VIGNY Lucas

DAVIAS Alexis

IF3E PROJECT REPORT

INTRODUCTION :

The IF3E project centers around an intergalactic trade management system. Its objective is to develop a web platform enabling users to monitor intergalactic business operations. With a single account, users can oversee their fleet of spacecraft and crew members. They have access to a diverse array of missions, allowing them to select and deploy the spaceship and crew they deem most suitable to secure the reward. The purchase and reward system facilitates users in optimizing and managing a growing fleet, aspiring to become the leading trader in the entire galaxy.

PLAN :

- Expected functionality :
  - Creation of a merchant account / connection to an existing account
  - Viewing the user profile
  - Complete list of detailed missions
  - Mission Filtering
  - Establishment of a fleet of spacecraft
  - Recruitment of crew members
  - Assignment of spaceships and crew to missions
  - Creation of mission by the user

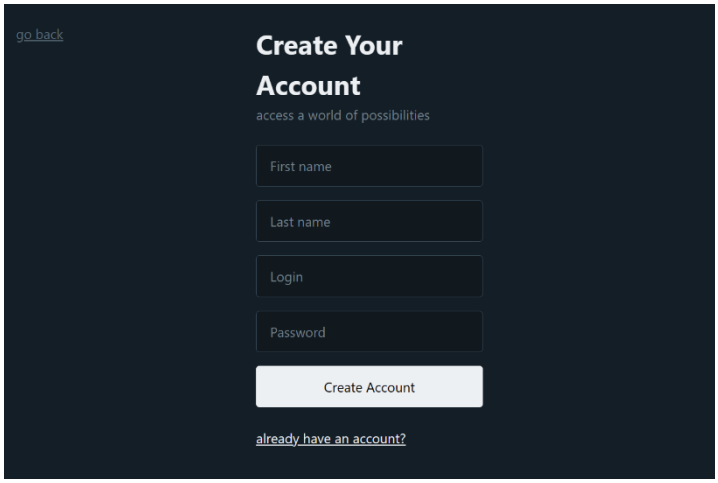
- Database template :
  - Entity-association diagram
  - Basic relationship diagram

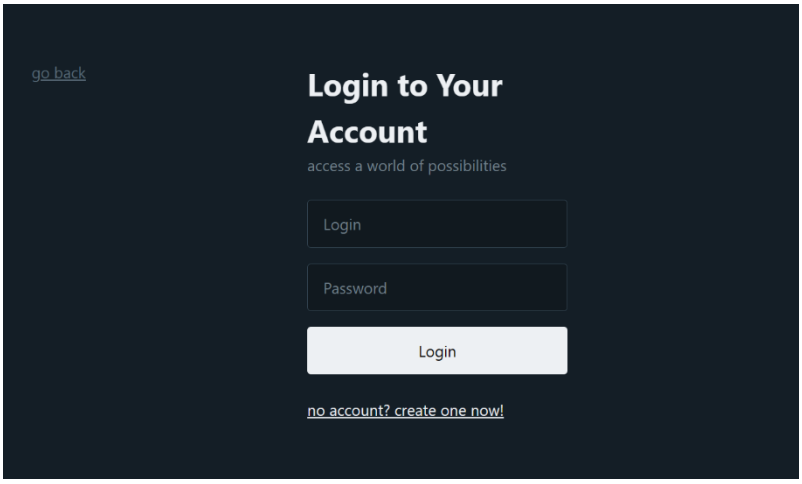
- Features implemented :
  - Explanation link
  - Action band
  - Level up your spaceships
  - Economic system of mission creation
  - Fail a mission
  - Mission Success Percentage Calculation
  - Modify a mission
- Features we would have liked to implement:
  - Implement a temporality in the realization of missions
  - Implement a system for purchasing mission resources

Expected functionality :

Creation of a merchant account/ connection to an existing account

When the launching index.php, the user is directed to the initial page, offering options to either log in or create an account. If the user chooses to create an account, their information is stored in the database, and they can subsequently log in. The home, login, and account creation processes are spread across three distinct pages, each accessible from any of the three. An incorrect password or login prompts an error. It's worth noting that there is an existing account in the database associated with the intergalactic guild responsible for issuing all the missions that have already been proposed.





Viewing the user profile

When the user logs into their account, a navigation bar, visible on most pages of the website, provides access to various information. This includes their first and last name, as well as the current balance of intergalactic credits. The navigation bar also features links to view the user's inventory, check their missions, purchase spaceships or crew members, and log out. This design ensures that the user can easily navigate through different sections of the website and access pertinent information related to their account and activities.

