MILITARY UNIVERSITY OF TECHNOLOGY

Business Modelling In UML

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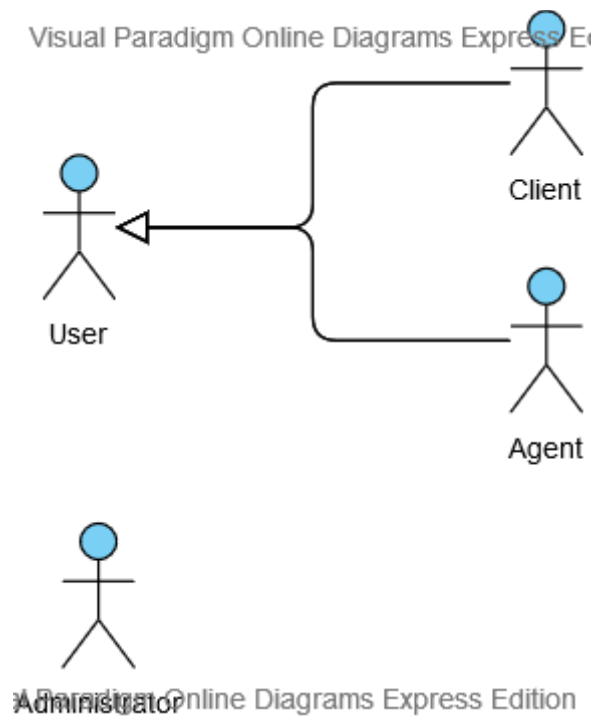

Group: I8E2S4

1. Topic of analytical and design documentation

This is the analytical and design documentation for travel agency. It contains UML diagrams which represent the functionality and structure of IT system.
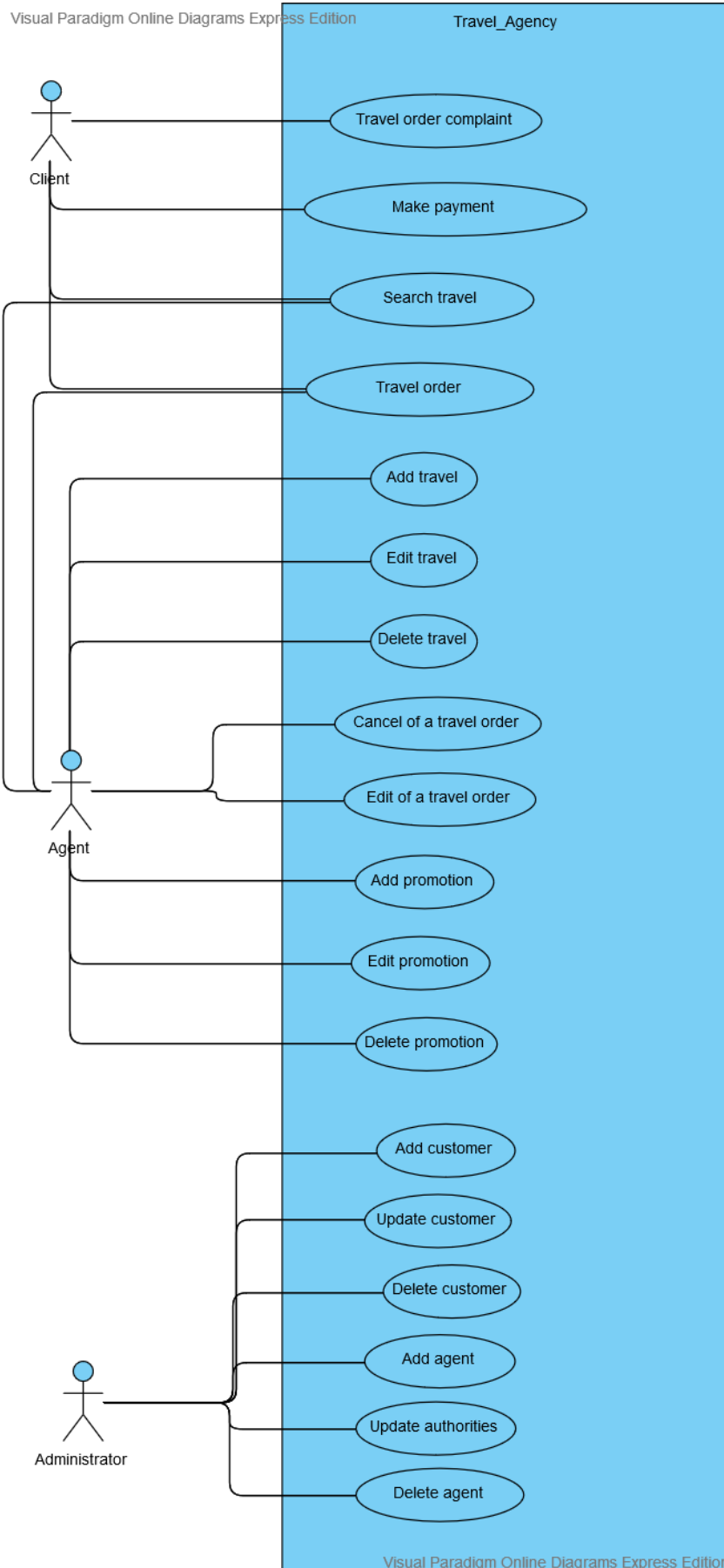
2. Requirements document

