**LenCO**

**Battle Souls**

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[**Informatica e Tecnologie per la Produzione del Software**]

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Product Backlog

**Battle Souls**

# Product Backlog

## Introduction

***Battle Souls*** is a software that emulates the popular card game **Battle Spirits** online, with personalized decks of cards to play against other players in real time.

This System sets itself 4 different goals:

* Edit your own deck of cards to fight against other players
* join games with other players
* host your own games with other players

These goals are carried out with functionalities that allow the user to interact with their own deck of cards, a list of available cards to pick from and use them in games with other players

Specifically:

About editing your own deck

* Choosing from a vast list of cards you can have on your deck

About joining games with other players

* Choosing from a list of available games which to join

Host your own games with other players

* Starting and sharing your games in LAN or online

## Business context

*Battle Spirits* is a card game published by Bandai e Sunrise, came out in 2008 in Japan, however, nowhere online there is an available public game that entertains players with the rules of this card game.

This software is made for those people to be able to play their favorite Battle Spirits cards online against other passionate people:

* *Personal context*: Nostalgia and interest in the technicalities of the game will help the user re-discover this card game from their childhood, in a free, secure and controlled way.

## Stakeholder

## User:

The generic user of the system, who can interact with all the functionalities of it, without the need to register.

The user will identify his personal characteristics, have a name and share his matches, history and decks online.

The kinds of users are:

* *Personal user*: someone who wants to interact with the system

## Functional Items

It contains the list and specifications of all functional requirements expressed through the user story format:

### IF-U1 – View my deck

**AS** user  
**I WANT TO BE ABLE TO** *view* my Battle Souls *deck*  
**SO THAT** I can shape my deck with the cards I want

### IF-U2 – Insert a card

**AS** user  
**I WANT TO BE ABLE TO** *insert* a Battle Souls *card* in my *deck*  
**SO THAT** I can shape my deck with the cards I want

### IF-U3 – Remove a card

**AS** user  
**I WANT TO BE ABLE TO** *remove* a Battle Souls *card* from my *deck*  
**SO THAT** I can shape my deck with the cards I want

### IF-U4 – Start a game

**AS** user  
**I WANT TO BE ABLE TO** *start* a Battle Souls *game*   
**SO THAT** I can play with other users

### IF-U5 – Join a game

**AS** user  
**I WANT TO BE ABLE TO** *join* a Battle Souls *game*  
**SO THAT** I can play with other users

### IF-U6 – Forfeit a game

**AS** user  
**I WANT TO BE ABLE TO** *Forfeit* a Battle Souls *game*  
**SO THAT** I can play with other users

### IF-U6 – View my profile

**AS** user  
**I WANT TO BE ABLE TO** view the details of my profile   
**SO THAT** I can identify myself as a player.

### IF-U7 – Change my profile

**AS** user  
**I WANT TO BE ABLE TO** change the details of my profile   
**SO THAT** I can play with other users

## Non-functional Items

It contains the list and specifications of all possible non-functional requirements.

### Informative Items

It contains the list and specifications of all possible non-functional informative requirements.

### IIN-01 Deck identifying items

Each player’s deck is identified by:

* Deck name
* Cards

### IIN-02 Player identifying items

Each player’s profile is identified by:

* Username
* Color
* Deck
* Lives
* void
* Reserve
* Trash
* Hand
* Field
* Burst zone
* Exile

### IIN-03 Card identifying items

Each card is identified by:

* Card name, at least 5 letters long
* Card cost, a whole number greater than 0
* Card reduction symbols, that are more than 0 and of any color (also more than one)
* Card symbols
* Card effect
* Card sprite
* Card ID
* Card color
* Card class

Each type of card will have this and additional information

### IIN-04 Card Colors

Each card will be of at least 1 color, no more than 2; the available colors are:

* Red
* Blue
* White
* Green
* Purple
* Yellow
* No-color

### IIN-04 Card types

Each card can be of one of these types:

* Spirit Card
* Magic Card
* Nexus Card
* Brave Card

### IIN-05 Spirit Card identifying items

Sprit cards are identified by:

* Level
* Battle Points
* Class
* Summoning condition (optional)
* Trigger abilities, that activate under specific **timer triggers**
* active

### IIN-06 Level identifying items

Each spirit card level has:

* Minimum number of cores, needed to activate the level, a whole number, more than 0
* Battle Point (BP), that is a whole number, more than 0

### IIN-07 Spirit Card Classes

The classes a spirit card can be:

For the ***red***cards:

* Dragon
* Dragonoid
* Emperor Beast
* Machine Dragon
* Ancient Dragon
* Flame Emperor
* Terra Dragon
* Armed Machine
* Beasthead
* GunKnight

For the ***blue*** cards*:*

* Machine Beast
* Artificial Soldier
* Armed Machine
* Crusader
* Metallic
* Shellman
* Mecha
* Shark Deity

For the ***white*** cards:

* Ice Princess
* Blade Beast
* Frost Beast
* Warrior Beast
* Guardian Beast
* Star Dragon
* Android
* Gun Angel
* Fortress

For the ***green*** cards:

* Shell Insect
* Leaf Beast
* Blade Beast
* Insect Spirit
* Elemental Dragon
* Buster Beetle

For the ***purple*** cards:

* Undead
* Demon
* Zombie Dragon
* Dark Knight
* Fallen Angel
* Ghost
* Ghoul Snake
* Vampire

For the ***yellow*** cards:

* Angel
* Fairy
* Light Spirit
* Holy Beast
* Deity
* Mythical Bird
* Charm

There are also special classes that any colored card can have; these are:

* Astral Soul
* Genesis Dragon
* Contract Beast
* NeoStorm
* Arcana
* Mythical Beast
* Cursed Dragon
* Celestial Being
* Mechanical Angel

Every card must have at least 1 Class

### IIN-06 Spirit Card effects

Spirit card effects can have one or more of the following effects:

* Timed-Based Effects
* Battle Effects
* Core manipulation Effects
* Continuous Effect
* Burst Effect
* Class Effect
* Deck Effect

### IIN-07 Spirit Card Timed-Based Effects

They are triggered at specific phases or events during the game; they are written in the following format:

When **[*trigger******phase or game event***] then **[*effect*]** at **[*optional modifier*] with [*condition*]**

Having:

* Trigger phase or game event:
  + Your turn begins
  + The turn ends
  + A battle starts
  + A spirit attack
  + A spirit is summoned
  + A spirit is destroyed
  + A spirit level up
  + A player loses a life
  + A core is moved
  + An attack is declared
  + A block is declared
* Effect:
  + Drawing cards
  + Adding or removing cores
  + Gaining or losing BP
  + Destroying or summoning spirits
  + Preventing actions
  + Searching the deck or trash
  + Changing card states
* Optional modifier
  + Once per turn
  + Flash (activated during flash timing)
  + Burst
  + Only if
* Condition
  + Number of spirits owned
  + Number of cores in reserve
  + Number of enemy spirits owned
  + Number of enemy cores in reserve
  + Level of the spirit
  + Classes of the spirit
  + Color of the spirit
  + Trigger phase or event
  + Spirit of certain classes are present

### IIN-08 Spirit Card Battle Effects

These can be activated during the combat phase, in the form of:

Whenthis spirit **[*combat event***] then **[*effect*]**

* Attack *events*:
  + attacks
* Block *events*
  + Blocks
* Battle resolution *events:*
  + Destroy an opponent’s spirit in battle
  + Survives a battle
  + Is destroyed
* *Effects:*
  + Gain X BP
  + Cannot be blocked
  + Draw X cards
  + Destroy X cards
  + The attack is negated
  + Summon X spirits
  + Gain X levels

With X a whole number greater than 0

### IIN-12 Spirit Card core manipulation Effects

These can be activated during different phases of the game, in the form of

When [***event***] then [***effect***]

