

Report - pokédeck project

Introduction

Scope

As part of the java course, we had to develop a java swing application, that classify cards from the Pokémon Trading Card game.

We had several documents to help use along the way : - Project topic - Pokémon TCG rules

Objectives

Create an application to classify cards from the Pokémon Trading Card Game in Java. Implement a swing user interface. Being able to add and delete cards, being able to consult the collection, and search for a specific card.

Specification

Back

- CRUD card (Create, Read, Update, Delete)
- Get the collection : array of cards
- Search method
- Save everything inside a Json file

Front

- Navbar with several views

Search & results

- Text field: to search a card based on its name and its number
- Button to submit
- Display a list of results matching the query

Evol: add filters by pokemon type, characteristic, ...

Card details

- Display the details of a card (all attributs)
- List of the evolutions (with link)
- Button to modify/delete the card

Evol: graphical representation of attributs.

New/modify card form

- Basically display a form to create or update a card

Idea: use pokemonTCG Api to add card

Note

In this application we are going to consider all the different version of each card, in every expansion.

Application design

Back

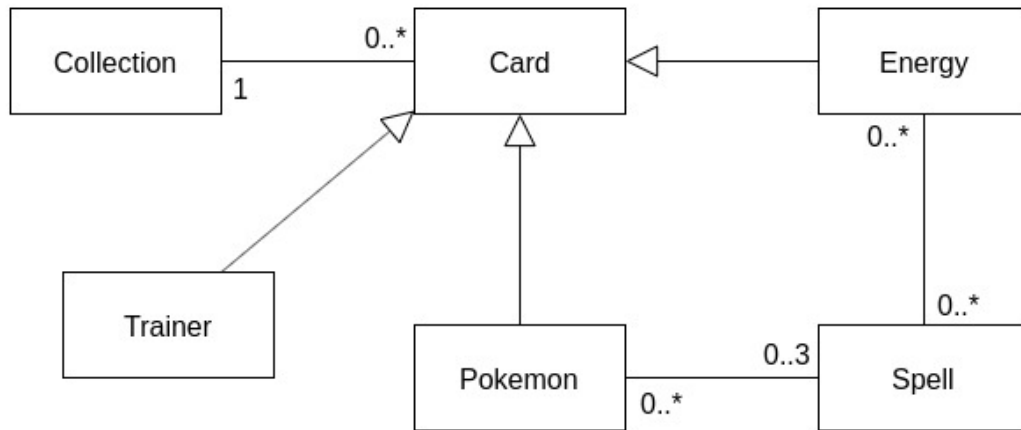


Figure 1: Back Class diagram

Card

Abstract class, basic card with following attributes : type, number and specific type.

Trainer, Pokémon, Energy

These classes inherit from Card, and represent the three main types of cards in the game.

Spell

Each pokémon card has one or more attacks or spells, as we call it here. Each spell requires a certain amount of energy to be used. The pokémon class will therefore have an attribute: “spell” array. And this class will have an array of “energy” needed to use the spell.

Collection

Only one attribute, which is an array of card, represent all the added card. This class will contain the method to add/delete cards from the collection and handle the modification of the Json file.

Front - Swing interface

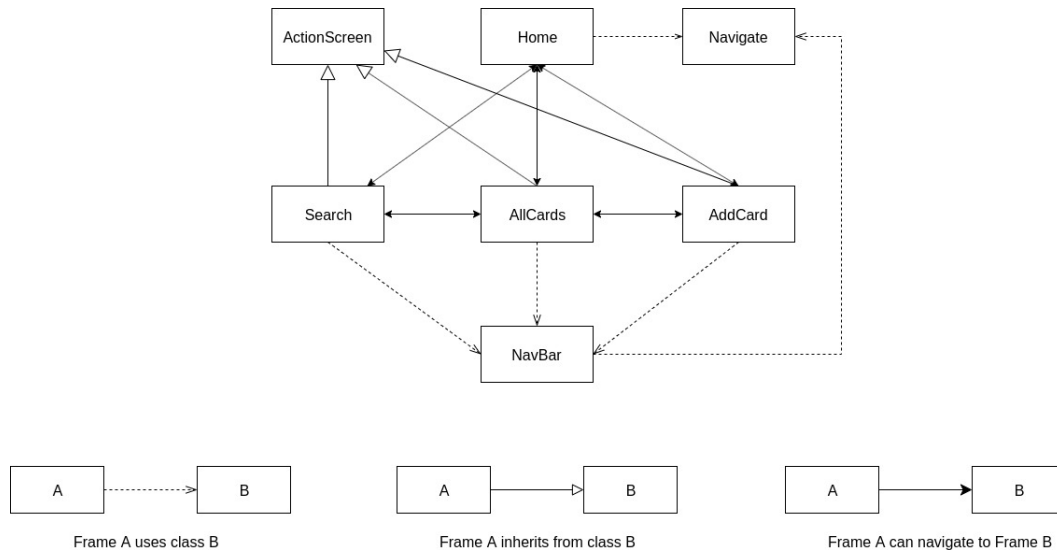


Figure 2: Front Class diagram

Global explanation

Our user interface will be composed of four main screens: Home, Search, AllCards, and AddCard. We'll have another screen for card details. As shown in the diagram, classes can interact with each other in three different ways:

- Class A uses class B: The four main frames are going to use the components NavBar, and Navigate. The NavBar will be placed at the top of each frame to navigate between each view. And the class Navigate will handle the navigation itself.

- Class A inherits from class B: The frames Search, AllCards, and AddCard inherit from the class ActionScreen. This class will setup the frame, the layout, and the NavBar.
- Class A can navigate to class B: Here we can see that navigation only concerns classes that are actually frames. So the four frames can navigate to each other.

Home

Frame that will display the title of the app and a navigation tool to go to the other views.

ActionScreen

Abstract class that will setup the following frames with the NavBar and the layout.

Search

Frame that will contain a text field to search for a card by keyword.

AddCard

Frame that will contain a form to add a new card to the collection.

AllCards

Frame that will contain a list of all the cards in the collection.

NavBar

Component that is going to be used to navigate between the frames. This component will appear on every frame except the “home” one.

Navigate

Class that will handle navigation between the frames. This class is used inside the NavBar component and the Home frame.

Implemented features

Back

- Card: Create / Read
- Collection:
 - Get data from the Json file and create objects from it
 - Add card to collection and update Json file
 - Remove card from collection and update Json file
- Save everything inside a Json file

Front

- Home
 - Display title
 - Navigation button
- NavBar
 - Title of current frame
 - Navigation buttons
 - Implemented in the following frame

- Search
 - Text field and button that trigger a research in the collection based on the keywords. Attributes concerned by research are name, type, specific type and expansion name.
 - Display the results in list format. Each result is a button to navigate to the card details (not implemented yet).
 - Scroll Panel
- AddCard (*Development stage*)
 - Button to add a new blank card.
 - Button to delete the last card of the collection.
- AllCards (*Development stage*)
 - Display all cards from the collection in list format. Each result is a button to navigate to the card details (not implemented yet).
 - Scroll Panel