2.1. Roles in system

There are two types of users. Client is a person served by travel agency by ordering travels. Agent is a person on the system side and he is responsible for editing travel information. Administrator is a special kind of user which is able to add and delete useres of other types. More detailed functionality is represented on use case diagrams below.
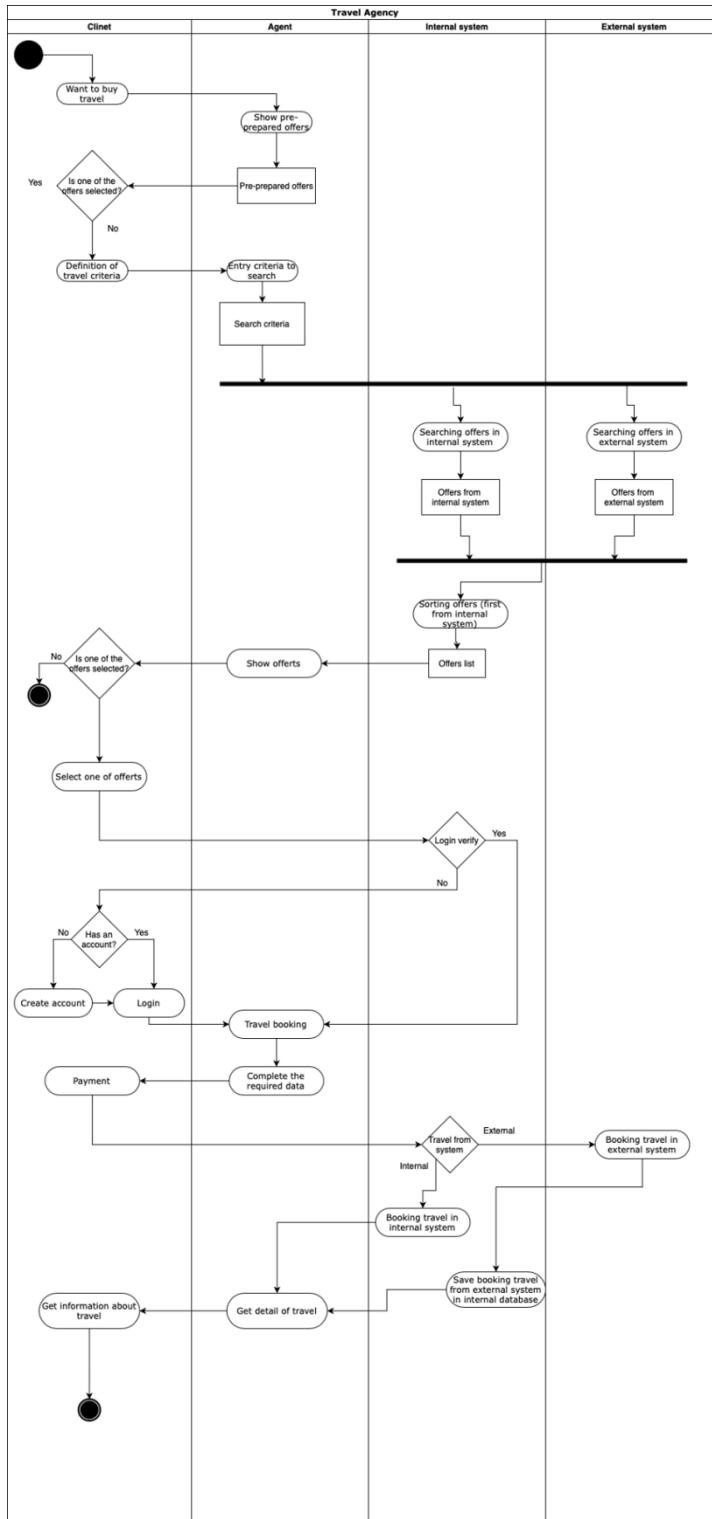
2.2. Use case diagram

