Teamwork 2025/26 (v1.0)

1. Introduction

The objective of the teamwork is to develop an information system for collectors. The system must be developed for the Web (e.g. **website** or webportal) and all information about the collections must be stored persistently in a relational database. The project occurs in two **sprints** or iterations.

2. Description

2.1 Context

The intended Information System (IS) is to manage collections (automotive miniatures, locomotive miniatures, stamps, coins, comic book classics, trading cards, among others) of collectible objects/parts/items, hereinafter simply called **items**. The information system to be developed will allow efficiently the CRUD (**C**reate-**R**ead-**U**pdate-**D**elete) of all information regarding the collections.

2.2 Global needs

The system must allow managing more than one type of collection. When creating collections, the characteristics of the collection must be defined (name, date of acquisition, etc). It must be possible to see the items in a specific collection and also the events where a specific collection occurred or will occur.

The system must allow classifying each collectible item according to parameters considered relevant, such as importance (value between 0 and 10), monetary value, weight (in grams) or others considered relevant. The system must also allow ordering the items according to the criteria defined above. If an item is part of more than one collection, its information will not be repeated.

Based on the example in **Figure 1**, we can see a website of itsms from various types of collection. By selecting the StarWars miniatures collection, it is possible to view the various items that make up that specific collection.

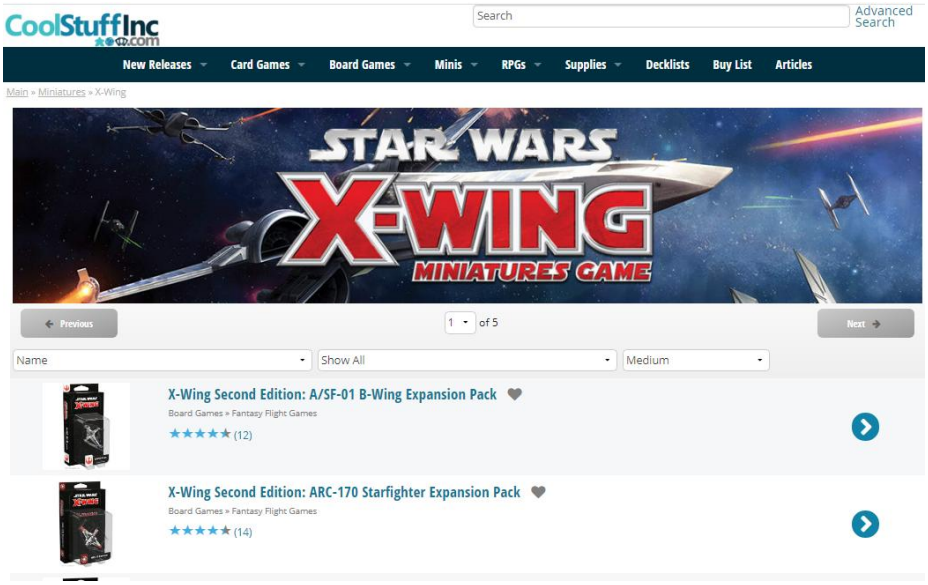

Figure 1: Example of a collection (coolstuffinc.com).

After choosing a particular item, a page will open (**Figure 2**) with all the information about the specific item of the StarWars miniatures collection.

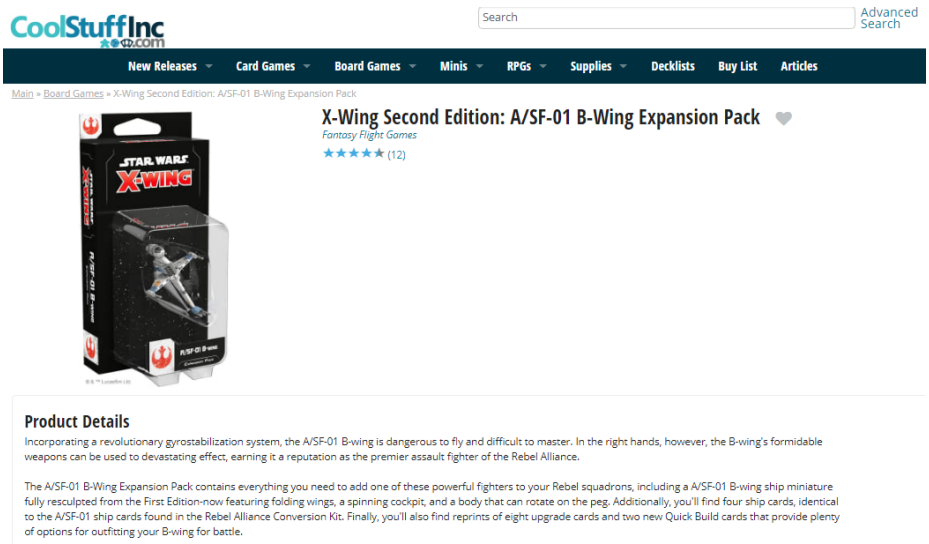

Figure 2: Web page of a specific item of a collection.

It must be possible to list all the items or just the item that make up a given collection. Previews only show part of the item information (**Figure 1**). For a complete description of a given item, the information system (IS) must refer to a specific page of the item (**Figure 2**).

