

Tennis-Net

Requirements Specification



Introduction

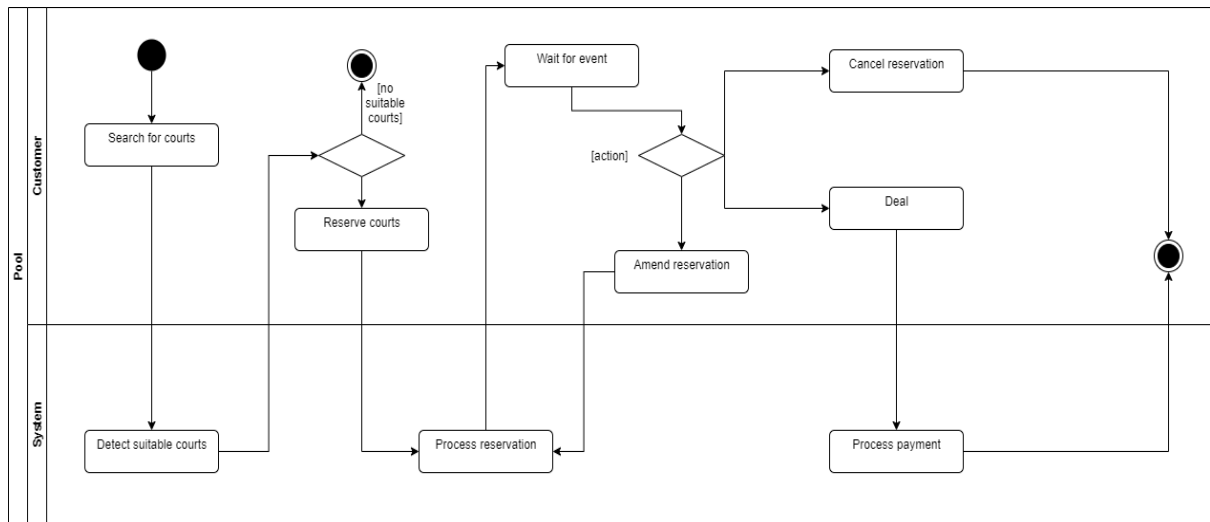
Requirements gathering is one of the most important steps in the development process because the future implementation of the project is going to be the reflection of requirements. If the requirements were composed incorrectly then it may lead to a huge wastage of resources while developing the system.

This document will provide you with crucial information about the Tennis-Net project.

Tennis-Net is a system which represents a network of companies and associations that want to allow people rent their tennis courts. Any client, even when he/she is on vacation, can search for tennis courts close to where they are at the moment. For each tennis court, information including photographs, location, description of the type of court, and the final price (direct and indirect costs included) is provided. The number of tennis courts that a company can offer on the platform may vary, so the company can remove or add courts based on their requirements (for example, if there is a championship on a certain week or simply because some type of maintenance is being done in the courts).