Travel_Agency

Client

- Travel order complaint
- Make payment
- Search travel
- Travel order
- Add travel
- Edit travel
- Delete travel
- Cancel of a travel order
- Edit of a travel order

Agent

- Add promotion
- Edit promotion
- Delete promotion
- Add customer
- Update customer
- Delete customer
- Add agent
- Update authorities

Administrator

- Delete agent

2.3. Specification

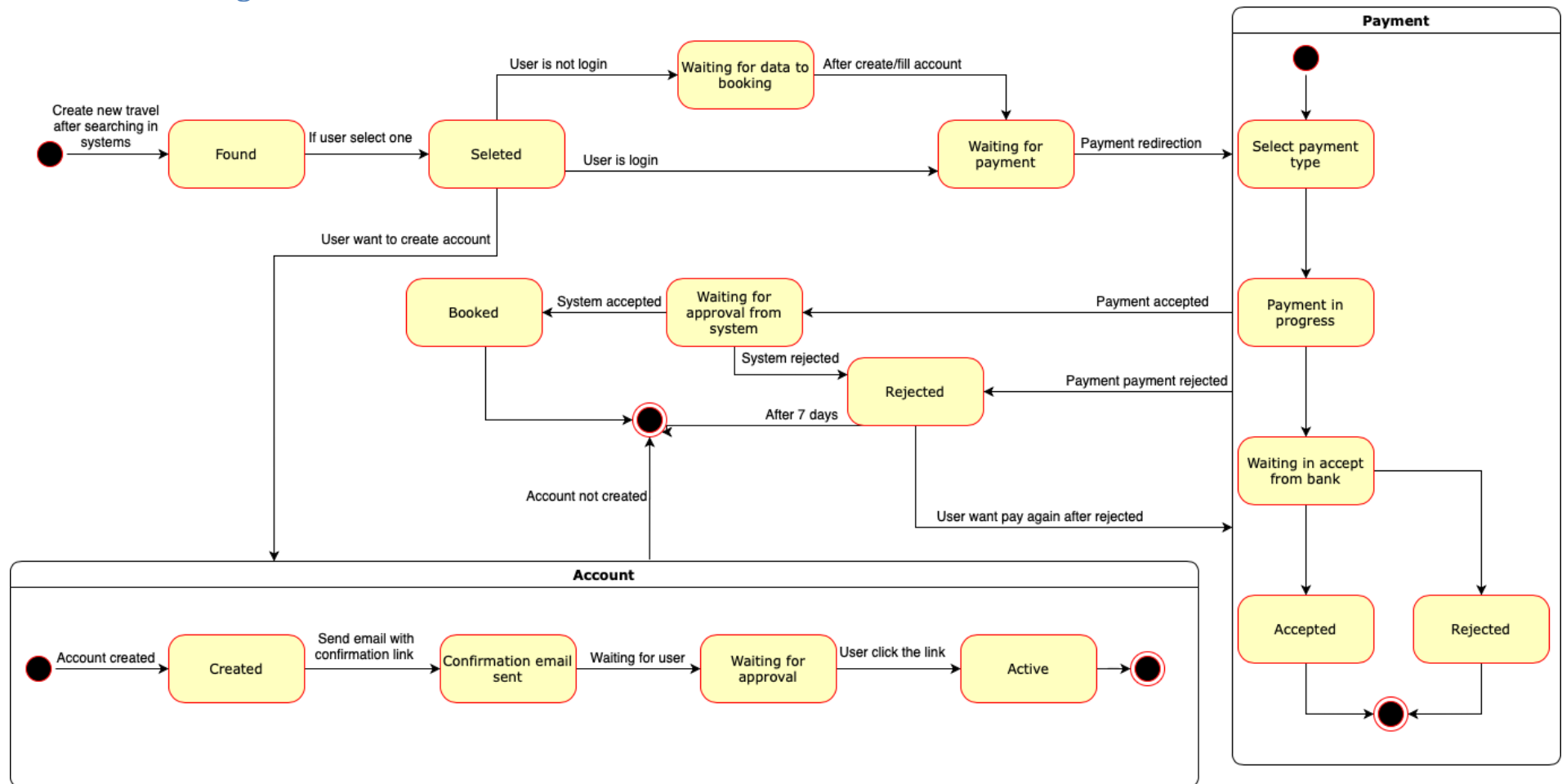| Id requirement	Title	Description	Kind
REQ001	Business purpose Travel_Agency	The business purpose of the Travel_Agency application is to enable the user to search and book travel.	business
REQ010	User management	Travel_Agency allows the administrator to manage users.	Functional
REQ010.REQ011	Add agent	Travel_Agency allows the administrator to add an employee and grant authorities	Functional
REQ010.REQ012	Update authorities	Travel_Agency allows the administrator to update authorities	Functional
REQ010.REQ013	Delete agent	Travel_Agency allows the administrator to delete an employee.	Functional
REQ010.REQ014	Add client	Travel_Agency allows the administrator to add a client	Functional
REQ010.REQ015	Update client	Travel_Agency allows the administrator to update profil a client	Functional
REQ010.REQ016	Delete client	Travel_Agency allows the administrator to delete a client	Functional
REQ020	Travel management	Travel_Agency allows the user to manage travel.	Functional
REQ020.REQ021	Add travel	Travel_Agency allows the agent to add a travel.	Functional
REQ020.REQ022	Edit travel	Travel_Agency allows the agent to edit a travel.	Functional
REQ020.REQ023	Delete travel	Travel_Agency allows the agent to delete a travel.	Functional
REQ020	Travel search	Travel_Agency allows the user to search for travel by selection criteria	Functional
