

# SWE 202 – Software Modeling & Design

## Jurgen Hila– Personalized Document Requirements

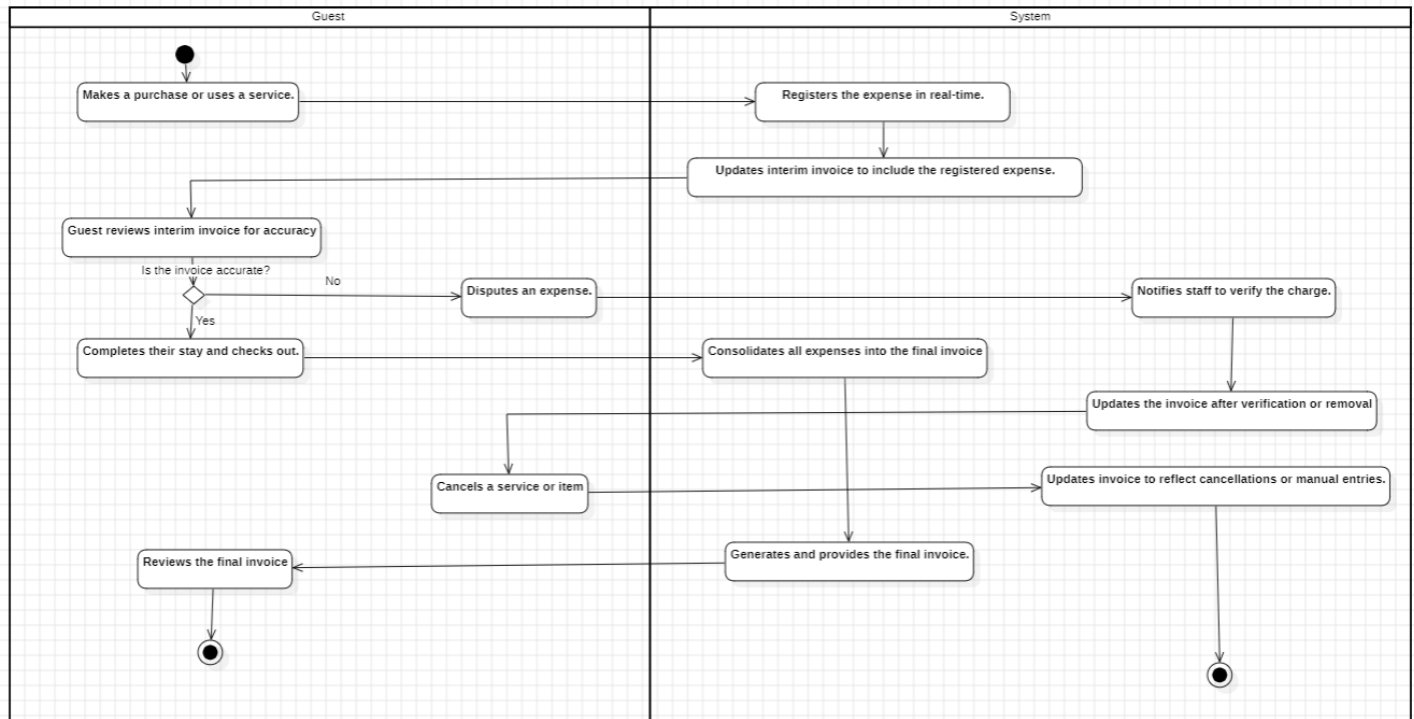
**FR\_GST\_10: The system shall register each expense made by the guest to their final invoice.**

