**McKenzie - PAD**

**Database**

**Software Requirements Specification**

**Version 1.3**

**2017-05-09**

**SWTS1104**

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# 

# Revision History

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Version** | **Author** | **Comments** |
| 2017-05-05 | 1.0 | Kyle Gunton | First Revision |
| 2017-05-08 | 1.1 | Kyle Gunton | Revisions made based on feedback |
| 2017-05-09 | 1.2 | Kyle Gunton | Revisions made based on feedback |
| 2017-05-09 | 1.3 | Kyle Gunton | Revisions made based on feedback, Corrected format based on IEEE SRS international standard document |
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# 1. Introduction

## 1.1 Purpose

To identify the requirements and features of the McKenzie – PAD database.

## 1.2 Scope

In the Puzzles and Dragons database, a user will be able to create a player account, add and modify their monsters, create and modify teams using those monsters, and compare those teams to other monsters.

## 1.3 Product Overview

### 1.3.1 Product Perspective

A database containing a list of players and their monsters as well as their teams. It also includes the attributes, types, active skill, leader skill, awoken skills, and the max/min statistics for each monster class in PAD as well as the current information of each monster instance.

### 1.3.2 Product Functions

- User may view the properties of any monster class or instance

- User may create/view/modify player instances

- User may create/view/modify Monster instances attached to a player instance

- User may create/view/modify a team from monster instances

- User may view the list of monster classes

- User may modify/view the list of monster instances

- User may add/remove/view latent skill lists

- User may view latent skills

- User may view awoken skill lists

- User may view awoken skills

- User may view monster types

- User may view monster attributes

- User may view other players’ teams and monsters

### 1.3.3 User Classes and Characteristics

- Anyone who is able to navigate around a database system and use SQL may use it

- Opposable Thumbs (or be an octopus)

- Index finger

- Eyes

### 1.3.4 Limitations

- User’s device

- McKenzie-PAD Database will only be for Computers/Laptops while PAD game is only for mobile devices

- no way to directly access data from the Puzzles and Dragons Gung-Ho database.

## 1.4 Definitions & Descriptions

### 1.4.1 About the Game

**The Player**



* A player is an account that contains a rank, name, Unique ID, starting attribute, magic stones, coins, monster points, stamina, and monster instances.
* Rank: An integer value determined by your current exp.
* ID: A unique integer identifier granted to each player upon account creation.
* Starting attribute: Determines player’s time group as well as their ID
* Magic Stones: In-game currency used to purchase monsters, refill stamina, increase friend slots, and to increase monster box slots.
* Coins: In-game currency used to purchase dungeons and upgrade monsters.
* Monster points: In-game currency used to purchase monsters.
* Stamina: an integer value based on level that allows you to enter dungeons only when it is sufficient.

**The Monsters**

* A monster holds a wide variety of properties that may be unique depending on the field.

In this screenshot, we can see some of the many fields attached to just one monster.

* Stats: HP/Attack/Recovery (This version is for the stat bonuses) (***RED***)
* Level: Current/max level/next level in (as well as a progress bar) (***yellow***)
* Skills: active skill/leader skill/second skill or assist skill (if they have any) (***green***)
* Cost (***light green***)
* Awoken skills: total for monster/awoken/yet to awaken (***Blue***)
* Latent awoken skills (***light blue***)
* Monster type: 1 top 3 of 12 possible types (***purple***)
* Attribute: 1 to 2 of 5 possible attributes (***pink***)
* Rarity: 1 to 10 stars (***cyan***)
* Monster name (***black***)
* Favorite: if the monster is listed as favorite or not (***mauve***)
* Number of the same monster you own (***grey***)
* Assisted monster (***white***)
* Active Skill: An ability monsters can use in dungeons to modify the board, the player or the enemies.
* Leader Skill: An ability that buffs the player’s team based on the leader monster.
* Awoken Skill: A boost granted to a monster.
* Latent Awoken Skills: A type of awoken skill that you assign to a monster.
* Assist Monsters: Monsters can become assists for other monsters. The assisted monster gains the active skill of the assisting monster as well as a possible stat boost. Not all monsters can be assists.
* Monster Types: Monsters have 1-3 types. There are currently 12 different types a monster may have.
* Attribute: All monsters have a primary element and they can have a secondary element. There are 5 elements that can be chosen form. Fire, Water, Wood, Light, and Dark.
* Monster Name: All monsters have a name that are unique (if only by case).
* Monster ID: All monsters have unique integer ID’s.
* Evolution: Monsters can evolve/devolve into other monsters when certain conditions are met.
* Stats
  + Level: Monster level based on current experience.
  + HP: Health of a monster.
  + ATK: Attack of a monster.
  + RCV: Recovery of a monster.
  + + stats: bonus stats applied to HP, ATK, and RCV.
  + Other stats boosts (Blue stats) are stat boosts granted from assisting monsters of the same attribute(s) as well as awoken/latent skills.
  + Has one of three growth rates and can be modifies by + stats as well as by assists, awoken skills and latent skills.
  + Cost: Monster cost that used to limit the number of powerful monsters that can enter a team.
  + Rarity: An indicator of how common or uncommon a monster is.

