Requirements Analysis

SOFE 2720U Lab 4 Report

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Introduction

In this lab, the group focused on creating sequence level diagrams using previous labs as a foundation. The goal of this lab was to expand the group's knowledge and understanding of requirements by creating high level system and class sequence diagrams. In addition, the group was tasked with creating a state model diagram to portray the behaviour of the principle class of the product.

Lab Deliverables

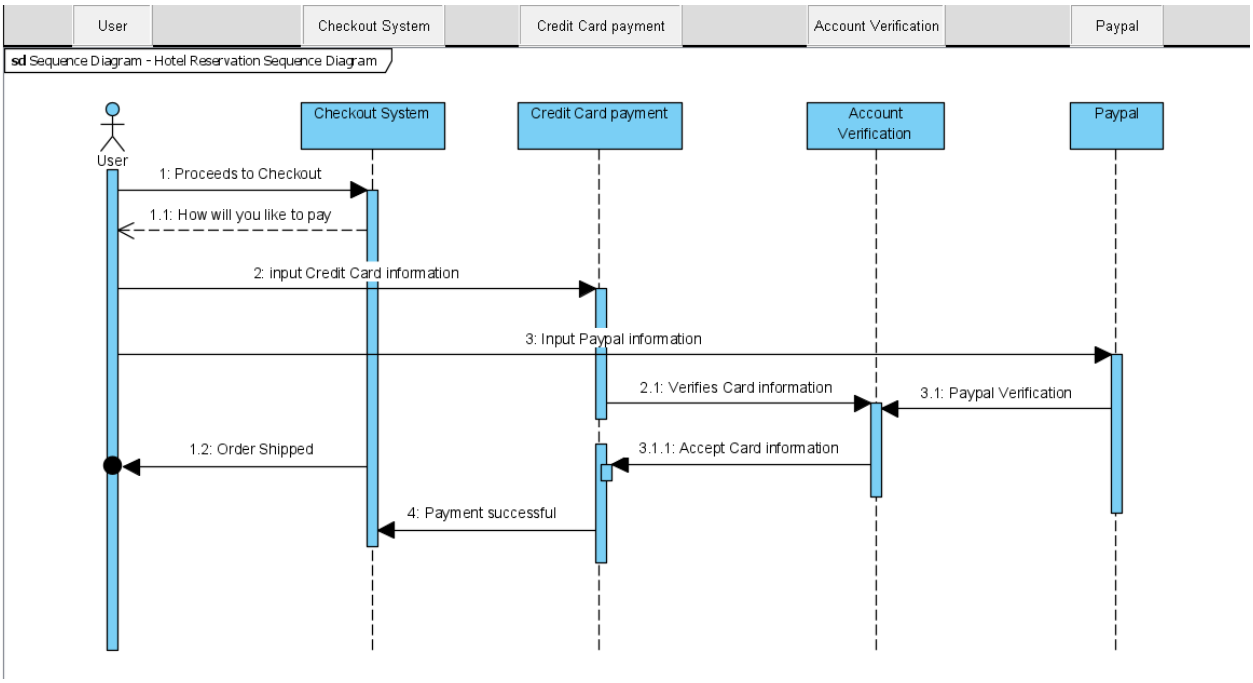

Figure a. System level sequence diagram.