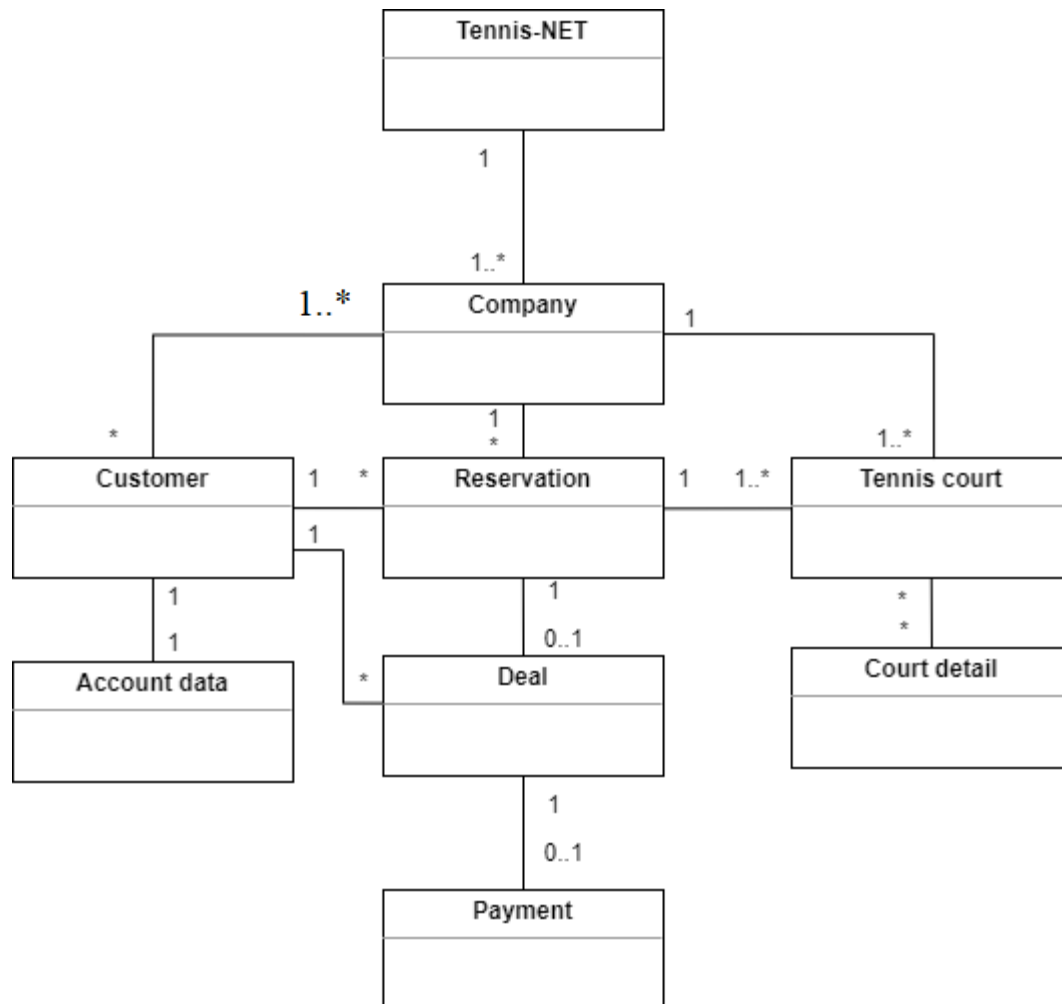
Business process for Tennis-Net

Let's refer to the Business process model. I've decided to depict exactly the part which is connected to reservations making (no sign in or sign up) because the main purpose of the system is to offer users make reservations of the courts.



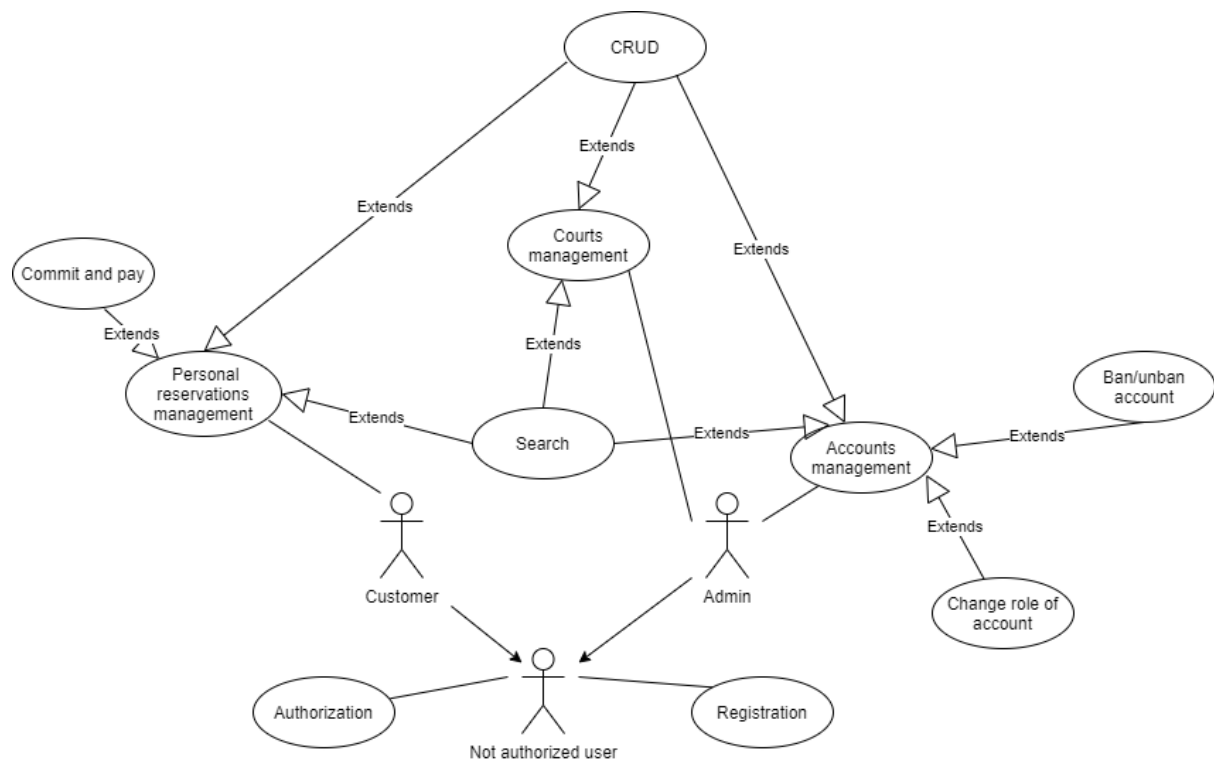
Business concept model

As far as I understood, business concept model is applied to comprehend the list of entities the system deals with and to figure out the interconnections between them in order to make it easy to assume the way the entities are going to work and change the state of the system.



Use Case diagram

Use case diagram is necessary in order to explain all the possible ways the user can interact with the system. It clarifies the responsibilities for different roles of users.



Use Cases

Here the use cases are uncovered. Such approach is useful to show all the possible behaviors the system can perform while processing this or that user's action.

