# Phase 1: Technical Report

**Website URL**: http://gamedb.us-east-1.elasticbeanstalk.com/

## Team Information:

**Canvas Group:** morning-1

**Project Name:** Game-DB

**Members:**


**Albert Garza**

- **GitHub ID:** possumrapture
- **Email:** albertsgarza@utexas.edu

**Numan Habib**

- **GitHub ID:** numan201
- **Email:** numanhabib@gmail.com

**John Nguyen**

- **GitHub ID:** johnnguyen3196
- **Email:** johnnguyen3196@gmail.com

**Alejandro Rodriguez**

- **GitHub ID:** JustAlejandro
- **Email:** rodriguezalejandro@utexas.edu

**David Wolf**

- **GitHub ID:** rambisco
- **Email:** david.wolf@utexas.edu

**Motivation**:

We want to make a useful video game database for gamers. By incorporating data from various APIs, other websites, and communities, we can have a variety of useful information all in one place for our users.

**Users**:

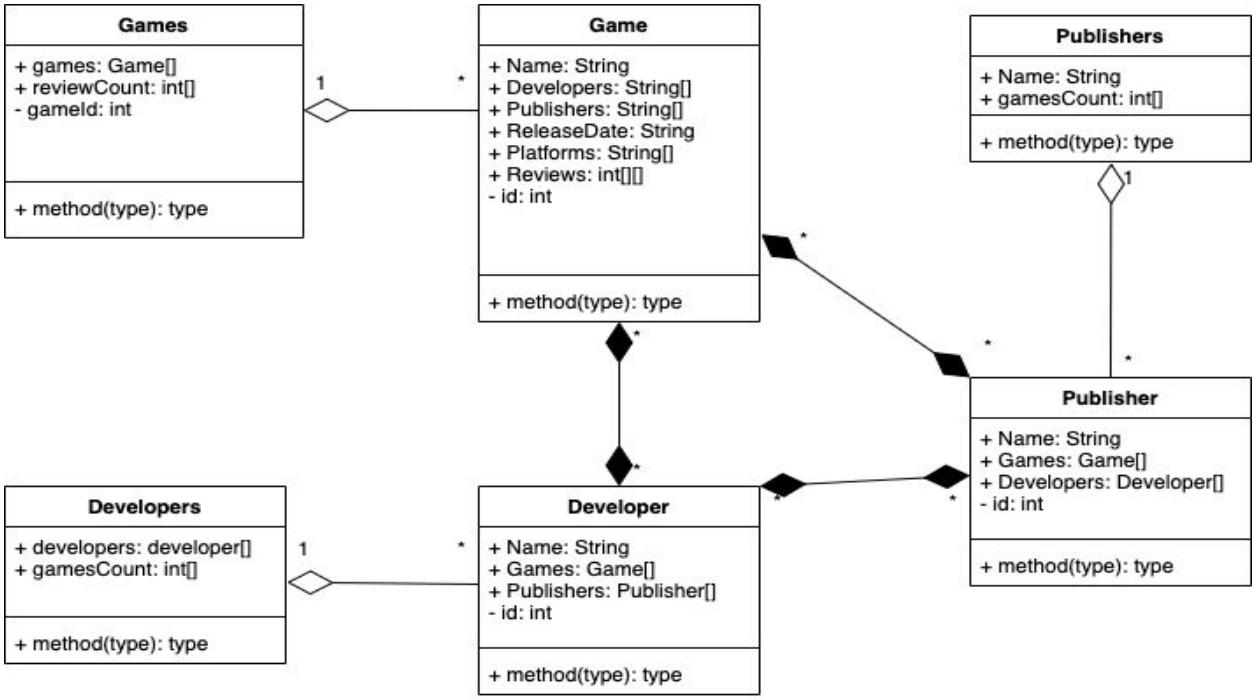
All types of gamers, people interested in learning about different games, people shopping for games, and people who like to consume gaming related entertainment.