REQ020.REQ021	Matched offers	Travel_Agency provides the user with tailored travel offers	Functional
REQ025	Display trip information	Travel_Agency provides the user with travel information	Functional
REQ025.REQ026	View detailed trip information	Travel_Agency provides the user with detailed travel information	Functional
REQ025.REQ027	Display photo gallery of the place of stay	Travel_Agency provides the user with a photo gallery of the place of stay	Functional
REQ025.REQ028	Display weather information for travel location	Travel_Agency provides the user with a weather information for travel location	Functional
REQ025.REQ029	Display the travel location map	Travel_Agency provides the user with the travel location map	Functional
REQ030	Travel booking management	Travel Agency allows the user to manage travel	Functional
REQ030.REQ031	Travel order	Travel Agency allows the user to order travel	Functional
REQ030.REQ032	Cancel of a travel order	Travel Agency allows the agent to cancel a travel order	Functional
REQ030.REQ033	Edit of a travel order	Travel_Agency allows the agent to edit a travel order	Functional
REQ030.REQ034	Travel order complaint	Travel_Agency allows the agent to make a complaint about a travel they have ordered.	Functional
REQ035	Payment Management	Travel_Agency allows the user to manage Payment	Functional
REQ035.REQ036	Payment by bank transfer	Travel_Agency allows the client to make a bank transfer payment for the ordered travel	Functional
REQ035.REQ037	Payment in the Travel Agency	Travel_Agency allows the user to make payments at the travel agency for the ordered travel	Functional
REQ035.REQ038	Reimbursement of part of the travel cost	Travel_Agency allows the user a Reimbursement of part of the costs in case of cancellation of the booking for the ordered travel	Functional

