DP1 2020-2021
Document of Requirements
and System Analysis

Tuvi's Casino Project

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Version history.

Date	Version	General description.	Sprint
26/10/2020	V1	• Document creation.	1
3/11/2020	V1	• General description. • Type of users.	1
4/11/2020	V1	• User histories update. • Uml creation.	1
5/11/2020	V1	• User histories update. • User histories Mock-Ups. • Uml update.	1
6/11/2020	V1	• User histories (Positives and Negatives cases). • Update histories Mock-Ups. • Uml update.	1
7/11/2020	V1	• Planification update.	1

Project general description.

Tuvi's Casino is a gambling games center which has among their facilities services such as a restaurant, where visitors can have whatever meal they desire in the moment, some show scenarios, where artists perform their shows on a daily basis, and a lot of gaming tables and slot machines

Due to all this, the management of this casino without a proper website is a hard task in day-to-day.
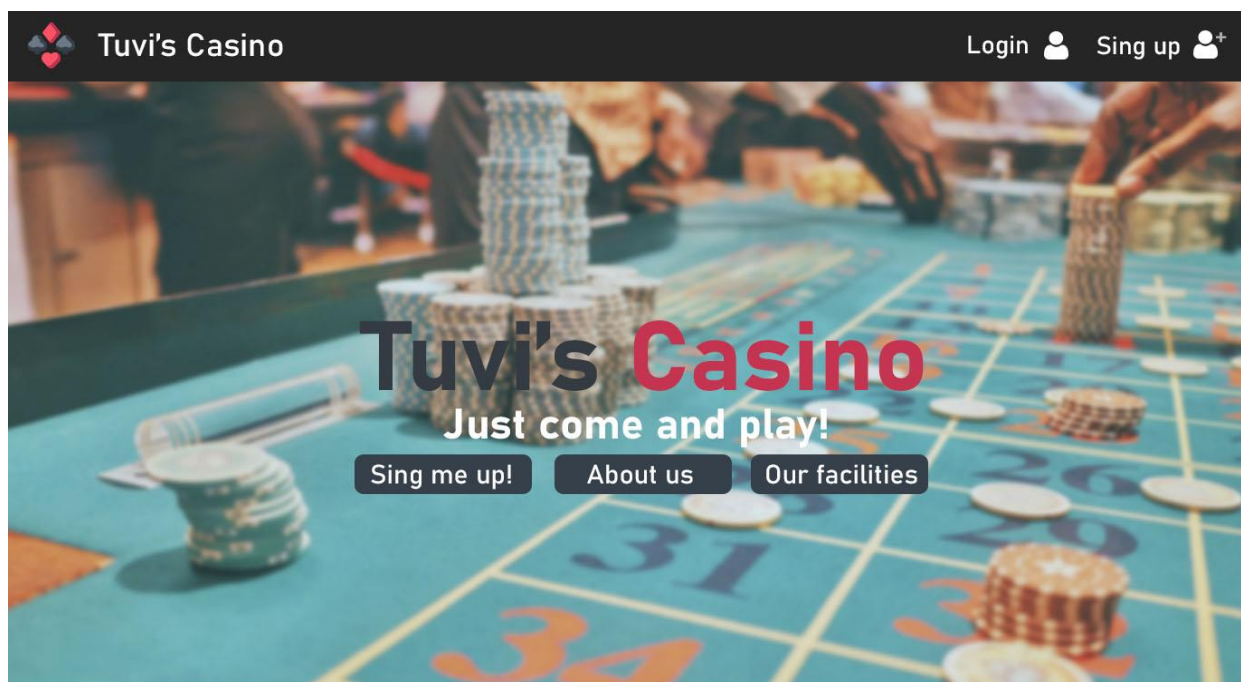
The goal of our Project is to develop a website with which the admins of Tuvi's Casino will be able to successfully manage their business.

This website is going to contain features such login for each different type of user (admin, worker, and client). Depending on the kind of user that is logged on the website, it will able him to manage different things.

If the user who is logged is a client, the website will show information about his income record, the games he can play and the shows that are going to take place in the casino. Also, the client will be able to reserve table in the Casino's restaurant using this website.