Complete list of detailed missions

The home page is the mission display page. We consider a third-party user, the guild that is created at the same time as the data base and that with almost infinite funds created the basic missions proposed to the user. The page displays all available missions created by the guild or by another user. Each mission has several characteristics: a brief description, a planet, a type of

cargo, a required capacity and a reward. The user then has access to a link for each mission leading him to a more detailed page where he can accept to do the mission.

Mission	Cargo	Planet (distance)	Ability	Reward	See details
Send Laser to Mars	Electronics	Mars (21)	Sneaky	1000 ¢	〖info〗

Mission Filtering

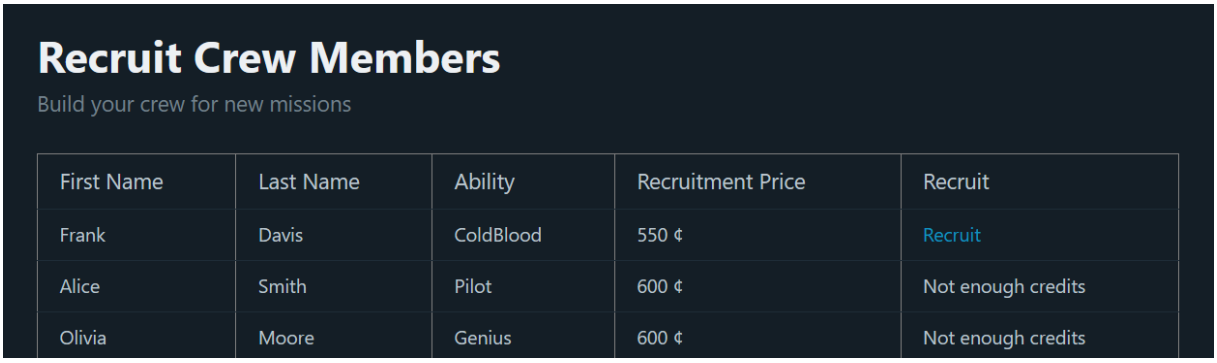
A filter is available to the user to sort the missions according to their 4 characteristics: planet, reward, capacity and type of cargo. The user can enter several criteria and apply the filter. The missions that appear will then have all the required criteria. Each criterion is selectable from a drop-down menu except for the reward where the user enters a minimum value.

Building a fleet of spacecraft

With the money the user starts with, he can go to the shop located in the information banner to buy spaceships. Spacecraft are characterized by 4 values: loading capacity in tons, the number of crew members that can be accommodated, the maximum distance traveled and the purchase price. By purchasing a spaceship, the user will find it in his inventory and can use it for his missions. The user can only buy one copy of each vessel and will be refused any purchase beyond his means.

Crew Recruitment and Capacity

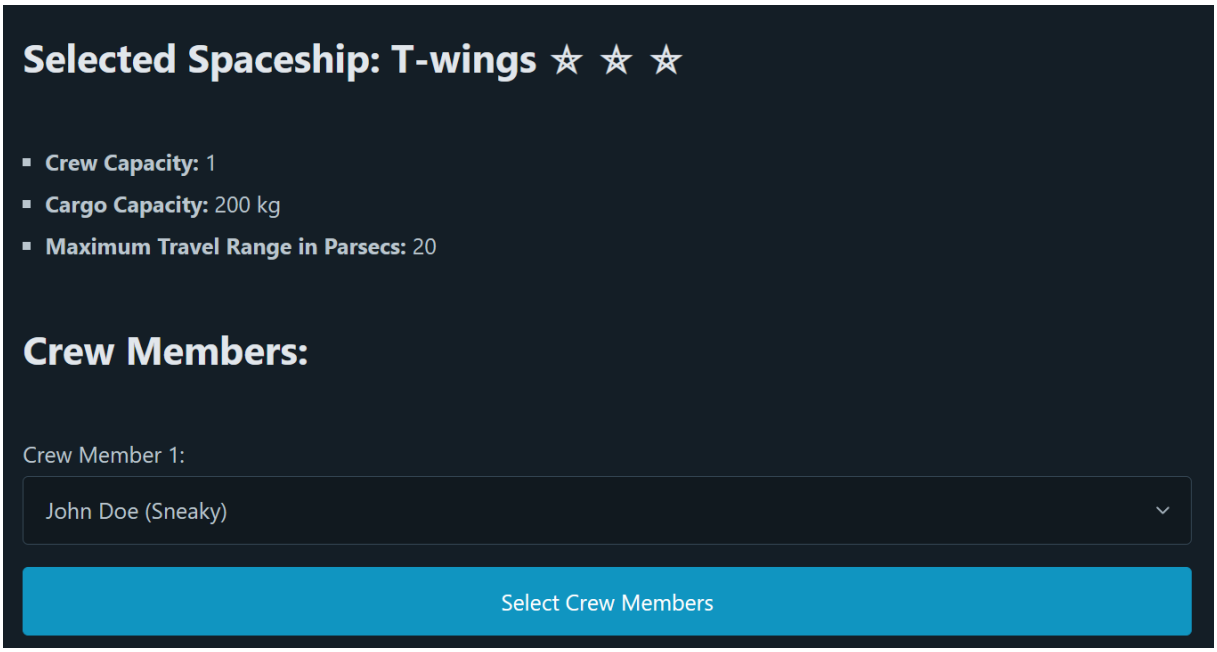
Following a similar system as spacecraft, users can also purchase crew members in the shop. Each crew member comes with a name, a first name, a unique ability, and a recruitment price. Acquiring crew members enables the user to assign them to missions within their spaceships. This adds a strategic element to the gameplay, allowing users to assemble a skilled and diverse team to enhance their chances of success in various missions.



