

Design Goals

1. Security

The website should be secure as email addresses and passwords, along with actors' personal information, are stored. We want to protect our user's private information from malevolent actors who may harass them. To address security issues, we plan on creating a request button for contact information. That way, the actors will be able to choose with whom they share their number or email. The passwords of the users should be kept securely in the database using encryption. Users will also have a chance to contact developers for any security concerns. For found items, users who do not own the item may claim the item as their own. To prevent this, users who have found a lost item will be instructed to obscure data about the item and verify that the person who is claiming the item is really theirs.

2. Usability

We think that usability is a critical design goal for our system because we believe that for buying second-hand items, finding lost items, and making donations; finding what the user needs easily and quickly is the most important.

Design Trade offs

Functionality vs. Usability

We chose usability over functionality because we don't want our website to be confusing to any users, and the website is planned to be used by a variety of people with different technological knowledge. Another reason we chose usability over functionality is that we have a limited amount of time for our semester project and it would take a lot of time to implement many functionalities.

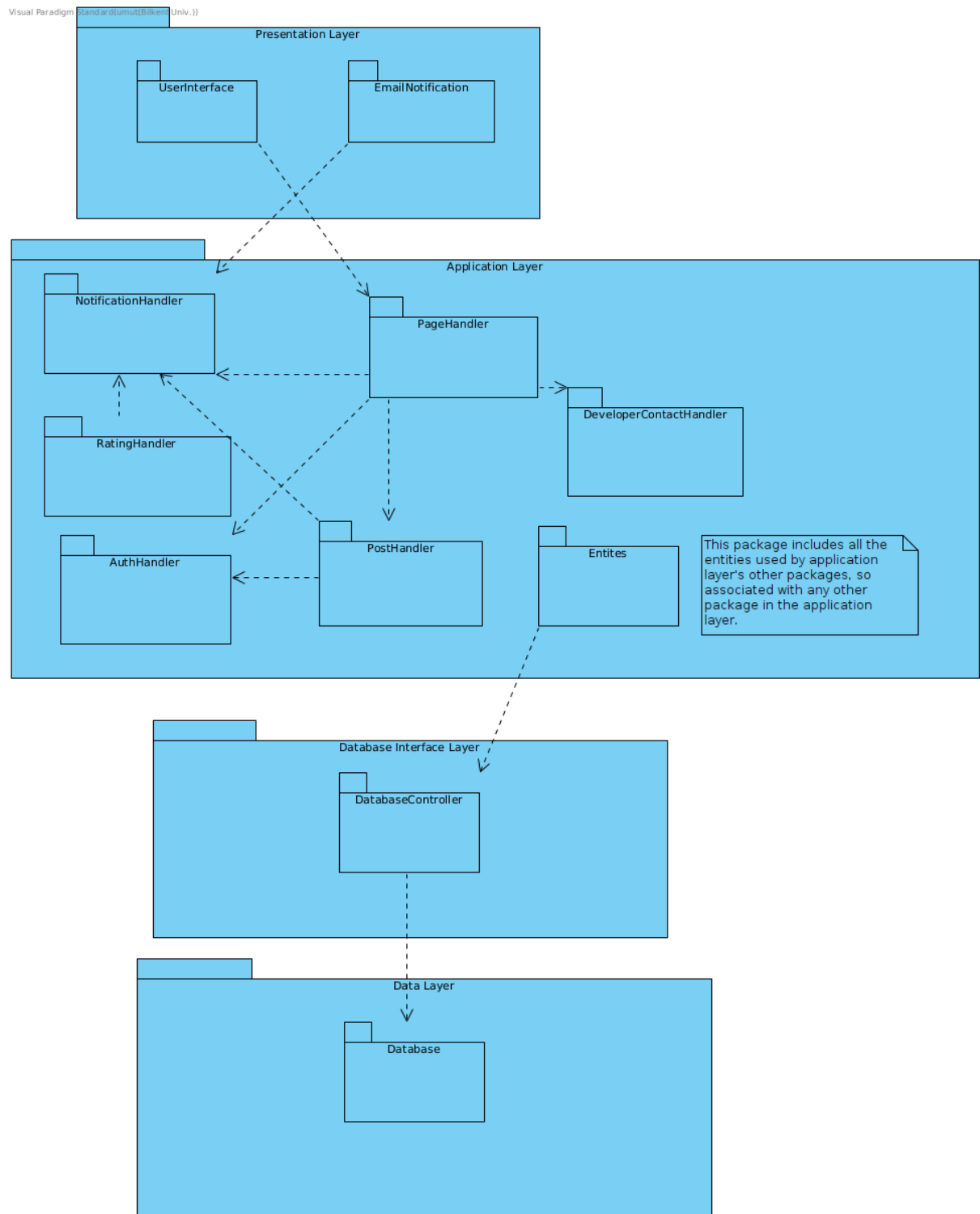
High performance vs. Cost Effectiveness

We chose cost effectiveness over high performance because this is a course project and there is no monetary gain from the project. For this reason, we will use free services that may have a low performance.

Security vs. Usability

We chose security over usability because the website contains sensitive information for the users. We don't want to leak the contact information of our users to spammers and other malevolent actors, we don't want lost items to be claimed by people who don't own the item, and we don't want our users to be scammed. As a result of our security concerns, the site becomes harder to use. Users must choose a strong password, they must provide their legitimate email and verify that email. Obstructing information about lost items will make it harder to find the item that someone is looking for.

Subsystem Decomposition



In the presentation layer, there are subsystems that users interact with. The user interface is the website and the email notification is notifications that users get sent to their emails outside the website.

In the application layer, there are Handler/controller subsystems that do operations such as creating a new post, user, notification, etc. There is also the entity subsystem which includes classes for Post, User etc.

The database interface layer is a wrapper subsystem that Application layer subsystems use instead of directly using database functions.

The database layer includes the database itself, in which users, posts, etc. are stored and fetched from.