VIDEO GAMES DATABASE

Susana C Delgadillo

V 3.0

Functional Details

- Subject

  General information about video games.

- Goal

  Create a public, interactive website where users can search for and view information about video games and the companies that create and distribute them.

- Audience

  General public, all ages

- Data sources

  Data entry by those who maintain the database.

- Users

  Multi-user system.

- Output

  Web pages displaying data based on the user's selections.

- Updates

  System will require dynamic updates since users aren't expected to view all data, all the time but instead will search for a small (compared to the size of the database) body of data.

- File sizes

  Less than 1 gig.

  Will fit comfortably on a Mac or PC.

- Data Entry

  Database requires data entry screens for each of the following: video_games, companies, game_genres, series, game_modes, game_languages and game_platforms.

  Data entry will not be done very often.

- Reports

  Will be the results of searches done by users.

- Security

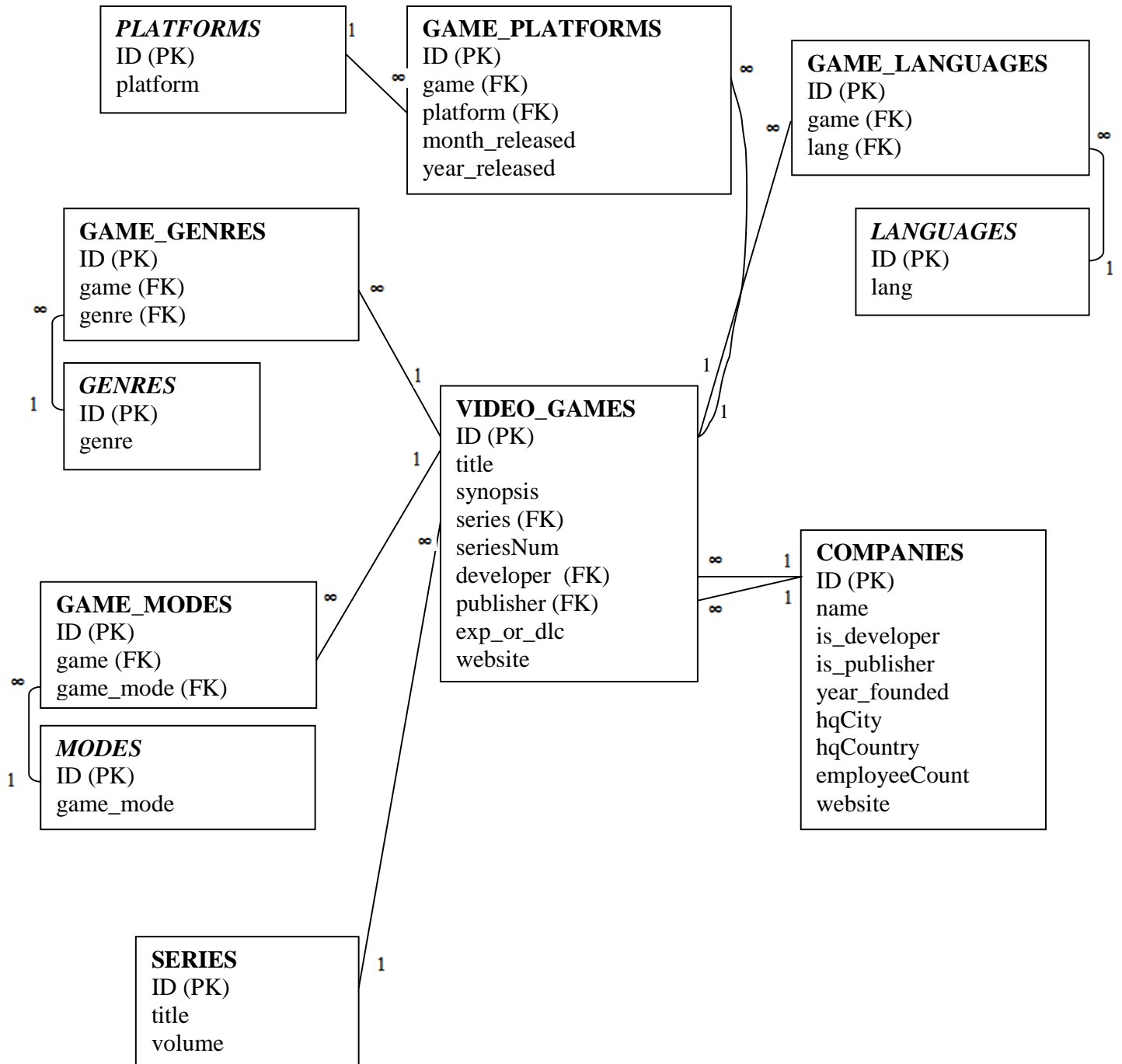 Very little security is needed as all the data is publicly available.

- Permissions

  No permission issues.

Technical Concerns

- Hardware and software requirements

  PHP and MySQL.
  Less than 1 gig for 200,000 records.

- Networking requirements

  LAN – not many people will be needed to update and maintain the database.