Choose and launch a mission

By utilizing the mission information link, the user can access and read the mission description before deciding to accept it. Once accepted, the user selects the spaceship they wish to send on the mission and assigns crew members to specific positions within the spaceship. The website automatically denies any configuration inconsistencies, such as having the same crew member assigned twice or selecting a spaceship without the required range.

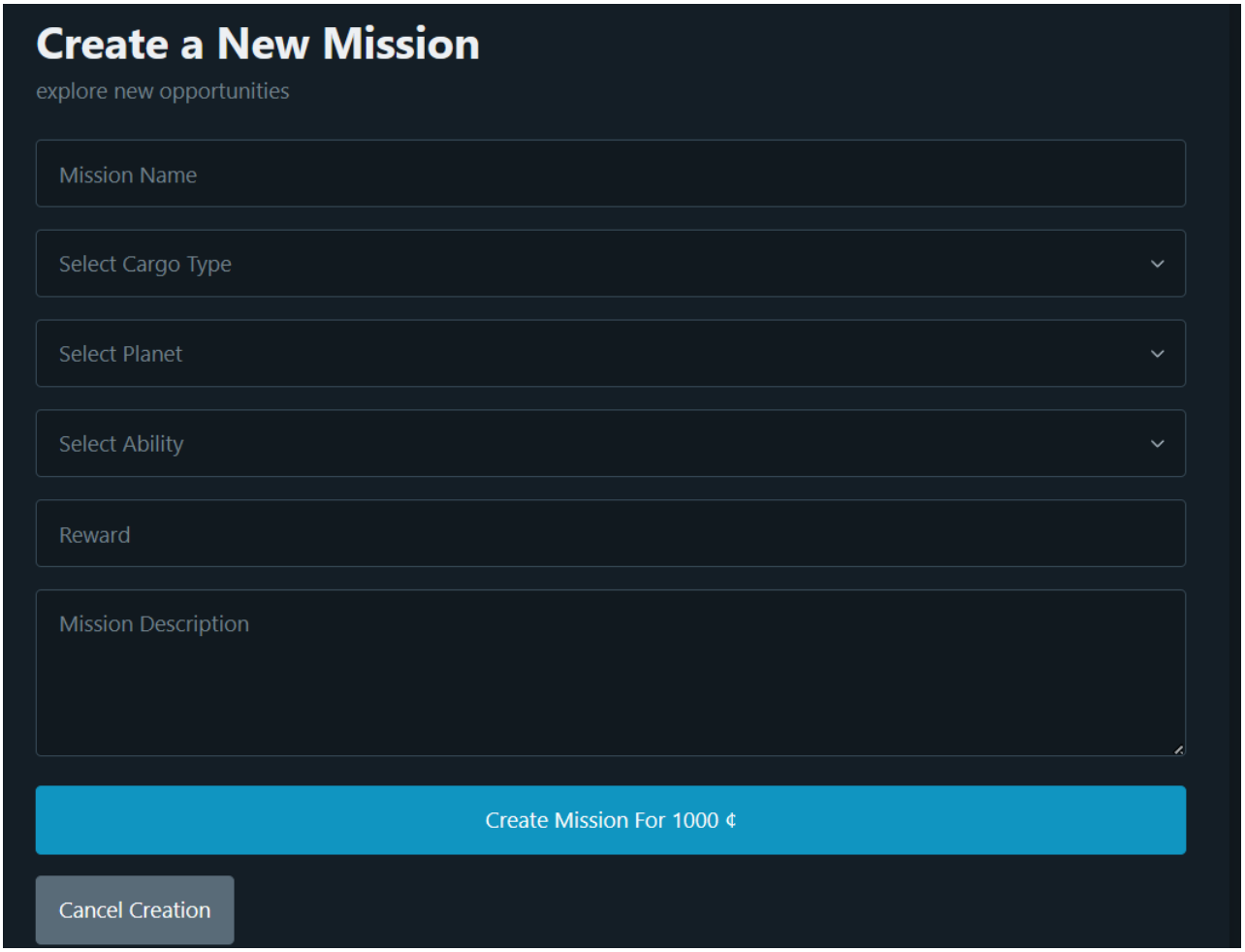
After configuring the crew and spaceship for the mission, the user is presented with the percentage of success for the mission. Upon confirming, the site displays the mission result, along with the amount of money earned or lost based on the success or failure of the mission. This dynamic process adds an interactive and strategic element to the user's experience, enhancing the overall engagement with the intergalactic trade management system.