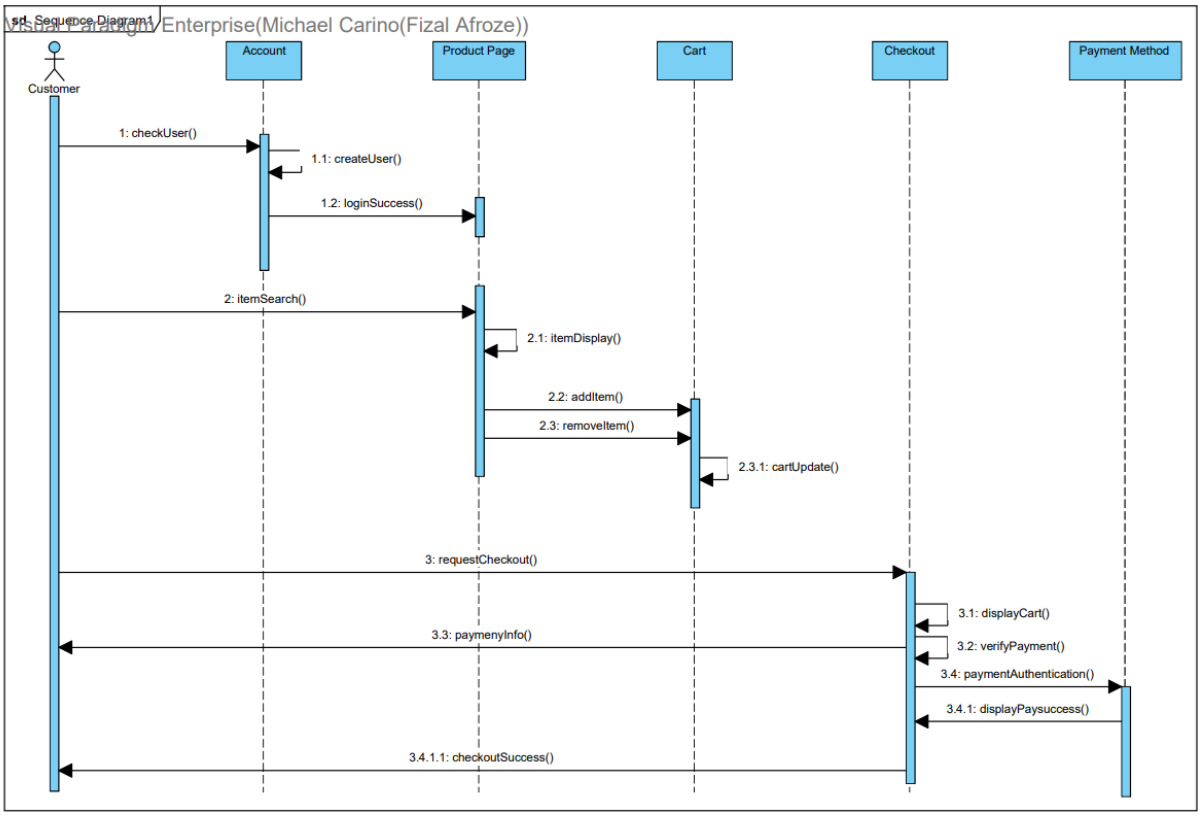

Figure b. Class level sequence diagram.

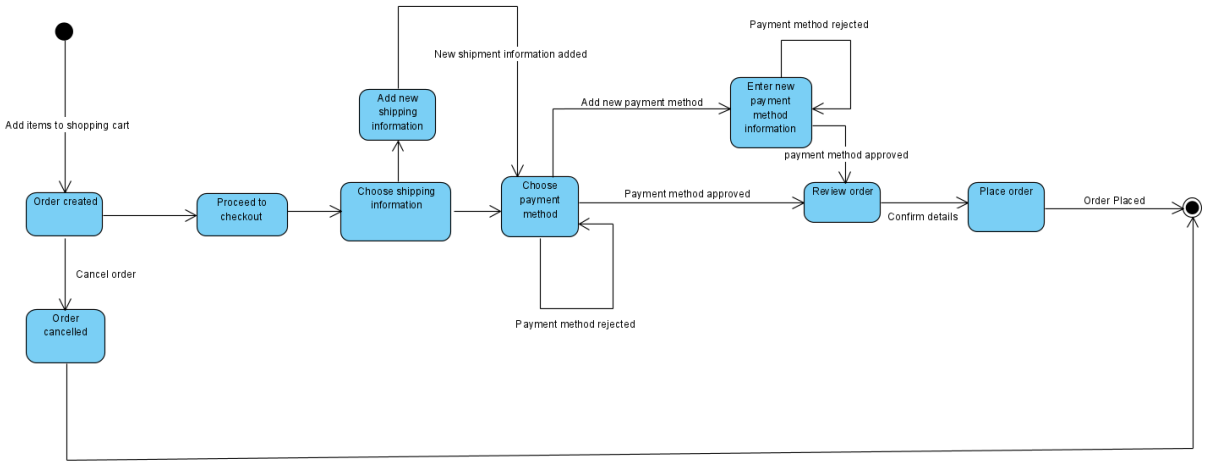

Figure c. State model diagram.

Conclusion

At the end of this lab, we see the interaction between different components in the one of the many requirements put together from the previous lab. The sequence diagrams help in the capture of this interaction. In the lab, we focused primarily on the “Check-out” use case scenario. We see the interaction between the customer or user and the whole newly designed check-out system. The check-out system interacts initially with the user, through a series of messages and during this process, the system interacts with other sub-systems like the banking system, which provides verification and authorisation for payment. The Class level Sequence diagram also shows the same interaction as well.

Furthermore, we were able to design behavior based on state diagram. The state diagram captures the states of the components, and they are connected by transitions which are triggered by messages. Here we have described the behavior of the checkout system, where we have considered all the possible states of the object when the event of checkout occurs. This state diagram represents objects and tracks the various states of these objects throughout the system.