- Web requirements

  Search page is required to give users the ability to search and retrieve data from the database.
  Website will need to be as user friendly as possible due to the large discrepancy in audience ages.
  Explicitly list what types of searches are available, for example, video games by developer.

- Backing up requirements

  Backup every 3 months.

- Tables and file structures

  See pages 4-9.

Relationships

PLATFORMS
ID (PK)
platform

GAME_PLATFORMS
ID (PK)
game (FK)
platform (FK)
month_released
year_released

GAME_LANGUAGES
ID (PK)
game (FK)
lang (FK)

LANGUAGES
ID (PK)
lang

GAME_GENRES
ID (PK)
game (FK)
genre (FK)

GENRES
ID (PK)
genre

VIDEO_GAMES
ID (PK)
title
synopsis
series (FK)
seriesNum
developer (FK)
publisher (FK)
exp_or_dlc
website

GAME_MODES
ID (PK)
game (FK)
game_mode (FK)

MODES
ID (PK)
game_mode

COMPANIES
ID (PK)
name
is_developer
is_publisher
year_founded
hqCity
hqCountry
employeeCount
website

SERIES
ID (PK)
title
volume

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Data Tables

VIDEO_GAMES			
Each record contains information about a single video game.			
ID	VARCHAR(10)	Primary Key: Composite key	
title	VARCHAR(40)		*Title of the video game.*
series	VARCHAR(15)	Foreign Key: reference to series table	*(If applicable) The series to which this game belongs. NULL if not applicable.*
series_num	INT(2)		*(If applicable) Installment number. NULL if not applicable.*
developer	VARCHAR(10)	Foreign Key: reference to companies table	*Company that created and developed this game.*
publisher	VARCHAR(10)	Foreign Key: reference to companies table	*Company that manufactured and marketed this game.*
exp_or_dlc	INT(1)		*1 if the game in the record is not a standalone game but an expansion of another.*
website	VARCHAR(40)		*Game website. NULL if no website available.*

Table 1

COMPANIES			
Each record contains information about a single publisher or developer company.			
ID	VARCHAR(10)	Primary Key: Composite key	
name	VARCHAR(30)		*Company name.*
is_developer	INT(1)		*1 if this company is a developer. 0 if not.*
is_publisher	INT(1)		*1 if this company is a publisher. 0 if not.*
year_founded	YEAR(4)		*Year this company was founded.*
hq_city	VARCHAR(20)		*City the current company headquarters is located.*
hq_country	VARCHAR(20)		*Country the current company headquarters is located.*
employee_count	INT(6)		*Number of employees.*
website	VARCHAR(40)		*Company website.*

Table 2

GAME_GENRES			
Each video game can be associated with more than one genre.			
ID		Primary Key: AUTO_INCREMENT	
game	VARCHAR (10)	Foreign Key: reference to video_games table	*ID of a single video game.*
genre	VARCHAR (5)	Foreign Key: reference to genre (controlled vocabulary) table	*Genre of the video game.*

Table 3

SERIES			
Multiple video games may be grouped under a single series. This table holds the name of the series and number of video games under that series, and is referenced to by the video_games table.			
ID	Text(10)	Primary Key: Composite key	
title	Text(30)		*Name of the series.*
volume	INT(2)		*Number of installments in the series.*

Table 4

GAME_MODES			
One video game can be identified by more than one mode.			
ID		Primary Key: AUTO_INCREMENT	
game	VARCHAR (10)	Foreign Key: reference to video_games table	*Video game.*
game_mode	VARCHAR (10)	Foreign Key: reference to modes table (controlled vocabulary)	*Mode of this game.*

Table 5

GAME_LANGUAGES			
One video game can be translated into more than one language.			
ID		Primary Key: AUTO_INCREMENT	
game	VARCHAR (10)	Foreign Key: reference to Video Games table	*Video game.*
lang	VARCHAR(3)	Foreign Key: reference to Language table (controlled vocabulary)	*Language that this game is available in.*

Table 6

GAME_PLATFORMS			
Allows mapping of many platforms to a single video game. The release date and current price of a video game on a particular platform is also shown.			
ID		Primary Key: AUTO_INCREMENT	
game	Text(15)	Foreign Key: reference to Video Games table	*Video game.*
platform	Text(15)	Foreign Key: reference to Platforms table (controlled vocabulary)	*Platform on which this game came be played.*
month_released	VARCHAR(9)		*Month when the video game was released for this platform.*
year_released	YEAR(4)		*Year when the video game was released for this platform.*

Table 7

Controlled Vocabulary

PLATFORMS			
ID	VARCHAR(5)	Primary Key: Composite key	
platform	VARCHAR (30)		*Xbox, Microsoft Windows, Playstation 3, etc.*

Table 8

LANGUAGES			
ID	VARCHAR (5)	Primary Key: Composite key	
lang	VARCHAR (30)		*Language.*

Table 9

GENRES			
ID	VARCHAR (5)	Primary Key: Composite key	
genre	VARCHAR (30)		*Casual, action, adventure, RPG, etc.*

Table 10

MODES			
ID	VARCHAR (10)	Primary Key: Composite key	
game_mode	VARCHAR (30)		*Single/multi player, first/third person shooter, etc.*

Table 11