Creation of mission by the user

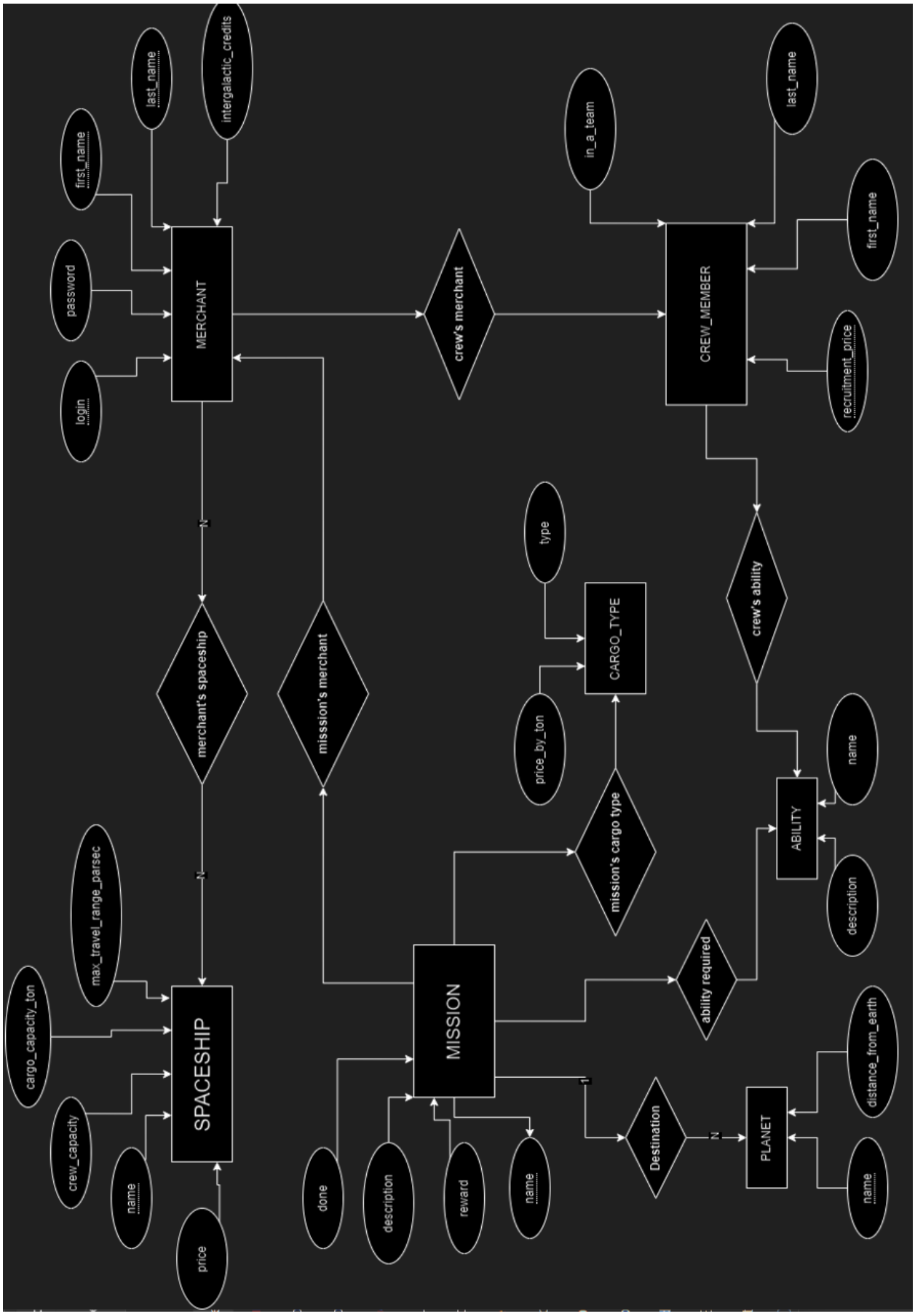
In addition to participating in missions, users have the option to create their own missions. This feature is accessible from the home page through a link leading to the mission creation page. During the mission creation process, the user can customize all aspects of the mission, and for a fee of 1000 credits, make it public. The mission is then registered in the database linked to the user's account. It will appear in the list of missions they've created and in the list of feasible missions visible to other users.

To ensure feasibility, users are restricted from setting a reward beyond their available credits. If another user successfully completes a mission created by someone else, the original creator earns credits based on the quantity and value of the transported goods. This creates a dynamic system where users can not only engage in missions but also contribute to the game's economy by generating and sharing their own missions with the intergalactic community..

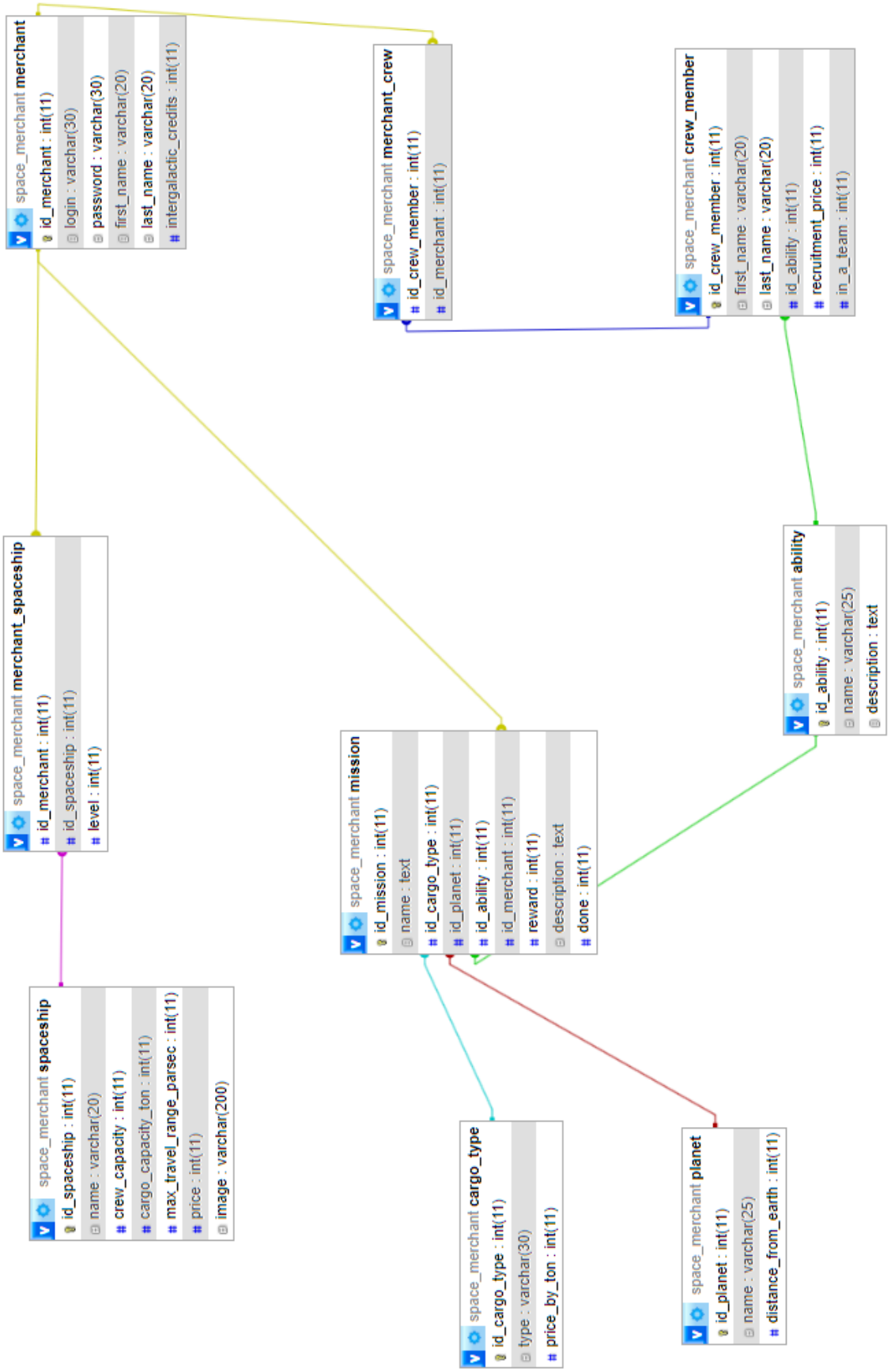


Database Template:

ERD :



Basic relational scheme :



features implemented :

Explanation Link :

Objective : Ensure a comprehensive understanding of the site.

Work Done : Implemented descriptions and links for additional explanations of various features.

Conclusion : The site is clear, and potential confusion is addressed through detailed explanations.

Action Banner :

Objective : Provide quick access to essential tools.

Work Done : Included an action banner at the top of each page after login, grouping basic tools : Logout, home page, my missions, shop, name, first name, credits, and inventory.

Conclusion : All essential tools are easily accessible via the action banner.

Level up of spaceships:

Objective : Introduce a spaceship upgrade system.

Work Done : Users can select spaceships from their inventory to upgrade, increasing their maximum distance traveled. Each spaceship is upgradable up to twice, and its level is represented by stars.

Conclusion : Spaceships can be improved, enhancing gameplay and progression.

Economic System of Mission Creation:

Objective : Creating a mission costs money but should also generate income.

Work Done : Each cargo type has a value per ton. Mission creators receive a prize multiplied by the spaceship's capacity, minus the reward paid to the user who completes the mission.

Conclusion : Mission creation is financially viable, and creators are compensated appropriately.

Calculation of Mission Success Percentage :

Objective : Implement a mission success system highlighting spaceship and crew choices.

Work Done : The success percentage is determined by crew member capabilities. The basic success rate is 40%, increased by 20% per crew member with the required ability.

