**Software Design Specification**

1. **Introduction**

This section describes the design for the new car rental company API service (CRC)

**1.1 Goals and Objectives**

The main purpose of CRC is to help company manage the service which customers can reserve a car for a period of time.

The goals of CRC are:

* To minimize the time span of any inspection.
* To promote efficiency of daily business.
* To minimize the amount of paperwork required.
* To provide a searchable database of all data.

The goals of CRC API are:

* To provide the standard format calling of background services.
* To reduce the difference between mobile app and web client.
* Abide by the principle of OOP

**1.2 System Statement of Scope**

In fact, the company is too new to involve complex business, therefore, concurrent connection will not be an issue for implementation. In addition, have to consider after the company's business expansion of compatibility.

**1.3 Major Constraints**

Time

I only have about four days to finish all documentation, coding, test and deployment. A lot of ideas and functions cannot implement them due to time constraint. Only completed some basic functionalities.

1. **Data Design**

**2.1 database description**

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1. **Architectural and Component-level Design**

**3.1 program structure**

Using MVC pattern to build the whole project.

MVC pattern stands for Model-View-Controller. In this project, view layer is separated to front-end, mainly design the model and controller layers.

**3.2 Objects recognition and analysis**

The company daily service is to provide cars for customers. So, there are basic three objects. the core business objects, car, customer, order

**3.3 Technology selection**

* Programming language: java
* Framework: Spring Boot + JPA
* API spec framework: swagger
* Deployment environment: docker

1. **business logic design**

一些文字和图案

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