Name	CRUD
Initiator	Customer & Admin
Goal	To create, show, update or delete information
Pre-Conditions	An authorized user is on the Tennis-Net platform, the user opened a definite web-page
Main Scenario	<p>Create:</p> <ul style="list-style-type: none">- user inputs data into html-forms- user presses "submit" button- user is redirected to the "success" page <p>Read:</p> <ul style="list-style-type: none">- user presses "show" button- all the information being presented in tables is shown to the user <p>Update:</p> <ul style="list-style-type: none">- user chooses an exact subject in the table by pressing its "modify" button- a window with html-form for a new data is opened- user fills in html-forms with a new data- user presses "modify" button- user is redirected to the "success" page <p>Delete:</p> <ul style="list-style-type: none">- user presses "delete" button in the row of a subject- subject gets deleted
Alternative Flow	<p>Create:</p> <ul style="list-style-type: none">- user inputs data into html-forms- user presses "submit" button- user is redirected to the "fail" page whenever an error occurred or some creational constraints are met <p>Read:</p> <ul style="list-style-type: none">- user presses "show" button- user gets message "No content" if there is nothing to show <p>Update:</p> <ul style="list-style-type: none">- user chooses an exact subject in the table by pressing its "modify" button- a window with html-form for a new data is opened- user fills in html-forms with a new data

	<ul style="list-style-type: none"> - user presses “modify” button - user is redirected to the “fail” page if an error occurred Delete: <ul style="list-style-type: none"> - user presses “delete” button in the row of a subject - subject is not deleted due to an error
Business Rules	1. The System shows appropriate errors when it is needed

Name	Search
Initiator	Customer & Admin
Goal	Find data filtered by some order
Pre-Conditions	An authorized user is on the Tennis-Net platform, on searching web-page
Main Scenario	<ol style="list-style-type: none"> 1. an authorized user applies searching filters 2. the system shows filtered data
Alternative Flow	<ol style="list-style-type: none"> 1. an authorized user applies searching filters 2. user gets message “No content” if there is nothing to show
Business Rules	1. The user can search subjects ordered by different categories dependable on the type of subject

Name	Commit and pay
Initiator	Customer
Goal	To pay for reserved tennis courts
Pre-Conditions	An authorized user is on the Tennis-Net platform, he reserved desirable tennis courts, he is on the page of the reserved courts
Main Scenario	<ol style="list-style-type: none"> 1. user asks for paying for the courts 2. user is offered payments methods 3. user chooses payment method 4. user makes a payment 5. user is redirected to the “successful payment” page 6. user is sent the bill to the via email
Alternative Flow	<ol style="list-style-type: none"> 1. user asks for paying for the courts 2. user is offered payments methods

	<ol style="list-style-type: none"> 3. user chooses payment method 4. user makes a payment 5. user is redirected to the “unsuccessful payment” page due to internal server error
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Name	Register
Initiator	Unauthorized user
Goal	To register on the Tennis-Net platform to be able to reserve courts online
Pre-Conditions	An unauthorized user is on the Tennis-Net platform, on the registration page
Main Scenario	<ol style="list-style-type: none"> 1. user fills out the form, providing necessary information 2. user submits the form 3. system checks the correctness of the entered data 4. system registers the user 5. system notifies the user of successful registration and redirects him to the log in page
Alternative Flow	<p>The user didn't fill in the required fields or filled in incorrectly.</p> <ol style="list-style-type: none"> 1. The system notifies the user about failed submitting. 2. return to step 1. <p>The System failed to register the User</p> <ol style="list-style-type: none"> 1. The System notifies the User about unsuccessful attempt 2. Return to step 1
Business Rules	<ol style="list-style-type: none"> 1. The required fields are specially marked. 2. When it's necessary to fill in the field in a special format, the user is notified about it.

Name	Authorization
Initiator	Unauthorized user
Goal	To log in to the Tennis-Net platform to be able to reserve courts online

Pre-Conditions	The user is on the Tennis-Net platform, on the log in page. The user has already registered on the platform
Main Scenario	<ol style="list-style-type: none"> 1. system provides the User with the log's in form 2. user fills out the form 3. system checks the correctness of the entered data 4. system logs in the User to his account
Alternative Flow	<p>The user didn't fill in the required fields or filled in incorrectly.</p> <ol style="list-style-type: none"> 1. The system notifies the user about failed submitting. 2. return to step 1. <p>The System didn't find account with such data</p> <ol style="list-style-type: none"> 1. The System shows error message 2. Return to step 1
Business Rules	<ol style="list-style-type: none"> 1. The system shows appropriate errors, that provide the user with information about what kind of mistake he made

I haven't decided yet whether Ban/unban of an account and changing account's role are going to be independent use-cases or not (maybe they are a part of CRUD operations).

Conclusion

In conclusion, all of these diagrams are useful to comprehend the inner processes happening in the system and affecting its condition, so we shouldn't arrogantly neglect them because in the nearest future it can produce many problems while developing the system.