For a better idea of your needs, consult collections or collectors' websites. For example: https://www.coolstuffinc.com, or https://www.revistaqui.com.br.

Just to clarify, the objective of this IS **is not** an online shop. The objective is to create an IS so that users can manage its own collections.

2.3 Minimal system

For the first sprint (**Sprint 1**) which corresponds to the first phase of the work, the system must include at least (the minimum system for Sprint 2 and other requirements will be known later):

- Through the creation of HTML documents, a user interface must be built, to be able to present all the information previously seen. The creation of this type of document will be necessary to support Sprint 2, namely the viewing, addition, change and removal (CRUD) of all information about collections, items and events.
- Create pages that reflect what the IS is expected to support, namely:
    - Home page: containing top 5 colections (can be the last added, chosen by the user, etc) and some items from that top 5 collections. It should also be possible to create a new collection on this page;
    - Collection page: it must be possible to view all information about that collection. It must be possible to view its items. In this page we can also:
        - Change information about the collection;
        - Create or delete an item.
    - Item page: it must be possible to view or change all information about a given item;
    - Event page: Page with information about events related to a given collection, such as exhibitions, events or others, filled with the description of the event and the date of the event. The system should alert you when the event date is approaching. After the event has taken place, a user will be able to allow rating the event on a scale of 1 to 5, regarding a specific collection.
    - User page: A page with information about the user (collector).
    - Team page: A page with information (name, institutional email, team number, course, etc) about the team who did the website.
- Validate HTML forms using javascript: All HTML forms must be validated for empty fields. For example, when creating a new collection, the form will not be submitted if the mandatory fields are empty (e.g. the submit button will not work).
    - It is up to the team to decide which fields are optional or required on the different entities (collections, items, …).
    - A message in form of a popup message or in HTML text will appear alerting for empty fields.
- Non-functional requirements:
    - The system must be as interactive as possible. As an example, a given item that appears on a given page must always have an associated link to the information page about the item;
    - The system must be easy to use, that is, suitable for end users, such as collectors, without computer knowledge;
- Other information that is relevant to the operation of the proposed IS. The addition of features that prove important to the IS will be valued.
- The conceptual model of the Database to be implemented must be created.

3. Considerations about the information

Whenever there is ambiguity in gathering the problem's requirements, they can take on new considerations (new attributes, relationships, tables, classes, etc.), as long as they make sense in the context of the problem. For basic information (collections, items, events) consider at least the following attributes:

- Collection
    - name

  - type
  - creation date
  - …
- Item
  - name
  - Importance
  - weight
  - price
  - Data of acquisition
  - …
- Events
  - name
  - localization
  - …
- User
  - Name
  - Date of birth
  - Email
  - …
- …
  -

4. Development Process and Technologies

Teams are made up of **4 members**. The development process must be iterative.

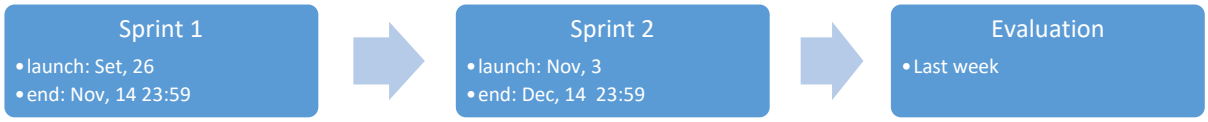

Figure 3: Development process.

Process for iteration 1:

1. In the initial phase, definition of requirements and layout of pages by the entire team;
2. Then, divide the features/pages by the team;
3. Creation of the conceptual model to support the project.

It is mandatory to use the GIT tool and the GitHub repository. The repository name on GitHub must follow the format, EIS_2526-GXXX_MXXX, (example: EIS_2526-G01_MEGI) and give read access to teacher. All team members must make commits that justify the work in both iterations.

The user interface will use HTML, CSS and Javascript, and Netbeans should preferably be used as the IDE. The code has to be written by the group.

Additional guidance, or new requirements, may be given during the project.

5. Evaluation

At the end, the student must demonstrate the ability to develop an information system, focused on the Web.

5.1 Iteration 1 (30% weight + 5% report)

Submission in Moodle until Nov, 14th at 11:59 pm (Moodle time).
Submission in a file (. zip) with

1. The release of the interface developed in HTML/CSS/Javascript/ (NetBeans project or standalone HTML, CSS and javascript files) for the desired system. They must add some test data to the HTML files to the submission, serving to check the hyperlinks from one page to another.
2. The conceptual model of the database that will support the storage of information.
3. Report containing (a template of this document will be available in moodle):
    a. team composition;
    b. individual task description (who made what);
    c. work limitations (what was not accomplished and why);
    d. self and hetero evaluation;
    e. other specifications and/or considerations that the team finds relevant.

The work in this iteration will be evaluated as soon as possible, and the teacher will then provide feedback on the team. The evaluation may take into account the progress of the work. Autonomy, depth of work, quality of models, code, development process, as well as effective functionalities are factors to be taken into consideration.

5.2 Iteration 2 and Final Assessment (Weight of 40% + 5% report + 15% presentation)

Submission in Moodle until Dec 14th at 11:59 pm (Moodle time).
More information about this sprint will be announced.

6. Version control

V1.0	Initial version
V1.1	**Validate HTML forms using javascript**. See chapter 2.3. for technical detail.