Test Plan Document

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Contents

Introduction

1.1 Revision History

First version of the ITPD document.

1.2 Purpose and Scope

This document aims to describe, specify and analyze the integration test strategy for *My Taxi Service*, in terms of which components/classes to integrate,the chosen typology of testing and a general schedule to do it, accordingly to what we enstablished in the previous assignments .

1.3 List of Definitions and Abbreviations

1.4 List of Reference Documents

- The project description.
- Our RASD document.
- Ou DD document.

Integration strategy

2.1 Entry criteria

Due to start an integration test two constraints must be satisfied: the major classes must be covered by ,at least , a 60 percent of unit test, while for the others a 30 percent is sufficient.

2.2 Elements to be integrated

In our case element is synonym of class; now we're going to show the classes that need integration test in order to be sure that our application will work correctly.

- Ridesmanager : it needs to be integrated with:
  - Ride, Sharedride : in order to store information about the actived rides
  - Taxiqueue : in order to take information of available taxis in case of taxi request.
  - Controller : in order to exchange information about user's(and also guest's) requests
- Controller : it needs to be integrated with:
  - User : in order to create an ad-hoc Controller and to retrieve information about users
  - Servernetworkinterface : in order to communicate with the corresponding client side
- Servernetworkinterface : it needs to be integrated with:
  - Clientmessage : in order to read client's messages
  - Servermessage : in order to send messages to the client
- Activity : it needs to be integrated with
  - Action : in order to provides the allowed actions
  - Userinterface : in order to provide the set of items this class needs to show

Action	: it needs to be integrated with the Clientnetworkinterface in order to send requests to the server
Userinterface	: it needs to be integrated with the Clientnetworkinterface in order to show the right Activity according to the server message
Clientnetworkinterface	: it needs to be integrated with:

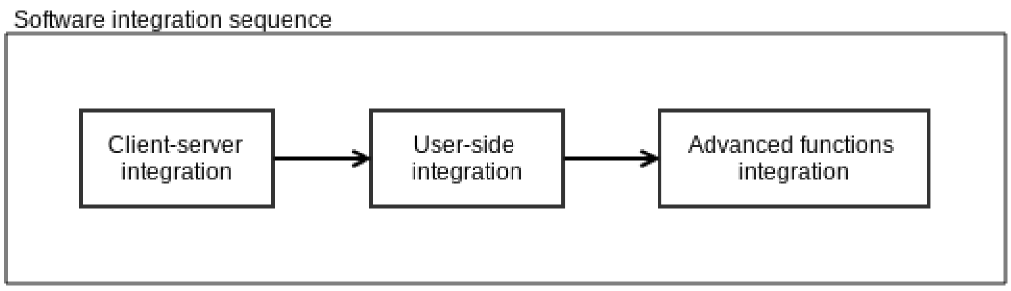
Clientmessage	: in order to send messages to the server
Servermessage	: in order to read server's messages

2.3 Integration testing strategy

In this section we will explain how we plan the integration test in order to build, as soon as possible, a running application with few working features; this will allow us to easly show our progress to the customer, and also , in case of delay, to launch a working application, also with missing requirements. In order to reach our goal we decide to apply a bottom-up method for integration test and top down method for unit test.

2.4 Sequence of component/Function integration

2.4.1 Software integration sequence



Software integration sequence
Client-server integration
User-side integration
Advanced functions integration

Figure 2.1: Software integration

2.4.2 Subsystem integration sequence

The classes are presented here in the ordered sequence in which they will be implemented, which is: 2.2 → 2.3 → 2.4 → 2.5 → 2.6

Note: the arrows here represent the ordering of the implementation, which may happen to partially match the logical structure of the class; however, those arrows do not aim to describe the inter-class relationships