**The Team**



* A team a group of monsters made up of 1 leader monster and 0-4 sub monsters.
* Monsters costs cannot exceed the max team cost
* Each team may be assigned a badge
* Team RCV is calculated by adding all monsters RCV together
* Team HP is calculated by adding all monsters HP together
* Each attribute ATK is calculated by the ATK of each monster with that element as their primary attribute plus 1/3 it’s ATK from their secondary unless their secondary and primary is the same in which case it is plus 1/10

# 2.0 References

ISO/IEC/IEEE 29148-2011 SRS International Standard Document

<http://ieeexplore.ieee.org/document/6146379/>

# 3. Specific Requirements

## 3.1 User Interfaces

- MS SQL Management Studio

## 3.2 Hardware Interfaces

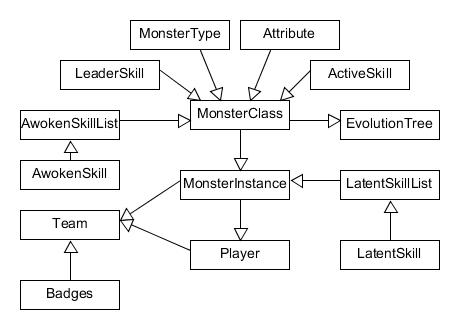
- Desktop Computer/Laptop

- Mobile Devices

## 3.3 Software Interfaces

- MS SQL Management Studio

## 3.4 Functional Requirements



Info from -> used in

MonsterClass

* A collection of blueprints of all monsters’ base information is stored in this table

MonsterInstance

* A collection of monsters based on blueprints from MonsterClass that has been given a unique instance ID and player ID.

Attribute

* All monsters have a primary and a possible secondary element that they will pull from this table

MonsterType

* All monsters currently have 1-3 types consisting of the records d they pull from this table

ActiveSkill

* Monster classes pull the information (Name, Desc., MaxLevel, MaxCooldown) on their active skills from this table

LeaderSkill

* All monsters can have a leader skill. The leader skill is an ability that grants the user a boost when certain conditions are met.

AwokenSkill

* Awoken skills are small boosts attached to monsters. All monster instances of the same base monster class have the same awoken skills in the same order. A monster can currently have up to nine.

AwokenSkillList

* A list of a monster classes’ awoken skills in order from one to nine.

EvolutionTree

* Monsters generally have the ability to evolve/devolve (change into another monster) under certain circumstances. This table records the different stages a monster instances may go through.

Player

* This table records information important to identifying a player including their in-game id, Name, and rank amongst others.

Team

* The team table is made up of the player’s id it belongs to, its name and anywhere from one to five monster instances. It also includes a badge that will give a boost to the team in dungeons.

Badges

* Badges may be assigned to teams (one badge may go to many teams) to grant that team a boost (stat, monster cost, etc.)

LatentSkill

* All monster instances can have at least 5 latent skills and up to 6 under certain circumstances. Lists all the latent skills available and their descriptions.

LatentSkillList

* A collection of which monster instances have which latent skills.

## 3.5 Performance Requirements

## 3.6 Usability Requirements

## 3.7 Logical Database Requirements

## 3.8 Design Constraints

## 3.9 Software System Attributes

* A list of a monster classes’ awoken skills in order from one to nine.
* Reliability
* Availability
* Security
* Maintainability
* Portability

## 3.10 Other Requirements

# 4.0 Verification

## 4.1 User Interfaces

## 4.2 Hardware Interfaces

## 4.3 Software Interfaces

## 4.4 Functional Requirements

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## 4.10 Other Requirements

# Appendixes

## Appendix A: Acronyms, and Abbreviations

PAD = Puzzles and Dragons

Exp = Experience

Desc = Description

HP: Health

ATK: Attack

RCV: Receive

+ = Plus

AS = Awoken Skill

LS = Latent Skill

Req = Requirement

## Appendix B: Assumptions and dependencies

- information gathered is accurate

- all monsters follow the same guidelines

## Appendix C: To Be Determined List

3.5 Performance Requirements

3.6 Usability Requirements

3.7 Logical Database Requirements

3.8 Design Constraints

3.9 Software System Attributes

3.10 Other Requirements

Section 4.0

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