* *Events*
  + a player spirit is summoned
  + an opponent spirit is summoned
  + a player spirit attacks
  + an opponent spirit attacks
  + a player spirit blocks
  + an opponent spirit blocks
  + a player spirit is destroyed
  + an opponent spirit is destroyed
  + a player spirit levels up
  + an opponent spirit levels up
  + a player spirit attack is declared
  + an opponent spirit attack Is declared
  + a player spirit block is declared
  + an opponent player spirit block is declared
  + a player burst effect is activated
  + an opponent burst effect is activated
  + a player spirit battles an opposing spirit
  + a battle ends
  + a player turn begins
  + an opponent turn begins
  + a turn ends
  + an opponent turn ends
  + a player nexus type card is played
  + an opponent nexus type card is played
  + a magic type card is played
  + an opponent magic type card is played
  + a player core is moved
  + an opponent core is moved
  + the player loses a life
  + the opponent loses a life
  + the player gains a life
  + the opponent gains a life

* *Effects*
  + **Add** one or more cores from the player reserve to a spirit
  + **Add** one or more cores from the player reserve to the player lives
  + **Add** one or more cores from the void to a spirit
  + **Add** one or more cores from the void to the player reserve
  + **Remove** one or more cores from an opponent’s spirit
  + **Remove** one or more cores from a player spirit and add it to the player’s reserve
  + **Remove** all but one core from an opponent’s spirit
  + **Move** one or more cores from one of the player spirit and add it to a different spirit from the same player
  + **Move** one or more cores from the player’s reserve and add it to a spirit from the same player
  + **Move** one or more cores from the destroyed spirit and add it to the player who controlled the spirit’s reserve
  + **Move** one or more cores from the player’s trash pile and add it to the same player’s lives
  + **Return** all cores from a player’s spirit and add it to the same player's reserve
  + **Return** one or more cores from an opponent spirit to the opponent’s reserve
  + **Return** one or more cores from a spirit and add it to the void
  + **Exchange** one or more cores between a player’s spirit and an opponent’s spirit
  + **Exchange** two or more cores between the player and another of the same player’s spirit.

### IIN-13 Spirit Card Continuous Effect

These *are* activated as soon as their condition is met, and will keep being in effect if the conditions are met, in the form of:

While **[*condition***], **[*effect*]**

* *Conditions*
  + The spirit is on the field
  + The spirit is level x or higher
  + The spirit has x or more cores
  + The player controls Y
  + There is another spirit named Y on the field
  + The player has more than x lives
  + The opponent has less than x spirits
  + Card Y is active
  + The player controls x spirits
  + The player’s reserve contains more than x cores
* *Effect*
  + The spirit cannot block
  + The spirit cannot be blocked
  + The spirit cannot attack
  + The spirit cannot be destroyed
  + The spirit cost is lowered by x
  + The spirit BP is increased by x
  + No spirit effect can be activated
  + No magic Card effect can be activated
  + No burst effect can be activated
  + No Nexus Card Effect can be activated
  + The player can summon a spirit
  + The player cannot summon any other spirit
  + The opponent spirit cannot attack this spirit

With x being a whole number greater than 0

With y being the **name**, **class** or **color** of a card.

### IIN-14 Spirit Card Burst Effect

### IIN-15 Spirit Card Class Effect

### IIN-16 Spirit Card Deck Effect

Search/Draw/Summon Effect

### IIN-17 Game identifying Items

A game is identified by:

* Player 1
* Player 2
* Field effect
* Status
* Turn

A game **ends** if:

* Player 1 loses all his lives (so has 0 lives)
* Player 2 loses all his lives (so has 0 lives)
* Player 1 has no cards left in his deck.
* Player 2 has no cards left in his deck.

### IIN-18 Game Turn phases

If the game is not over, the players will alternate in **turns**, with every turn containing these steps:

* Start step, where the player begins his turn
* Core step: where **one core is taken from the void and placed in the reserve of player whose turn it is. *Player one MUST skip this step on their first turn.***
* Draw Step: where the player draws one card from his deck and adds it to his hand
* Refresh step 1: where all ***inactive*** cards go back being ***active*** unless prohibited by an effect.
* Refresh Step 2: where the cores contained in the cards in the trash pile that get moved to the player’s reserve

.

