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| SE 577: Software Architecture    **Train Ticket System**  **Group Homework #2: Modeling**    Shivani Aggarwal  Jijo George  Vighnajeet Naik  Priya Thotta Jayachandran        21-March-2020 |
| **1** **Introduction** This document details how the intended users are expected to interact with the proposed TrainTicket Application to execute various functionalities. This document makes use of UML Class diagrams and sequence diagrams.   The TrainTicket application will allow customers connected over a network to book a train ticket from one location to various other destinations covering all America via their desktop, laptop or mobile devices.   Our TrainTicket strives to deliver a high quality, safe, on-time rail passenger service that exceeds customer expectations. Our TrainTicket application tend to connect America in safer, greener and healthier ways.  The technology stack that will be used by us in our application would include the below:   * Spring Boot * Spring MVC * Spring Data JPA * REST Services * Eclipse/STS * Bootstrap * MySQL * Java 8 * Surefire-reports   The following details include class diagrams and sequence diagrams representing the logical and process view of the TrainTicket system.  Also below is the GitHub link for our TrainTicket application .  [https://github.com/sa3664/Group3\_TrainTicketingSystem/](https://github.com/sa3664/Group3_TrainTicketingSystem/issues) **2 Class Diagrams** This section will describe several class diagrams for the TrainTicket application. These are the class diagrams with major classed as being used in the application. This includes a UML class diagrams as the starting point of implementation.  Below are the major class diagrams that have been covered:   1. **Search Tickets**       **Figure 1: A class diagram for Search Ticket.**   1. **Checkout**       **Figure 2: A class diagram for Checkout.**   1. **Manage Itineraries**     **A screenshot of a cell phone  Description automatically generated**  **Figure 3: A class diagram for Manage Itineraries.**  **3 Sequence Diagrams** The following illustrates the UML Sequence diagram modelling the major Use Cases within TrainTicket Application  The various sequence diagrams are as below:   1. **Search Tickets**       **Figure 4: A Sequence diagram for Search Tickets.**   1. **Check out**       **Figure 5: A Sequence diagram for Check out.**   1. **Manage Itineraries**     A screenshot of a social media post  Description automatically generated  **Figure 6: A Sequence diagram for Manage Itineraries.** |

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