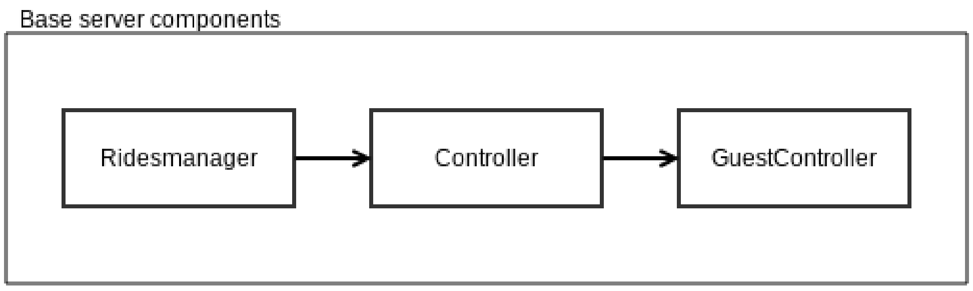


Figure 2.2: Base server components

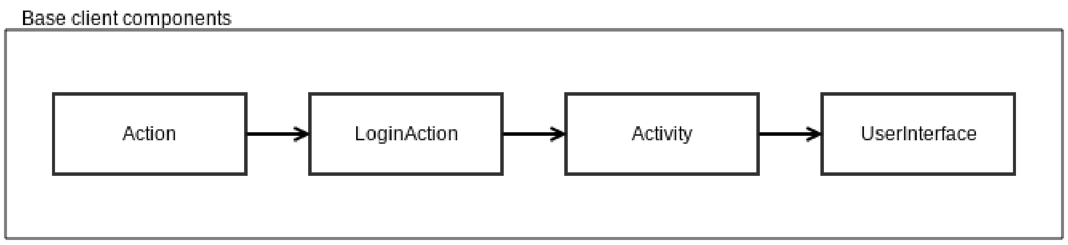


Figure 2.3: Base client components

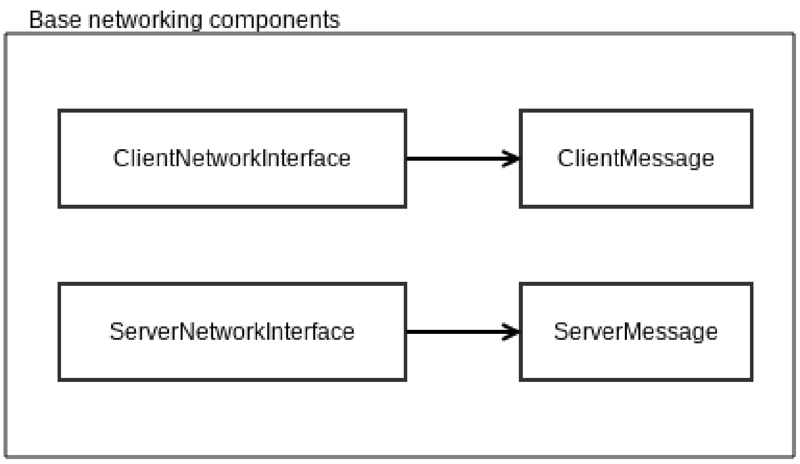


Figure 2.4: Base networking components

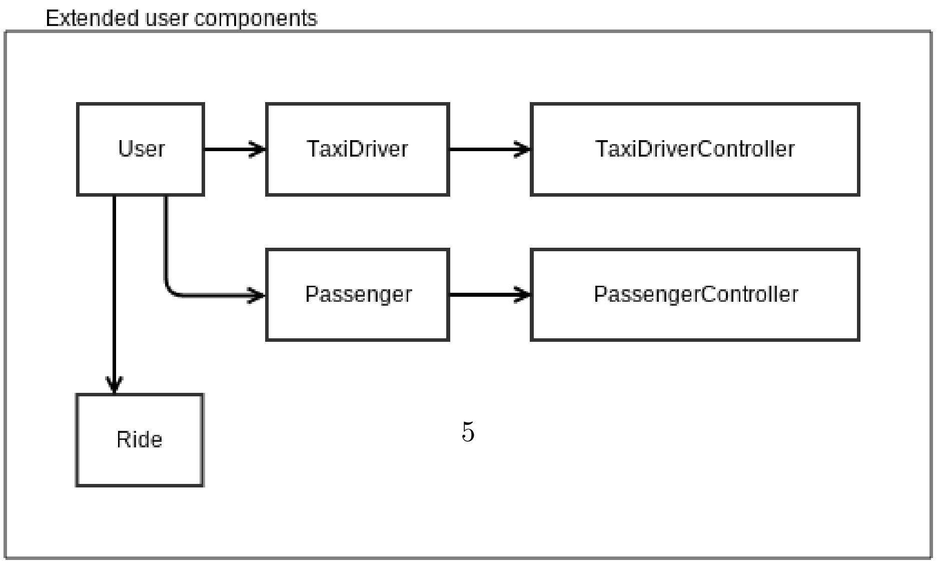


Figure 2.5: Extended client components

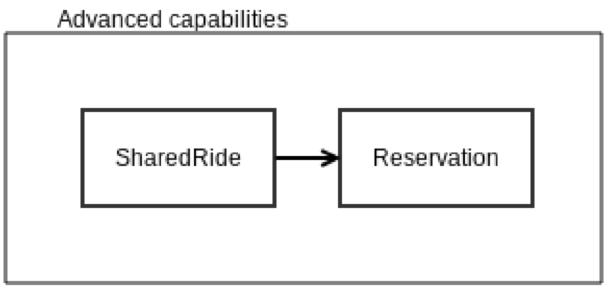


Figure 2.6: Advanced functions

Individual steps and Test description

3.1 Integration test case I-1

Test Case Identifier	I-1-T1
Test Item(s)	Ridesmanager → Controller
Input specification	Create the typical Ridesmanager input
Output specification	Check if the correct methods are called in the Controller
Environmental needs	Ridesmanager driver

3.2 Integration test case I-2

Test Case Identifier	I-2-T1
Test Item(s)	Controller → GuestController
Input specification	Create the typical Controller input
Output specification	Check if the correct methods are called in the GuestController
Environmental needs	I-1 succeeded

3.3 Integration test case I-3

Test Case Identifier	I-3-T1
Test Item(s)	Action → LoginAction
Input specification	??
Output specification	??
Environmental needs	??

3.4 Integration test case I-X4

Test Case Identifier	I-X4-T1
Test Item(s)	ClientNetworkInterface → ClientMessage
Input specification	Invoke various types of network methods