* Main step: where the player can, **in any order and as many times as he wants:**
  + Summon cards from his hands as desired
  + Rearrange his cores from
  + Set burst cards
* Attack step (player one MUST SKIP this step on their first turn): where the player can
  + Attack as many times as he wants using **active** spirits.
  + Block the opponent’s attacks using **active** spirits.
* End step. where:
  + All temporary card effects activated during this turn come to an end.

### IIN-07 Magic Card identifying items

Magic cards are identified by:

* Timing
* Effect

### IIN-08 Timing identifying items

Timings are identified by:

* Timing type
  + Main, that can be played only during the Main Phase
  + Flash, can be played during the Main Phase OR during the Battle Phase

### IIN-09

### Interface Items

Contiene gli eventuali requisiti di interfaccia espressi tramite disegni (Sketch) e mockup.

#### IUI-1 – Active Spirit Card Interface

Immagine che contiene testo, schermata, numero, Carattere

Il contenuto generato dall'IA potrebbe non essere corretto.

Immagine che contiene testo, schermata, Carattere, numero

Il contenuto generato dall'IA potrebbe non essere corretto.

#### IUI-2 – Inactive Spriti Card Interface

Immagine che contiene testo, schermata, diagramma, numero

Il contenuto generato dall'IA potrebbe non essere corretto.

Immagine che contiene testo, schermata, numero, Carattere

Il contenuto generato dall'IA potrebbe non essere corretto.

#### IUI-3 Player Interface

### Qualitative Items

Contiene l’elenco e la specifica di tutti gli eventuali requisiti non funzionali di tipo qualitativo.

#### IQ-1 S

### More Items

Sprint Report N. 1

**Link**

# Sprint Report

## Sprint Backlog

**Summary table indicating, for each Sprint following Sprint 0, the list of Product Backlog items, highlighting those to be implemented during the current sprint along with an explanatory description.**

To simplify the presentation and preserve traceability between intermediate deliverables, the following assumptions have been made:

* Within a Sprint, a subset of items specified in the Product Backlog is implemented.
* The Sprint Backlog for the current sprint therefore contains the set of Product Backlog items that are in the process of being implemented.
* Functional items, i.e., User Stories, must be traceable one-to-one—ideally, though not necessarily—to use cases.
* Each use case must be associated with a basic scenario plus any possible alternative scenarios. The scenario is initially drafted based on the specification of the User Story listed in the Product Backlog.
* Each use case must be associated with a sequence diagram.

Each Sprint must produce working code as output. The only exception is **Sprint 0**, which must be used to design the system’s macro-architecture with its components and interfaces. This architecture will serve as a roadmap for the following sprints, clarifying where each deliverable fits within the overall system.

|  |  |  |
| --- | --- | --- |
| **Codice Item** | **Numero Sprint** | **Note** |
| IF-U1 | Sprint 1 |  |
| … |  |  |

## Product Requirement Specification

### Diagramma dei Casi d’uso

### Specifiche dei Casi d’uso

### Altro

## System Architecture

### Diagramma delle Componenti

Riportare il diagramma delle Componenti evidenziando le interfacce utilizzate

### Specifica delle componenti

### Specifica delle interfacce

## Detailed Product Design

### Diagramma delle Classi

### Specifiche delle Classi

### Diagrammi di Sequenza

## Data modeling and design

Qui va fornita la specifica di tutti i dati e le informazioni scambiate dal sistema in corso di realizzazione con l’utenza di riferimento e/o gli eventuali altri sistemi con cui esso comunica. Deve essere descritto il modello logico della base di dati e la sua struttura fisica.

### Modello logico del Database

### Struttura fisica del Database

# Glossario

## Acronimi

## Definizioni

# Appendice

## Prompt