

1.3.4 Iteration 3: Addressing Quality Attribute Scenario Driver

In this section we build on our fundamental structures from iteration 1 and 2 with a focus on QA-6: Usability.

1.3.4.1 Step 2: Establish Iteration Goal by Selecting Drivers

The goal for this Iteration is to focus on Quality Attributes QA-6 which is to make sure that the application should be intuitive and should have a small to no learning curve to the users.

1.3.4.2 Step 3: Choose one or more Elements of the System to Refine

The element that we chose to refine for this iteration is the frontend as a whole. Because our architecture allows the frontend and backend to be highly decoupled - we have the luxury of focusing one or the other without our changes affecting each other in a dramatic way.

1.3.4.3 Step 4: Choose one or more design concepts that satisfy the selected drivers

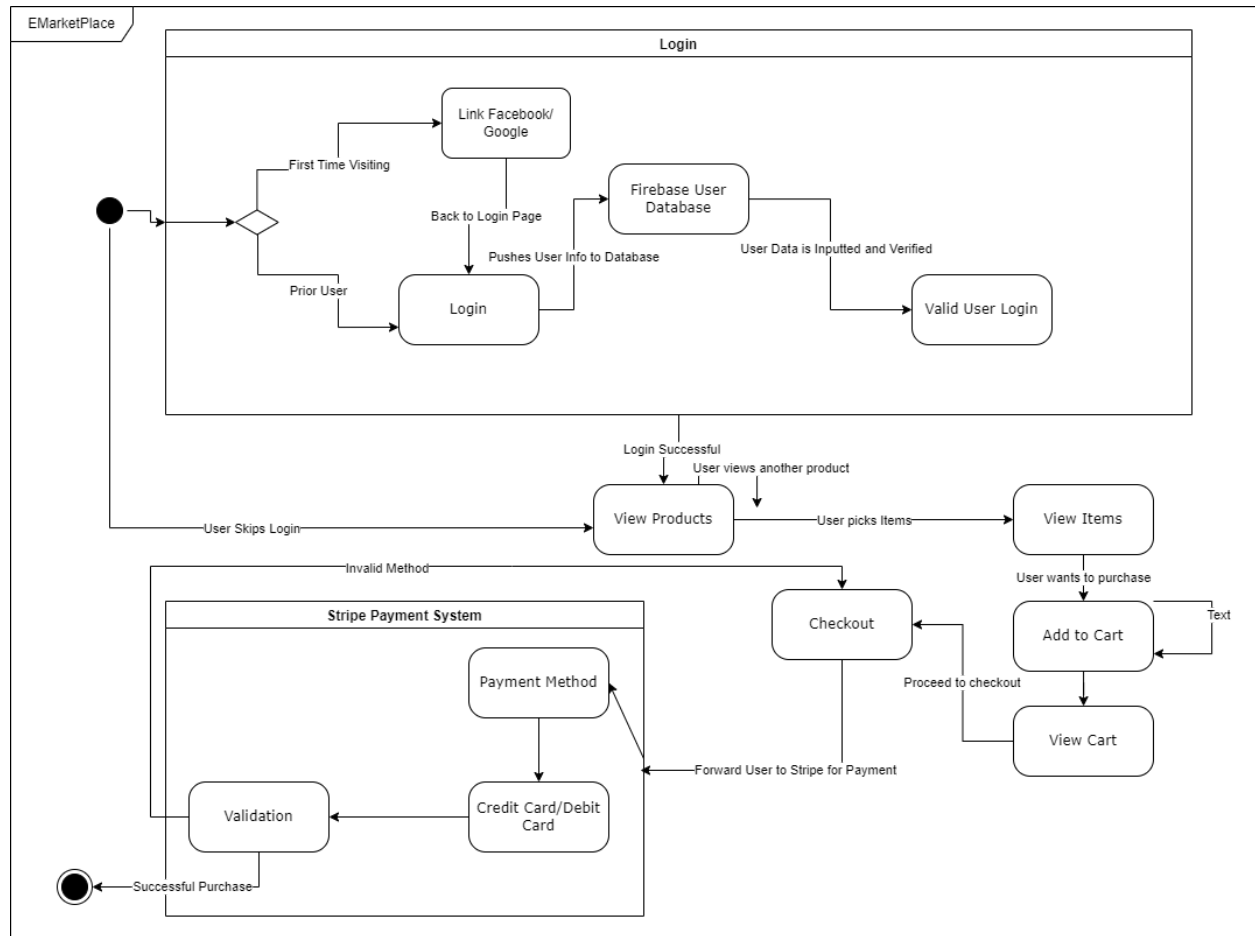
The design concepts used for this iteration are the following:

| Design Decisions & Locations | Rationale |
|--|---|
| Building a single page application using Angular | This is a great frontend framework built by google. It is a well-documented and tested framework that is very popular in the industry at the moment. It is also a highly performant framework as well. This is also where our team is most experienced. - maintainability |

| Alternatives | Reasons for Discarding |
|--------------|--|
| React.js | React is a great framework that we like very much. But considering that Angular ships with typescript out of the box as well as its more structured way of creating applications we preferred it over react.js. We are also more familiar with Angular so that will streamline the development process a little bit. |

| Design Decisions & Locations | Rationale |
|------------------------------|---|
| Implement caching | We decided to implement caching on the frontend to help reduce the load on our servers and databases. |

| Alternatives | Reasons for Discarding |
|------------------------------------|---|
| Make requests every time you login | Having to login every time you access the site is not something that the users enjoy doing. These logins also cost us money each time the user logs in - since we are using a third party login system. |



1.3.4.6 Step 5: Review iteration

The goal for this iteration was to refine components on our backend. We made significant progress in the design of our backend. We made major decisions in regards to the main systems that our application will use. However there is still much work to be done, specifically the database and the APIs still need to be designed. This will take at least one more iteration. However we are satisfied with the results of this iteration as it clears up a lot of the ambiguity regarding our backend infrastructure.