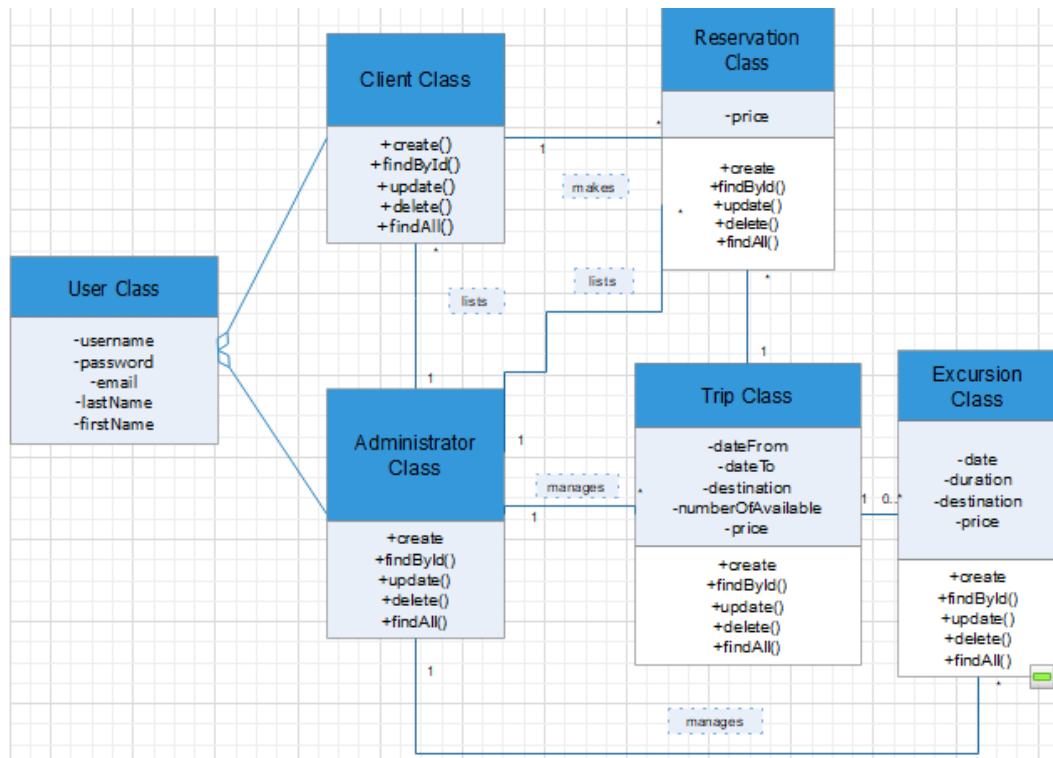| REQ040	Promotion management	Travel Agency allows the agent to manage promiotion	Functional
REQ040.REQ041	Add promotion	Travel_agency allows the agent to add promotions.	Functional
REQ040.REQ042	Edit promotion	Travel_agency allows the agent to edit promotions.	Functional
REQ040.REQ043	Delete promotion	Travel_agency allows the agent to delete promotions.	Functional
REQ050	Travel_Agency availability	Travel Agency ensures the highest possible system availability	
REQ050.REQ051	Travel_Agency availability for the user	Travel Agency ensures the user availability of at least 98% per year	Non-functional
REQ050.REQ052	Travel_Agency availability for the administrator	Travel Agency ensures the administrator availability of at least 99% per year	Non-functional
REQ050.REQ053	Travel_Agency availability for the user via the website	The travel agency provides users with 24/7 access via the website, except for a technical break of several hours at night	Non-functional
REQ055	Travel_Agency security	Travel_Agency stores user data are in accordance with the Personal Data Protection Act.	Non-functional
REQ060	Travel_Agency reliability	Travel_Agency will ensure the highest possible system reliability	Non-functional
REQ060.REQ061	System restart	Maximum system restart time 2h	Non-functional
REQ060.REQ062	Performing operations	Performing all operations on a transaction basis	Non-functional
REQ060.REQ063	Backups	Automatic backups every night at low system load	Non-functional
REQ060.REQ064	Restore a damaged system	The ability to restore a damaged system from a backup of the last 5 hours	Non-functional
REQ070	Utility	Travel_Agency will ensure the highest possible usability of the system	Non-functional
REQ070.REQ071	Intuitive operation	Travel_Agency provides agents with a two-hour service course enabling efficient use of the basic functions of the system.	Non-functional
REQ070.REQ072	Help	An extensive system of help, warnings and hints for each user	Non-functional
REQ070.REQ073	User interface	User interface available in languages supported by the travel agency	Non-functional
REQ075	Flexibility	Travel_Agency will provide the highest possible system flexibility	Non-functional
REQ075.REQ076	System architecture	The system architecture enables easy adding of new functionalities	Non-functional
REQ075.REQ077	Cooperation with other services	The system can be adapted to cooperate with other services	Non-functional
REQ075.REQ078	Web client	The ability to use the system from a web browser	Non-functional
REQ075.REQ079	Scalability of the system	Scalability of the system in terms of increasing the database size and processing power	Non-functional
REQ080	Performance	Travel_Agency will provide the highest possible system performance	Non-functional
REQ080.REQ081	Charges by employees	The system is to be able to withstand a temporary load corresponding to the work of 500 employees	Non-functional
REQ080.REQ082	Charges by client	The system is to be resistant to temporary load corresponding to the work of 1500 clients	Non-functional
REQ080.REQ083	Disk space	The disk space for the database should have a capacity of 1TB	Non-functional
REQ080.REQ084	Storage of information	Storage of information about transactions carried out for 4 years	Non-functional
REQ085	Error messages	Travel Agencyreturn error messages that occurred during communication with the system	Non-functional
REQ090	User rights	Travel_Agency distinguishes account permissions	Non-functional

3. Analytical documentation

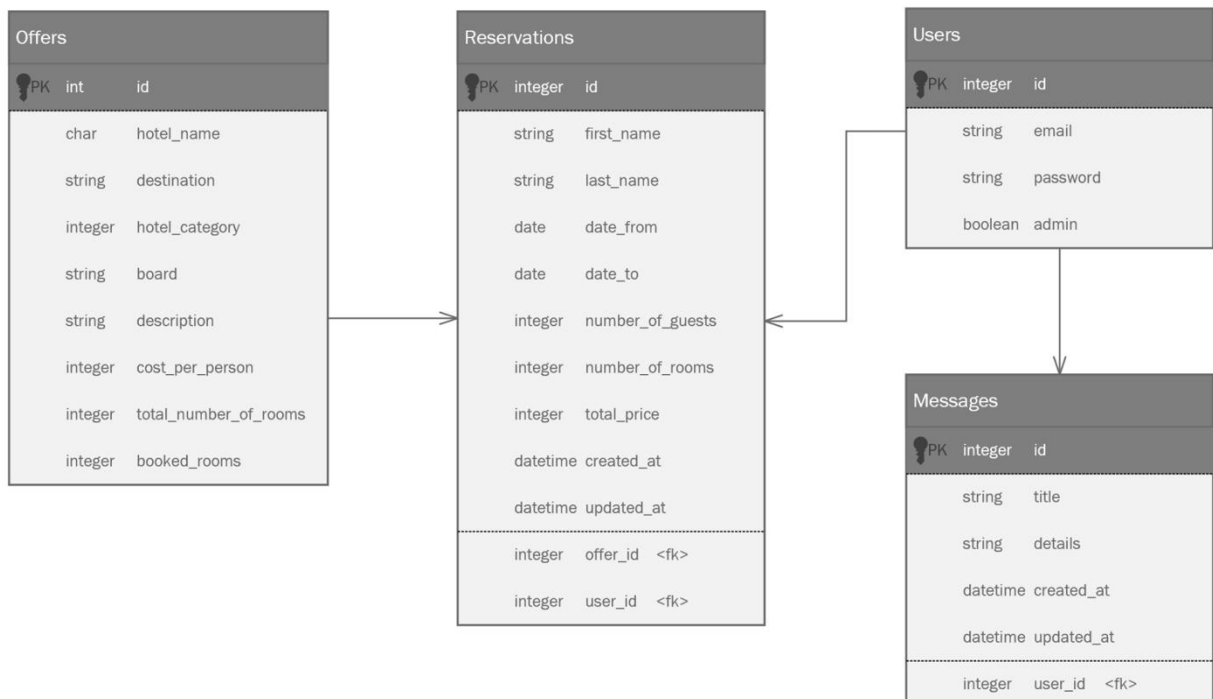## 3.1. Activity diagram

3.2.   State diagram

3.3. Class diagram

4. Design documentation

4.1. Object diagram

4.2. Sequence diagram