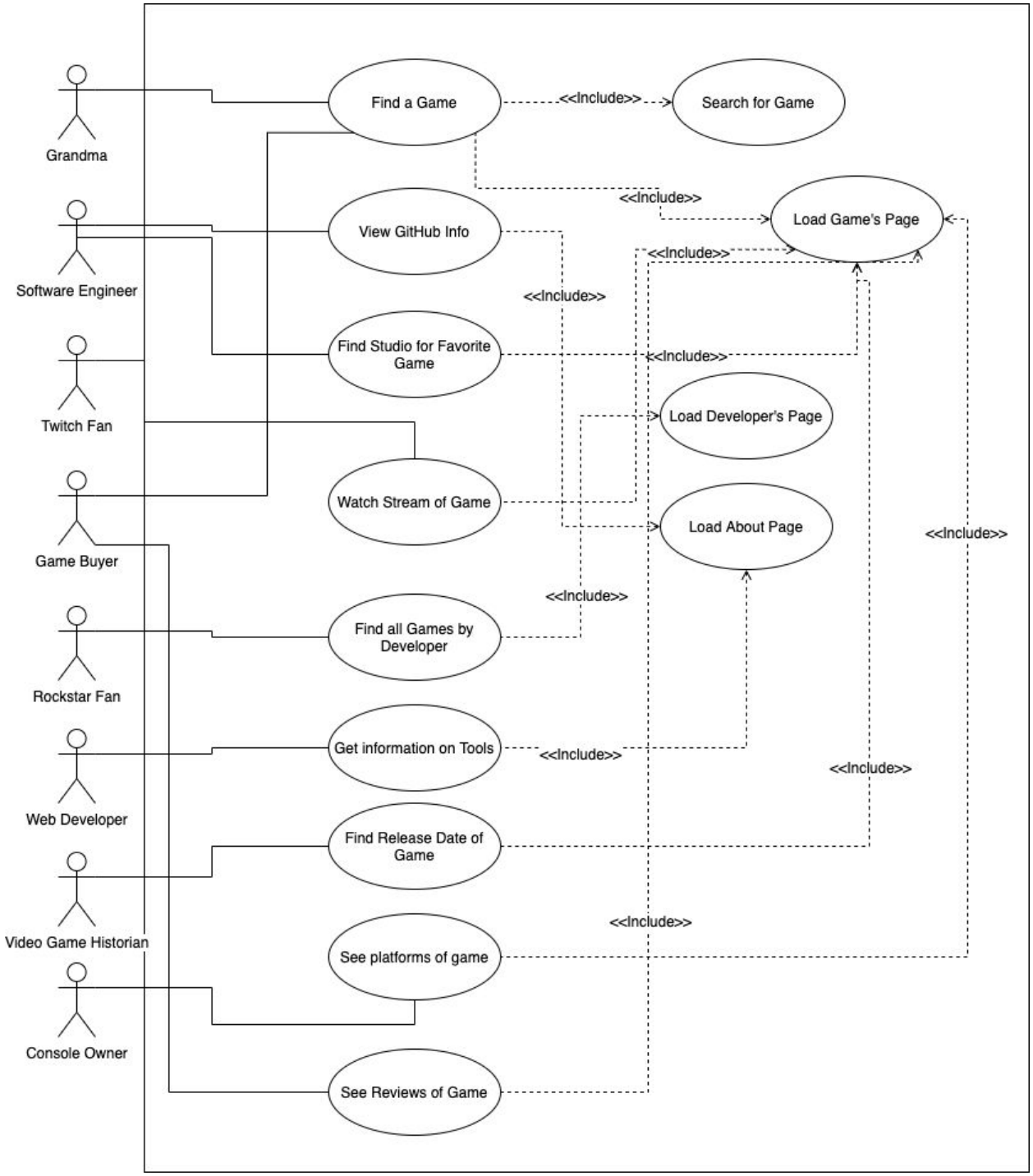
**User stories**:

1. As a grandmother with a grandchild who likes Fortnite, I want to know what Fornite is so that I know my boy is not playing inappropriate games.
    a. Estimated: 5 hours
    b. Actual: 8 hours
    c. Assumptions: user has no gaming experience and does not normally keep up with the current games
2. As a fan of Rockstar Games, I want to know some of the games that they made so that I can find other cool sandbox games that I can spend all day on.
    a. Estimated: 5 hours
    b. Actual: 6 hours
3. As a potential game buyer, I want to preview screenshots and videos of the game so I have an idea of the game type and how fun it can be.
    a. Estimated: 3 hours
    b. Actual: 3 hours
4. As a software engineering professor, I want to know who is making commits to a GitHub repo so I know how much each person is contributing.
    a. Estimated: 3 hours
    b. Actual: 12 hours
5. As a person who likes to watch Twitch streams, I want to watch a stream for a game I find in the database so that I can see its gameplay live.
    a. Estimated: 6 hours
    b. Actual: 8 hours

