Table of Contents

1. Introduction 3

1.1 Description 3

1.2 Goals 3

1.3 Domain Properties / Assumptions 3

1.4 Glossary 3

1.5 Proposed System 3

1.6 Stakeholders 3

2. Actors 3

3. Requirements 3

3.1 Goals Requirements 3

3.2 Functional Requirements 3

3.3 Non Functional Requirements 3

4. Specifications 3

5. Scenarios 4

6. UML Models 4

6.1 Use Case Diagram 4

6.2 Use Case Description 4

6.3 Sequence Diagrams 4

6.4 StateChart Diagrams 4

6.5 Class Diagram 4

7. Alloy 5

7.1 Modeling 5

7.2 Alloy Analyzer 5

7.3 Worlds Generated 5

8. Used Tools 5

9. Hours of Work 5

# Introduction

## Description of the problem

Our object is to project a system to optimize the taxi service of a large city, simplifying the access of passengers to the service and guaranteeing a fair management of taxi queues. It will be composed of a web application and a mobile application allowing users to request a taxi and informing them about the code of the incoming taxi and the waiting time. The system is constantly updated about the availability of the taxi drivers and call confirmations in order to maintain the fairness of queues.

The city is divided in zones (2 km² each) and there is a one-to-one correspondence between them and the queues.

-

-

STAKEHOLDER – RAFFAELA MIRANDOLA

-

## Goals

When the system is online, it has to guarantee all these functionalities:

* registration of a new user (passenger or taxi driver)
* creation of a taxi ride request
* confirm/reject a taxi ride request
* update taxi driver availability
* management of taxi queues
* scalability to additional services
* reservation of a taxi ride

## Domain Properties

This is a list of some domain properties and assumptions that we think has to be true:

* passengers can create taxi ride requests only after registration
* taxi drivers can inform the system about their availability only after registration
* when a taxi driver accepts a ride request, it is automatically excluded from the queue by the system

## Assumptions

This is a list of assumptions that we think has to be true:

## Proposed System

The mobile application used by passengers and taxi drivers is the same but its user interface changes after the login screen since the functionalities needed from them are different.

## Glossary

# Actors

# Requirements

## Goals Requirements

## Functional Requirements

## Non Functional Requirements

# Specifications

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table Name** | **Field Name** | **Data Type** | **Allow Nulls** | **Field Description** |
| BinderRequest | SellingRep | Varchar(50) |  | Get this field from BankPlan.ProposalRepCode  But use actual name (Roy Pinnell) |
| BinderRequest | SigningRep | Varchar(50) |  | Get this field from Bankplan.SigningRepCode  But use actual name (Roy Pinnell) |
| ProcessBP | ParentProcessID | Int | Yes | This will tie a subprocess to a process |
| BinderRequest | ProjectedWireDate | Date |  | The earliest Policy.ProposalWireDate of all included policies in the scenario. |
|  |  |  |  |  |
|  |  |  |  |  |

*For each field change (such as data types, required/not required, or renaming), please complete a row of the following table. (Insert additional rows as needed.)*

|  |  |  |
| --- | --- | --- |
| **Table Name** | **Field Name** | **What to change?** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

# Scenarios

# UML Models

This section provides user interface design descriptions that directly support construction of user interface screens.

## Use Case Diagram

Detail the common behavior that all screens will have. Common look and feel details such as menus, popup menus, toolbars, status bar, title bars, drag and drop mouse behavior should be described here.

## Use Case Description

Illustrate all major user interface screens and describe the behavior and state changes that the user will experience.

## Sequence Diagrams

## StateChart Diagrams

## Class Diagram

|  |  |  |
| --- | --- | --- |
| **Label Name** | **Note** | **Source** |
| NB Specialist |  | SELECT UWUserID FROM PolicyGroup GROUP BY UWUserID ORDER BY PolicyGroup.UWUserID; |
| Inserted By | Change to be a dropdown containing the NB Cordinators (approve group).  Add to the BinderRequest table a new filed ‘NBCordinator’ | SELECT InsertBy FROM PolicyGroup GROUP BY InsertBy ORDER BY InsertBy;  Query active directory to return the NBCordinator group. |
| Binder Type |  | SELECT CodeToText.Code, CodeToText.Text FROM CodeToText WHERE (((CodeToText.TableDotField)='PolicyGroup.Type')) ORDER BY CodeToText.SortOrder; |
| Status | This will not be used. | SELECT PolicyStatus.Status, PolicyStatus.PolicyGroupApply FROM PolicyStatus WHERE (((PolicyStatus.PolicyGroupApply)<>0)) ORDER BY PolicyStatus.Status; |
| Insurance Carrier |  | SELECT InsCo.InsCo, InsCo.CompanyName FROM InsCo ORDER BY InsCo.InsCo, InsCo.CompanyName; |
| Main Rep | Will this be the ***selling*** or ***signing*** rep? | SELECT Rep.RepCode, [LName]+", " & [FName] AS Name, Rep.RepCode AS AcctgRepCode FROM Rep ORDER BY [LName]+", " & [FName]; |
|  |  |  |

# Alloy

## Modeling

## Alloy Analyzer

## Worlds Generated

# Used Tools

# Hours of Work