Output specification	Check that the correct ClientMessage(s) are generated
Environmental needs	ClientNetworkInterface driver

3.5 Integration test case I-X5

Test Case Identifier	I-X5-T1
Test Item(s)	ServerNetworkInterface $\rightarrow$ ServerMessage
Input specification	Invoke various types of network methods
Output specification	Check that the correct ServerMessage(s) are generated
Environmental needs	ServerNetworkInterface driver

3.6 Integration test case I-X6

Test Case Identifier	I-X6-T1
Test Item(s)	User $\rightarrow$ Ride
Input specification	Add a new Ride to an User
Output specification	Check that the Ride is correctly added
Environmental needs	User driver

3.7 Integration test case I-X7

Test Case Identifier	I-X7-T1
Test Item(s)	Taxidriver $\rightarrow$ TaxidriversController
Input specification	Add a new Taxidriver to a TaxidriversController
Output specification	Check that the Taxidriver is correctly added
Environmental needs	TaxidriversController driver

3.8 Integration test case I-X8

Test Case Identifier	I-X8-T1
Test Item(s)	Passenger $\rightarrow$ PassengersController
Input specification	Add a new Passenger to a PassengersController
Output specification	Check that the Passenger is correctly added
Environmental needs	PassengersController driver

Tools and testing equipment required

Program stubs and test data required