# Use Case Specification

# View Reports

## Task Analysis

1. The actor (Pool Admin) selects ‘Reports’ from the Main Menu.
2. The application displays the list of supported report types.
3. The actor selects the required type of the report.
4. The application displays the form with the generated report based on the default parameters. The form also includes components for configuring the report and setting up other parameters (e.g., start date and end date).
5. The actor adjusts the parameters of the report.
6. The application displays the updated report.

## Functional Requirements

1. Show the log of all visits by Customers during the specified period of time (two parameters: from date, to date). For each visit display the name of the Customer, the name of the Operator, date, check-in time, check-out time.

Allow sorting the report by any field: Customer’s name, Operator’s name, date, check-in time, check-out time.

1. Show the log of all customers who visited the pool during the specified period of time. For each customer display the number of visits, the average time, and the total time spent in the pool.

Allow sorting the report by any field: number of visits, the average time, and the total time spent in the pool.

1. Display the attendance numbers grouped by hour or by week-day, or both given the specified period of time. Information of minimum load, maximum load, and the average load must be included.

## Non-functional Requirements

1. Any report must be generated within 2 seconds or less.
2. The reports must be properly formatted.
3. The width of the columns must be adjustable.

## Design Challenges

* the size of the customer’s database is unknown. The optimal solution depends on the size of the database.
* the test database for past visits must be generated somehow.
* the choice of the visualization instruments is limited in core Java.

## Pre- and Post-conditions

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| Pre-conditions | Post-conditions |
| Actor (user) must be logged-in | Actor has not reported a problem with reading the reports. The reports are legible. |
| Application has a connection to the customer’s database | Actor can navigate between different types of reports and other options of the Main Menu |
| Application can read and write logs (implies the need for persistent storage) |  |