Conclusion : Users strategically choose spaceships and crew members for mission success based on capabilities.

Fail a Mission :

Objective : Make mission failure have a punitive minimum.

Work Done : A failed mission incurs a cost proportional to the distance from the mission's planet. Users are penalized for suboptimal configurations.

Conclusion : Users face consequences for mission failure, emphasizing the importance of optimization.

Edit a Mission :

Objective : Allow users to modify a published mission.

Work Done : Added a link to modify missions on the "my missions" page.

Conclusion : Users can review and modify their missions as needed.

Features We Would Have Liked to Have :

Implement Temporality in Mission Realization:

Objective : Introduce a time dimension to missions.

Desired Work : Missions take time, and the user must plan spaceship and crew deployments considering the duration based on the mission's distance and vessel speed.

Conclusion : Adds complexity and strategy, requiring users to optimize spaceship usage for successive missions.

Implement a System for Purchasing Mission Resources:

Objective : Balance the mission creation system by incorporating resource costs.

Desired Work : Creators pay credits based on mission-associated resources, with fluctuating initial purchase prices.

Conclusion : Enhances strategic planning, forcing creators to consider market prices for mission profitability.

Conclusion :

In conclusion, the IF3E project introduces a unique intergalactic trade management system. The creation of a web platform empowers users to efficiently oversee their intergalactic business operations through a unified account. The management of fleets, crews, and the creation of missions provides users with substantial strategic flexibility to optimize their earnings. This project not only allowed us to solidify our foundations in MySQL, PHP, and HTML but also provided opportunities to explore innovative approaches to problem-solving within these programming languages. The development journey has been enriching, offering insights into the complexities of implementing a comprehensive and dynamic system for intergalactic trade.