

**Database Lab Project Report**

**Game Store System o**

**Group Members:**

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**Project Components**

* **Frontend**

Html, CSS, Javascript

* **Backend**

Node.js

* **Database Storage**

SQL Server

**All SQL Data**

User table:  
CREATE TABLE [dbo].[User] (

[User\_ID] INT IDENTITY(1,1) NOT NULL,

[User\_Name] NVARCHAR(100) NOT NULL,

[Email] NVARCHAR(100) NOT NULL,

[Password] NVARCHAR(100) NOT NULL,

[Role] NVARCHAR(20) NOT NULL DEFAULT 'Customer',

[Date\_Created] DATETIME NULL DEFAULT GETDATE(),

CONSTRAINT PK\_User PRIMARY KEY CLUSTERED ([User\_ID]),

CONSTRAINT UQ\_User\_Email UNIQUE NONCLUSTERED ([Email]),

CONSTRAINT CHK\_User\_Role CHECK ([Role] IN ('Admin', 'Customer'))

);

Game table:

CREATE TABLE [dbo].[Game] (

[Game\_ID] INT IDENTITY(1,1) NOT NULL,

[Name] NVARCHAR(100) NOT NULL,

[Description] NVARCHAR(MAX) NULL,

[Price] DECIMAL(10, 2) NOT NULL,

[Genre] NVARCHAR(50) NULL,

[Platform] NVARCHAR(50) NULL,

[ImageData] NVARCHAR(300) NULL,

[Release\_Date] DATE NULL,

[Featured] BIT NULL DEFAULT 0,

CONSTRAINT PK\_Game PRIMARY KEY CLUSTERED ([Game\_ID]),

CONSTRAINT CHK\_Game\_Price CHECK ([Price] >= 0)

);

Inventory table:

CREATE TABLE [dbo].[Inventory] (

[Game\_ID] INT NOT NULL,

[Last\_Updated] DATETIME NULL DEFAULT GETDATE(),

[Admin\_ID] INT NOT NULL,

CONSTRAINT PK\_Inventory PRIMARY KEY CLUSTERED ([Game\_ID]),

CONSTRAINT FK\_Inventory\_Game FOREIGN KEY ([Game\_ID]) REFERENCES [dbo].[Game]([Game\_ID]),

CONSTRAINT FK\_Inventory\_Admin FOREIGN KEY ([Admin\_ID]) REFERENCES [dbo].[User]([User\_ID])

);

Shopping\_cart:

CREATE TABLE [dbo].[Shopping\_Cart] (

[Cart\_ID] INT IDENTITY(1,1) NOT NULL,

[User\_ID] INT NOT NULL,

[Created] DATETIME NULL DEFAULT GETDATE(),

CONSTRAINT PK\_Shopping\_Cart PRIMARY KEY CLUSTERED ([Cart\_ID]),

CONSTRAINT FK\_ShoppingCart\_User FOREIGN KEY ([User\_ID]) REFERENCES [dbo].[User]([User\_ID])

);

Cart\_item:

CREATE TABLE [dbo].[Cart\_Item] (

[Cart\_ID] INT NOT NULL,

[Game\_ID] INT NOT NULL,

[Price] DECIMAL(10, 2) NOT NULL,

CONSTRAINT PK\_CartItem PRIMARY KEY CLUSTERED ([Cart\_ID], [Game\_ID]),

CONSTRAINT FK\_CartItem\_Cart FOREIGN KEY ([Cart\_ID]) REFERENCES [dbo].[Shopping\_Cart]([Cart\_ID]),

CONSTRAINT FK\_CartItem\_Game FOREIGN KEY ([Game\_ID]) REFERENCES [dbo].[Game]([Game\_ID]),

CONSTRAINT CHK\_CartItem\_Price CHECK ([Price] >= 0)

);

Order:

CREATE TABLE [dbo].[Order] (

[Order\_ID] INT IDENTITY(1,1) NOT NULL,

[User\_ID] INT NOT NULL,

[Order\_Date] DATETIME NOT NULL DEFAULT GETDATE(),

[Total\_Amount] DECIMAL(10, 2) NOT NULL,

[Status] NVARCHAR(20) NOT NULL,

CONSTRAINT PK\_Order PRIMARY KEY CLUSTERED ([Order\_ID]),

CONSTRAINT FK\_Order\_User FOREIGN KEY ([User\_ID]) REFERENCES [dbo].[User]([User\_ID]),

CONSTRAINT CHK\_Order\_Status CHECK (

[Status] IN ('Cancelled', 'Delivered', 'Shipped', 'Processing', 'Pending')

),

CONSTRAINT CHK\_Order\_Amount CHECK ([Total\_Amount] >= 0)

);

Order\_details:

CREATE TABLE [dbo].[Order\_Details] (

[Order\_ID] INT NOT NULL,

[Game\_ID] INT NOT NULL,

[Price] DECIMAL(10, 2) NOT NULL,

CONSTRAINT PK\_OrderDetails PRIMARY KEY CLUSTERED ([Order\_ID], [Game\_ID]),

CONSTRAINT FK\_OrderDetails\_Order FOREIGN KEY ([Order\_ID]) REFERENCES [dbo].[Order]([Order\_ID]),

CONSTRAINT FK\_OrderDetails\_Game FOREIGN KEY ([Game\_ID]) REFERENCES [dbo].[Game]([Game\_ID]),

CONSTRAINT CHK\_OrderDetails\_Price CHECK ([Price] >= 0)

);

Payment:

CREATE TABLE [dbo].[Payment] (

[Payment\_ID] INT IDENTITY(1,1) NOT NULL,

[Order\_ID] INT NOT NULL,

[Payment\_Date] DATETIME NOT NULL DEFAULT GETDATE(),

[Payment\_Method] NVARCHAR(50) NOT NULL,

[Amount] DECIMAL(10, 2) NOT NULL,

[IBAN] NVARCHAR(20) NOT NULL,

CONSTRAINT PK\_Payment PRIMARY KEY CLUSTERED ([Payment\_ID]),

CONSTRAINT FK\_Payment\_Order FOREIGN KEY ([Order\_ID]) REFERENCES [dbo].[Order]([Order\_ID]),

CONSTRAINT CHK\_Payment\_Amount CHECK ([Amount] >= 0),

CONSTRAINT CHK\_Payment\_Method CHECK (

[Payment\_Method] IN ('Other', 'Bank Transfer', 'PayPal', 'Credit Card')

)

);