### Use Case Table:

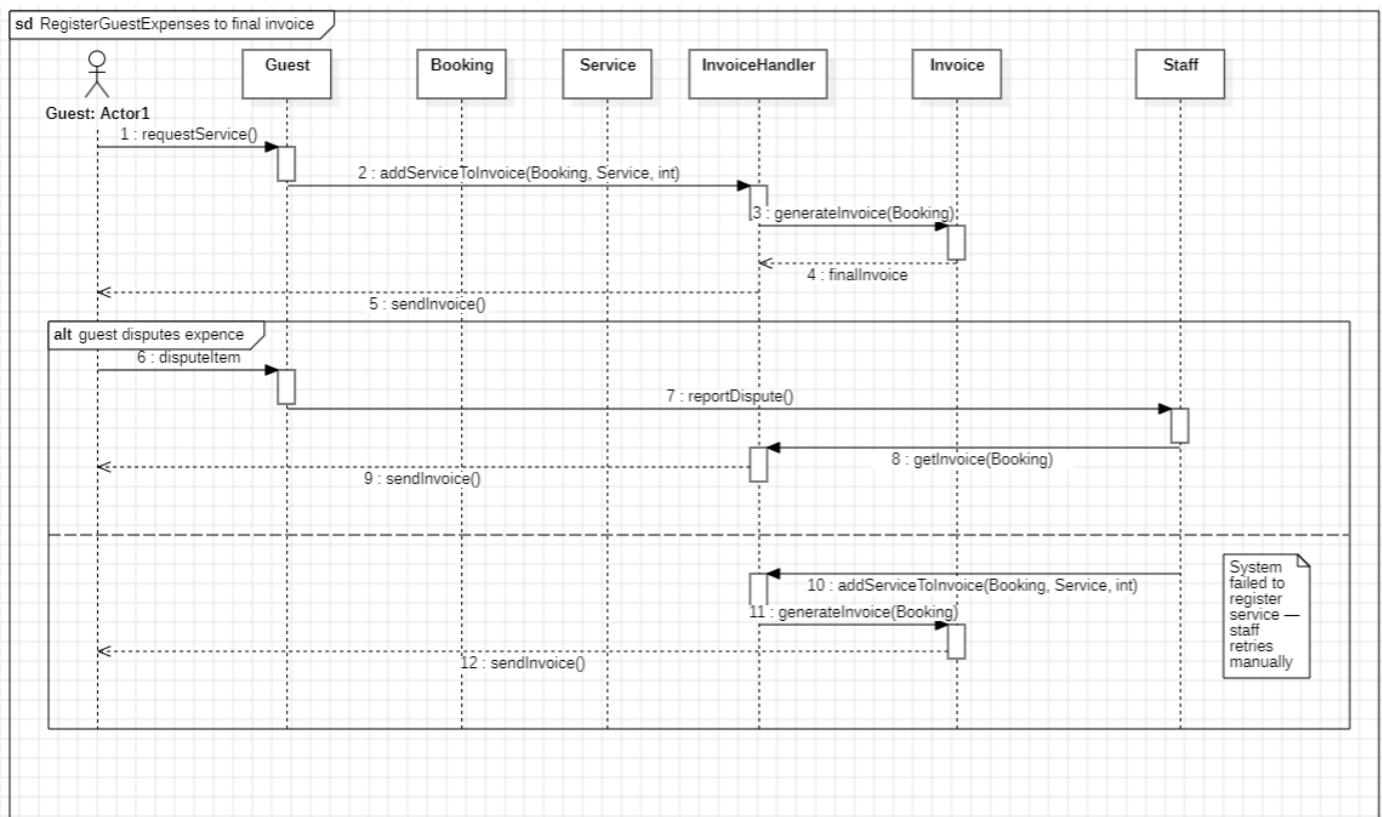
UC Name	<i>FR_GST_10: Register guest expenses to final invoice</i>
Summary	<i>Record guest expenses on the final invoice.</i>
Dependency	<i>No dependency</i>
Actors	<i>Guest is the primary actor.</i>
Preconditions	<p>1. Guest Check-In: The Guest must be registered in the system they have checked in to the facility, hotel, or venue.</p> <p>2. Expense Logging Mechanism: The system or staff must have the tools or processes in place to register expenses accurately.</p> <p>3. Staff Availability (if applicable): If manual expense entry is required, relevant staff should be available to handle it.</p>
Description of the Main Sequence	<ul style="list-style-type: none"><li>• <i>Step 1: The system updates the guest's interim invoice in real-time to include the registered expense</i></li><li>• <i>Step 2: Optionally, the guest reviews their interim invoice to confirm accuracy during their stay</i></li><li>• <i>Step 3: At checkout, the system consolidates all expenses to generate the final invoice</i></li><li>• <i>Step 4: The system generates and provides the final invoice to the guest, including a detailed expense summary.</i></li></ul>

Description of the Alternative Sequence	<ul style="list-style-type: none"> <li>• <i>Step 1: The guest disputes an expense. Staff verifies the charge and either removes it or corrects the invoice.</i></li> <li>• <i>Step 2: The system encounters a failure while registering an expense. Staff manually logs the expense and updates the system later.</i></li> </ul>
Non functional requirements	<ul style="list-style-type: none"> <li>• <i>The system must process and register expenses within 2 seconds of receiving input to ensure smooth operation.</i></li> <li>• <i>The system should support simultaneous usage by at least 100 staff members without performance degradation.</i></li> <li>• <i>The interface must be user-friendly and intuitive, enabling staff to log expenses with minimal training.</i></li> <li>• <i>The system must have 99.9% uptime to ensure uninterrupted operation for registering guest expenses.</i></li> </ul>
Postconditions	<ul style="list-style-type: none"> <li>• <i>The guest's account has been updated with the newly registered expense, including all relevant details such as the description, amount, and timestamp.</i></li> <li>• <i>The interim or final invoice associated with the guest reflects all registered expenses accurately.</i></li> <li>• <i>The system maintains a log of the transaction for future reference or auditing purposes.</i></li> <li>• <i>The data integrity of the guest's account and overall system is ensured, with no errors or inconsistencies introduced during the process.</i></li> </ul>

## Activity Diagram:



## Sequence Diagram:



## Communication Diagram:

