**Design document**

1. Project description/scope

The goal of the project is a fully functional webshop application which consist of a ReactJS frontend and a Spring boot API with a MySql database. The application should allow a user to create an account, sign in with that account as either a developer, who can upload and update games or a customer, who can browse and purchase games.

Customers should be able to make orders consisting of multiple products via the shopping cart feature. They should also be able to access their completed orders history and refund products that they’ve already purchased. Products should be available for search by name or with pre-defined filters – by genre, price, popularity.

Developer accounts should be able to publish games, add and edit information regarding those games and view information about customers who purchased their games.

Additionally, all users should be able to change their username and password, as well as get a new password in case theirs is forgotten.

1. **Fronted**
2. Criteria

|  |  |  |  |
| --- | --- | --- | --- |
|  | Angular | React | Vue |
| Virtual dom |  | x |  |
| Support Community | x | x |  |
| Prior experience | - | - | - |
| Size |  | x |  |
| Learning Curve |  | x | x |
| stable | x | x | x |
| Documentation | x | x | x |
| coding speed |  | x | x |

1. Explanation of choice

* ReactJs is easy to use library and can also achieve the result that is required. It is recommended for people with little to no experience with JS. I chose this library because I wanted to get on track with the frontend as quickly as possible.

1. Pros & cons of ReactJS

+ One of the pros of ReactJS is that it has a strong community behind it. This is important for because I can easily find required information and access resources.

+ ReactJS is also open source, which means it is constantly developing and is open to the community.

* On the other hand, the usage of JSX and HTML in the JavaScript code is considered a disadvantage, because it leads to less readable code.
* Compared to a framework like AngularJS, ReactJS often times require downloading additional libraries because the desired functionality is not available in the library itself.

1. **Backend**
2. Justification

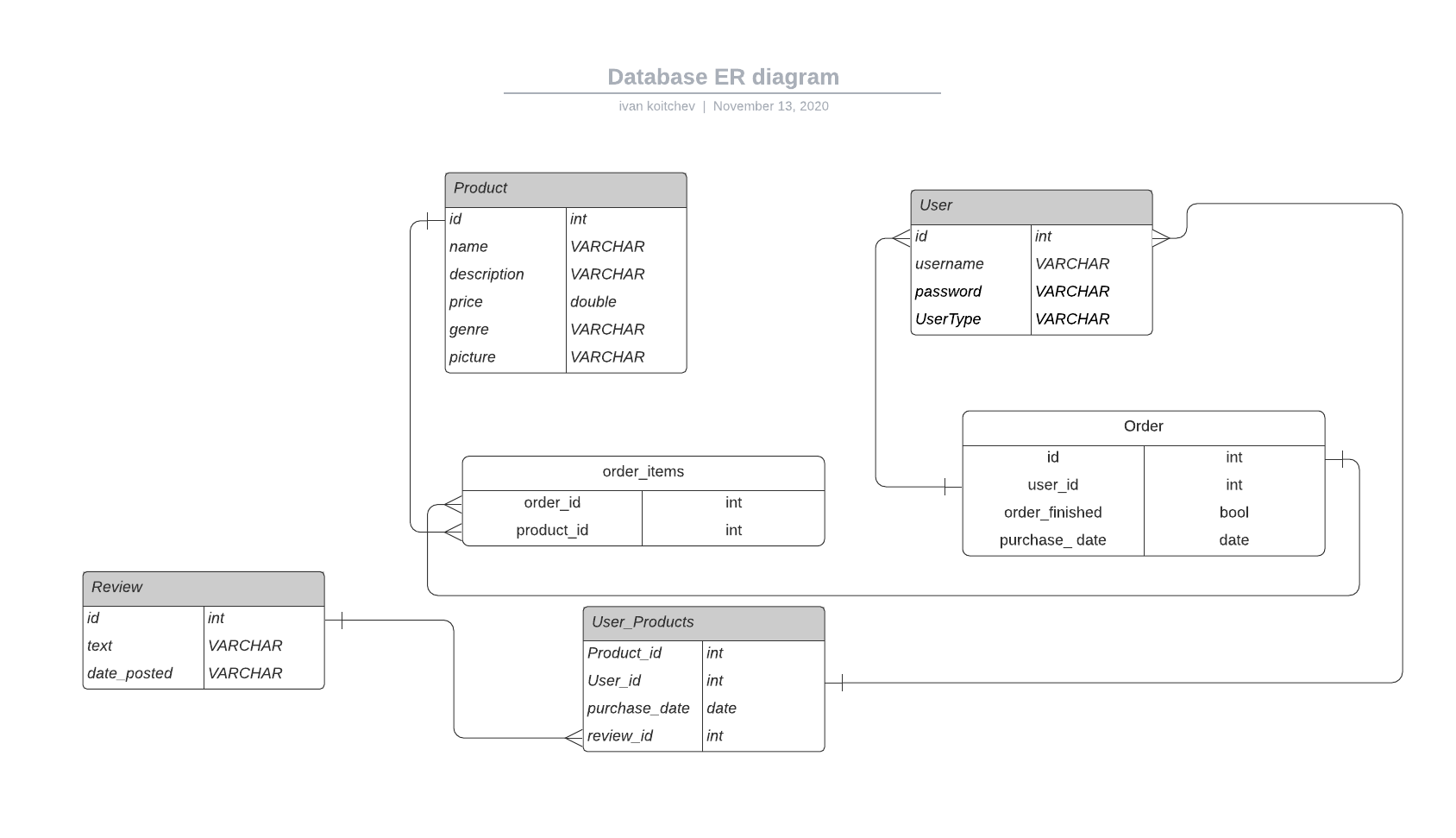
I chose to use Spring boot for the development of my API because it is a powerful framework which is excellent for creating a backend service. It also has a strong community behind it which means it is easy to find help if needed during the process of implementation.

Spring boot is used to build stand-alone and production ready Spring applications. Some of the its main strengths are the shorter development time and efficiency increase, which are achieved through a default setup of unit and integration tests. It also provides flexible XML configurations, robust batch processing, database transactions, easy workflow, along with a wide variety of tools for development.

1. **Database** 
   1. Justification

My choice for the database is MySQL. It offers a high performance and an on-demand scalability, which means it able to facilitate the management of deeply embedded apps using a smaller footprint, even in massive warehouses that stack terabytes of data. It is also easy to get started because the setup does not take too much time. Finally, being open source offers more flexibility and support.

* 1. ER design

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