Date  (YYYY/MM/DD) |

**ORDER\_VIDEOGAMES**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Column  Name | Column  DataType | Size, Precision | Default  Value | PK/FK | Not  Null | Range | Sample  Data | Notes |
| orderID | INT |  |  | PK, FK | ✓ |  | 122333 |  |
| gameID | INT |  |  | PK, FK | ✓ |  | 987654 |  |
| status | VARCHAR | 10 |  |  | ✓ | “Processing”, “Shipped”, “Delivered”, “Completed”, “Cancelled”  “Pending”  “Delayed”  “Returned” | “Completed” | Status of Customer Purchasing |
| paidPrice | NUMBER | 10, 2 | 0.00 |  | ✓ |  | 123.45 | Monetary value |
| quantity | INT |  | 0 |  | ✓ |  | 3 |  |

**SUPPLY\_ORDER\_VIDEOGAMES**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Column  Name | Column  DataType | Size, Precision | Default  Value | PK/FK | Not  Null | Range | Sample  Data | Notes |
| supplyOrderID | INT |  |  | PK, FK | ✓ |  | 111223 |  |
| gameID | INT |  |  | PK, FK | ✓ |  | 987654 |  |
| status | VARCHAR | 10 |  |  | ✓ | “Processing”, “Shipped”, “Delivered”, “Completed”“Cancelled”  “Pending”  “Delayed”  “Returned” | “Shipped” | Status of Product Supply Purchasing |
| paidPrice | NUMBER | 10, 2 | 0.00 |  | ✓ |  | 123.45 | Monetary value |
| quantity | INT |  | 0 |  | ✓ |  | 25 |  |