# Pokemon Battle!

## Problem Statement

## Rose-Hulman Institute of Technology - CSSE 333

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# Contents

# 1. Executive Summary

The purpose of this document is to describe the objective of our project as well as to show a general plan of our design. This document is to describe our project's objectives and goals. It contains a high level problem summary, a detailed problem statement, and some stakeholders.

This project is a game so the purpose is to provide entertainment on a mobile platform. This game allows users to build a variety of teams and challenge their skills by challenging other users.

# 2. Introduction

This document is the first document describing our Pokemon Battle Simulation system. It also included is an ER diagram showing our design plan. Following this document will be a relational schema, a security analysis, some periodic reports, and a final presentation. This document will give an overview of the proposed system and its requirements, and the security and data analysis will go into more detail as to the implementation of the system. The relational schema will describe the database and foreign key constraints, based upon the ER diagram. The final presentation will demonstrate the completed system, as well as describing the process we used in creating the system.

# 3. High Level Problem Summary

## a. Elevator Statement

- The Pokemon game series has become very popular since it was released. With the growing mobile gaming market, having a way to play with your friends or other random opponents over the internet from your smartphone would open up the market to the new generation of gamers. The system would also remove the need to play the games in full, spending dozens of hours training your Pokemon to be level 100 with exactly all of the moves that you want, and allows players to play for the strategy. Our primary goal is to provide an application that is a fun casual game to play on an android device.

## b. Success Criteria

- Our goal is to create a fully operational system that can be accessed from the web and android platforms the holds all the information needed to host pokemon battles between users from anywhere on the web.

## c. Scope

    i. Within Scope:
1. Information about users
2. Information regarding pokemon teams
3. Results of Battles between players
4. General attributes, statistics, and movesets of individual pokemon
5. Information about all pokemon moves

6. Information about pokemon types
7. Interface to connect views together

ii. Outside of Scope
1. Specific Battle details
2. Ailments and temporary status effects on pokemon
3. Trading and other user interactions

# 4. Detailed Problem Statement

## Function

- Key Business Features
  - To create a user profile
  - to create a pokemon party
  - select pokemon
  - select moves
  - select items
  - to battle an opponent
  - to keep track of match record
- Key Enabling Features
  - Ensure the list of pokemon is up to date
  - Ensure moves list is up to date
- Key Concurrency Issues
  - Both players searching for opponents

## Form

- Performance
  - Allow multiple users to create and maintain a pokemon team and battle other users. Starting with a max of 100 users.
- Availability
  - Using a spare computer to host, the hardware is a little old so deal with problems as they arise. Able to be accessed through the web and android
- Usability
  - Fast response times to look up and select pokemon
- Security
  - Protection against Sql injections
  - User account security through encrypted passwords
- Maintainability
  - Updates with any new pokemon released
  - Only admins will be able to change data
    - Deletion of users/pokemon

## Economy

- Our system is intended to be a free to use service funded exclusively by advertisement and special promotions. Our system will need to be hosted on webserver which will cost some amount per month, which hopefully will be displaced by ad revenue. Licensing costs will also come into play as pokemon is a registered trademark of Nintendo.
- Later advancement to the system would allow specific members to pay for additional features and functionality which would greatly increase the projects profit margin.

## Time

- HISTORICAL
    - This system is to replace having to level up your pokemon and battle them using a gaming console, it makes it faster to develop and test the teams that the user wants, as well as to make it a more mobile experience. Previously it could only be played either locally or on a Nintendo handheld device in which you had to connect to either nearby players, or you had to be connected on wifi to battle another user.
- CURRENT
    - Currently there are games that are very similar available online but currently there are none available on the Android market. We would like to meet this need.
- Future context
    - It will continue to update based on the current pokemon.

# 5. Key Stake Holders

| Name | Role |
| --- | --- |
| Sriram Mohan | Project Advisor |
| Matthew Olson | Project Developer |
| Seth Ruji | Project Developer |
| David Patterson | Project Developer |
| Brain Bolivar | End User |

# 6. References

a. To Be Determined

# 7. Glossary

    a. Pokemon: A Nintendo created franchise where "**Pocke**t **Mon**ster" are trained by pokemon trainers and compete against each other for honor and prestige



Key
Pokemon must have at least 1 type but at most 2 types.

Each battle must have 2 users and 2 parties and 1 battle instance.

Each Type may be strong or weak against 0-N other types.