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| Department of computer science & Engineering  University of Nebraska—Lincoln |
| RETROMON GAME DESIGN DOCUMENT |
| 24-HOUR HACKATHON PROJECT |
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| This project is based on the knowledge of Object-Oriented Program in CSCE156, which is focused on make and develop the Retromon game. |

# Revision History

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| Version | Description of Change(s) | Author(s) | Date |
| 1.0 | Introduction which used to provide document for viewers | Olwen Nguyen  Khoa Tran | 2022/01/22 |

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# Introduction

Based on the Retro theme of the CornHacks 2022, Retro- which means the blast from the past. Retro can be different from each person based on his/her childhood or memory. Pokemon is also a game also movie which was popular in the past, therefore, based on this idea this project will introduce about the Retromon creatures. The project uses Java classes to model the problem and follows object – oriented programming principles and using database to store data about Retromon.

## Purpose of this Document.

The goal of this article is to lay out the technical design of a new database backed Retromon data and provide general design and implement by Object-Oriented program.

## Scope of the Project

The Retromon is a system which introduce about new creature game with has different element. The system retrieves and updates data by using SQL database, while the old one used Excel sheets, which has some limitations when updating data. The system was completed in different phases. The first phase represents the data by using class in OOP. In the second phase summary competition is created. The next stages of the program included designing a SQL database and storing the data. And lastly, connecting java classes and SQL database using JDBC. The database interface provides an easy way to access and modify the data if needed.

## Definitions, Acronyms, Abbreviations

### Definitions

### Abbreviations & Acronyms

OOP- Object-Oriented Program

JAR - Java ARchive.

JDBC - Java™ database connectivity

SQL - Structured Query Language

# Overall Design Description

This project uses two main techniques: Java and SQL. To read data from database in mySQL, create summary reports, and update data, creating Java classes following object-oriented programming and java parsers, which use encapsulation such as Player class, Club class, and Retromon class which have private fields being prevented from being accessed by code outside. To make SQL database that be used extensively and flexibly, this database should have well-defined column types, primary and foreign keys. To create classes properly map to database tables using JDBC.

# Detailed Component Description

Detailed design and testing strategy of components.

## Database Design

Diagram

Description automatically generated

Figure 1: SQL diagram

## Class/Entity Model

The Retromon class which represent each Retromon creature which their characteristics and with their attack ability.

The Player class which represents each Player in the game with their username account and email address and all of the Retromon creatures they have

The Club class which represents each Club in the game with their name and all of the players in that club.