6. As a frugal video game purchaser, I want to know how many 5/4/3/2/1 star reviews there are for a game so that I can make an educated decision in purchasing a game and not waste time on a bad game.
    a. Estimated: 3 hours
    b. Actual: 1 hour
    c. Assumptions: user does not have much free time because they are normally busy with work
7. As an owner of a PlayStation 3, I want to know what platforms each game is on so that I know if I can play it on my console
    a. Estimated: 1 hour
    b. Actual: 2 hours
8. As a video game historian, I want to know the release date of my favorite games, so that I can be factually correct in my discussions with peers.
    a. Estimated: 1 hour
    b. Actual: 1 hour
9. As a software engineer interested in game development, I want to know which studio made my favorite games, so that I can send in an application.
    a. Estimated: 2 hours
    b. Actual: 4 hours
10. As a software engineer interested in web development I want to know the tools used to make a website, so that I have an idea of the capabilities of tools and which tools I should invest time in learning.
    a. Estimated: 0.1 hours
    b. Actual: 0.5 hours

**UML:**


Games
+ games: Game[]
+ reviewCount: int[]
- gameId: int
+ method(type): type
1
*
Game
+ Name: String
+ Developers: String[]
+ Publishers: String[]
+ ReleaseDate: String
+ Platforms: String[]
+ Reviews: int[][]
- id: int
+ method(type): type
Publishers
+ Name: String
+ gamesCount: int[]
+ method(type): type
1
*
*
*
*
*
Publisher
+ Name: String
+ Games: Game[]
+ Developers: Developer[]
- id: int
+ method(type): type
Developers
+ developers: developer[]
+ gamesCount: int[]
+ method(type): type
1
*
Developer
+ Name: String
+ Games: Game[]
+ Publishers: Publisher[]
- id: int
+ method(type): type


Grandma
Software Engineer
Twitch Fan
Game Buyer
Rockstar Fan
Web Developer
Video Game Historian
Console Owner
Find a Game
View GitHub Info
Find Studio for Favorite Game
Watch Stream of Game
Find all Games by Developer
Get information on Tools
Find Release Date of Game
See platforms of game
See Reviews of Game
Search for Game
Load Game's Page
Load Developer's Page
Load About Page
<<Include>>
<<Include>>
<<Include>>
<<Include>>
<<Include>>
<<Include>>
<<Include>>
<<Include>>
<<Include>>
<<Include>>

**Design**:

For our design we used modern tools to expose us to technologies commonly used in the industry right now. Our backend is Node.js with MongoDB, and our website is hosted through AWS. For our framework, we chose Express since it is a common framework used to make web applications with Node. It makes web development with Node easier and more structured. When a user visits a URL on our domain, the framework routes it to the appropriate router file which will handle the request. The router will query and process data from MongoDB/APIs necessary to render the page. After this, it will provide this data in an object to a template file (.ejs) specific to this page. The .ejs file created for this page will render the provided data in HTML to serve the browser request\generate web page. Our .ejs files use various CSS classes and Bootstrap 4 to make our pages aesthetically pleasing and keep design simple.

**Testing**:

Manually tested publicly viewable pages and all of their features.

**Models**:

1. Games:
    a. Attributes:
        i. Using RAWG API
            1. Name
            2. Release Date
            3. Developers
            4. Publishers
            5. Platforms
            6. Reviews
            7. Related Screenshots
        ii. Using YouTube API
            1. Related Videos
        iii. Using Twitch API
            1. Related streams
2. Developers:
    a. Attributes:
        i. Using RAWG API
            1. Name
            2. # of Games made
            3. List of games made
            4. List of publishers worked with
3. Publishers:
    a. Attributes
        i. Using RAWG API
            1. Name
            2. Developers worked with
            3. Games published

**Tools**:

1. Express JS
2. Axios
3. Bootstrap
4. Postman
5. MongoDB
6. Amazon Web Services (AWS)
7. WebStorm
8. Visual Studio
9. Visual Studio Code
10. Google Chrome
11. RAWG API
12. YouTube API
13. Twitch API
14. Github API
15. draw.io

**Reflection**:

We started working on this project early and finished 95% of Phase 1 half a week before it was due. We were also very communicative by having daily SCRUM meetings, properly distributing work, and reallocating workloads when necessary. The frameworks and APIs that we used were also chosen early in the planning process. Some improvements that we can make is planning a full schedule for meetings, instead of figuring out what we want to do for the meeting when we arrive at the meeting place. We can also plan weekly meetings at a specific time that works for everyone, instead of playing it by ear. We all learned more about web development tools. We also learned that we work effectively on our individual assignments when being in a group because we can easily use each other as resources instead of having to always find help online.