If the user who is logged is an employee, the website will able him to check their shift and where is he going to work, depending on the employee type (this types are described in detail in this document).

In closing, if the user who is logged on the website is an admin, the website will show all the information about the casino, and the admin will be able to manage features such as the employees' shifts or the events distribution and the addition of tables or slot machines.

Types of users/roles

Administrator: *Person in charge of managing the workers and their shifts. Each administrator supervises one specific part of the casino, those being game tables management, restaurant's menus and security management and all the workers related to each of them.*
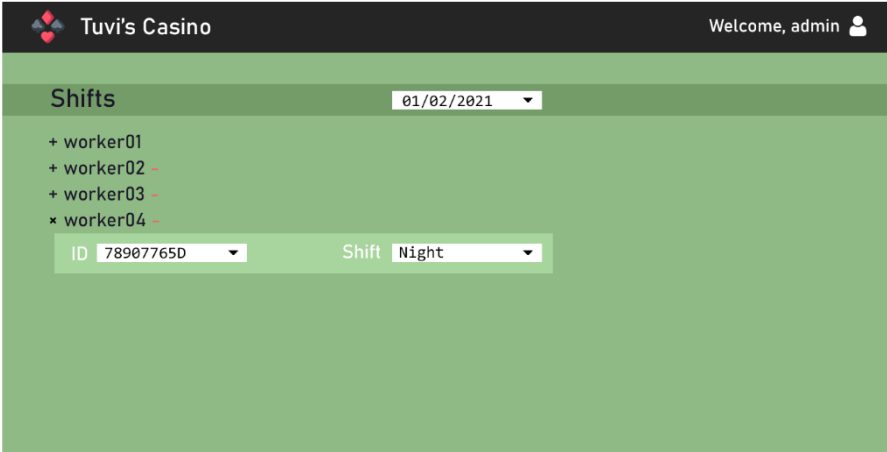
Workers: *Basic personnel of the casino, distributed along its different sectors (catering, games, security…). They can look up their shifts and some other information specific to their work (For example cooks can check for the week menus).*

Client: *Person that benefits from the use of the casino's services, they can look up general information such as the available games, the opening schedule, or the catering offer.*

User Stories

H1-Assign shift to a worker
As an administrator I wanpt the system to modify the shifts of the workers under my command so I can change the different routines in case of an unexpected event that forces me to modify the schedule.

Positive cases:

H1+E1-Problems with the schedule
Given that we are logged in as admin1 and that we have two workers named Antonio and Maria who are suffering from stomach ache, when, he selects the workers tab, it shows all workers, once this is done, he selects Maria and Antonio (one at a time) and changes their schedules, after doing so, then the illness won't affect their monthly work time anymore.

Negative cases:

H1-E1-Increasing the working hours over the limit

Given that we are logged in as admin1 and that we want to assign Antonio with more shifts this week, when, he selects the workers tab, it shows all workers, once this is done, he selects Antonio and changes his schedule, so he has to work more than normal, after doing so, then the system shows that the shift amount limit is exceeded so it does not allow the change.

H2-Check-up schedule

As a worker I want the system to let me check-up the schedule corresponding to the current week so I can which days I have to work and at what time I must be there.

Positive cases:

H2+E1-Paco does not know when he must go to work

Given that I am a worker and that I am identified as such, when, he selects the workers tab, it shows all workers, once this is done, he selects "My schedule" and after selecting the corresponding day of the week, then his schedule for that day will be displayed so he knows when he must go to work.
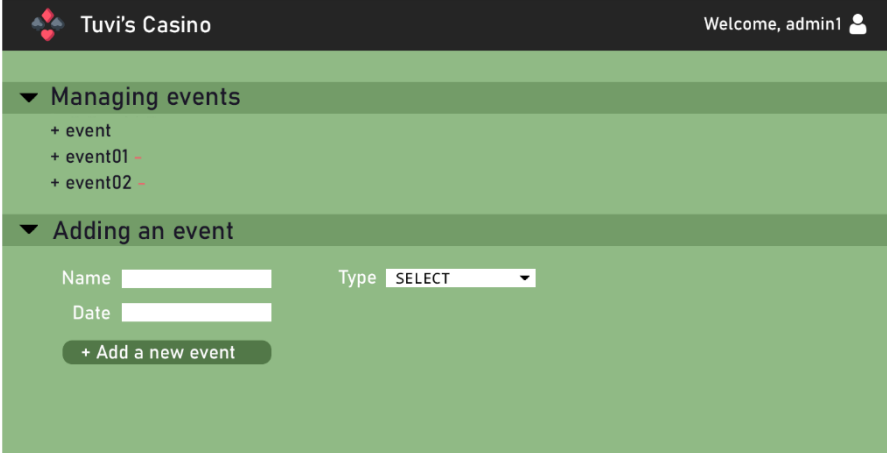
Negative cases:

H2-E1-Paco is not logged in

Given that I am a worker and that I am not logged in, when he tries to select the workers tab, he will not find it because he has to log in as a worker first.

H3- Register new event

*As an administrator **I want the system to** let me add new events in our casino's stages **so I can** schedule different shows that attract people's attention to our casino.*

Positive cases:

H3+E1-Wallapop wizard comes to play a show

Given *that I am logged in as admin1 **and** I want to offer a new event so customers are encouraged to come**, when,** he selects the events tab a new window with the stages is displayed**, once this is done,** he selects the stage he thinks is the most suitable for the show and all the shows that will take place in that stage appear **after** filling all the data about the new "**Pop and disappear**" show and clicking the "**Add a new event**" button**, then** it will be announced in the casino's web for all the clients to see and added to that stage list of events.*
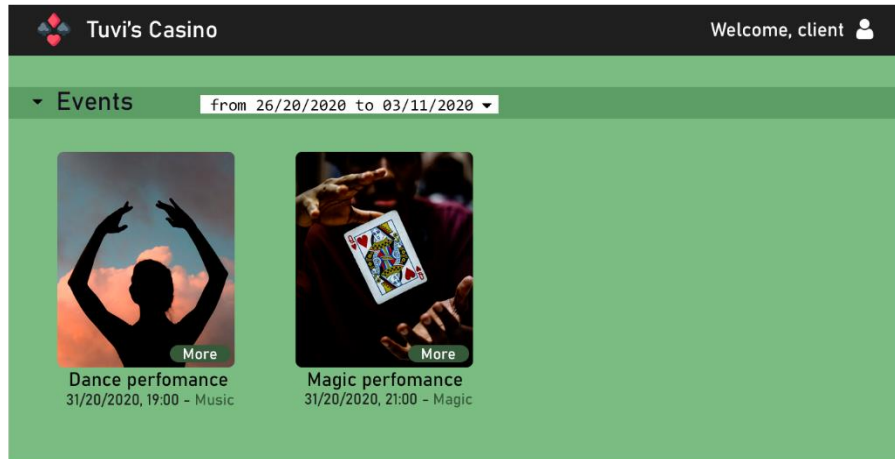
Negative cases:

H3-E1-Forgetting about the type

Given *that I am logged in as admin1 **and** I want to offer a new event so customers are encouraged to come**, when,** he selects the events tab a new window with the stages is displayed**, once this is done,** he chooses one stage and starts filling the data about the new show coming to the casino **after** clicking the "**Add a new event**" button**, then** the system will show that no type for the show was selected and he only then will he realize he had forgotten about that field.*

H4- Check-up events

As a client I want the system to show me the information about the events that are coming to the casino that day so I can know the participants in those events and when and where are they going to take place.

Positive cases:

H4+E1-Paco wants to go to a show this week

Given that the client rarely goes to the casino and that he wants to see an innovative show, when, he goes into the casino's web and the home page is displayed, once this is done, he selects the "Events" tab, after selecting that he wants to see what events are being performed this week, then all the events will be available for him to view.
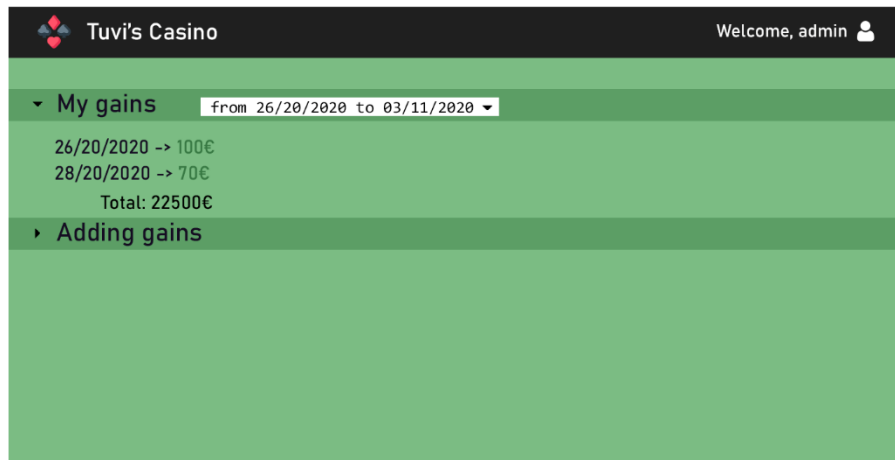
Negative cases:

H4-E1-Paco does not select the right tab

Given that the client rarely goes to the casino and that he wants to see an innovative show, when, he goes into the casino's web and the home page is displayed, once this is done, he is not sure about the tab he has to click, after selecting the "Game Tables", then all tables are displayed, but no events, this will be displayed when he realizes he has to click in "Events".

H5- Check-up earnings

*As an usual casino customer that has over 200 games played at blackjack **I want the system to** show me the earnings that I have been obtaining during the week **so I can** control the amount of money I need to exchange for chips, in order to not exceed my budget.*

Positive cases:

H5+E1-Paco wants to know what days of the week he was lucky.

Given *that the client has gone to the casino several times this week **and** that he does not know exactly which days of the week he has collected more from his matches**, when,** he logs in with his profile**, once this is done,** he selects "**My profile**", **after** going into the "**my gains**" section**, then** Paco will be able to see how much has he earned in the days he has gone to the casino.*
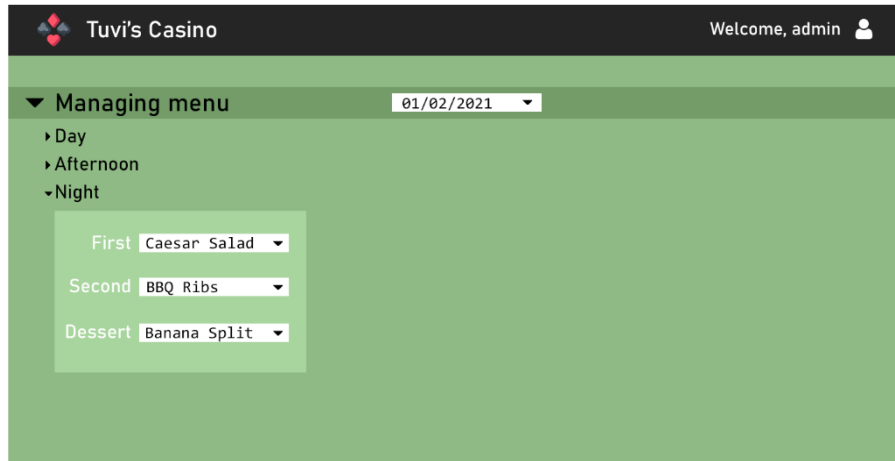
Negative cases:

H5-E1-Paco has not come to the casino

Given *that Paco has not come to the casino in quite some time **and** that wants to know how much has he earned when he has come**, when,** he logs in with his profile**, once this is done,** he selects "**My profile**", **after** going into the "**my gains**" section**, then** Paco will find that there is no information about his earnings because he did not earn anything in the last week.*

H6- Menu modification

As an administrator I want the system to let me modify the different dishes in a menu so I can make changes in case we do not have the necessary ingredients or to increase the menu's variety.

Positive cases:

H6+E1-Change in the afternoon menu

Given that we are logged in as chef1 and want to change the first dish in the afternoon menu, when, he accesses the menu edition tab the current menus are displayed, once this is done, he selects the first dish field and selects "Caesar salad" from one of the available dishes, after selecting the dish, then the menu will appear correctly modified to anyone who searches for it.
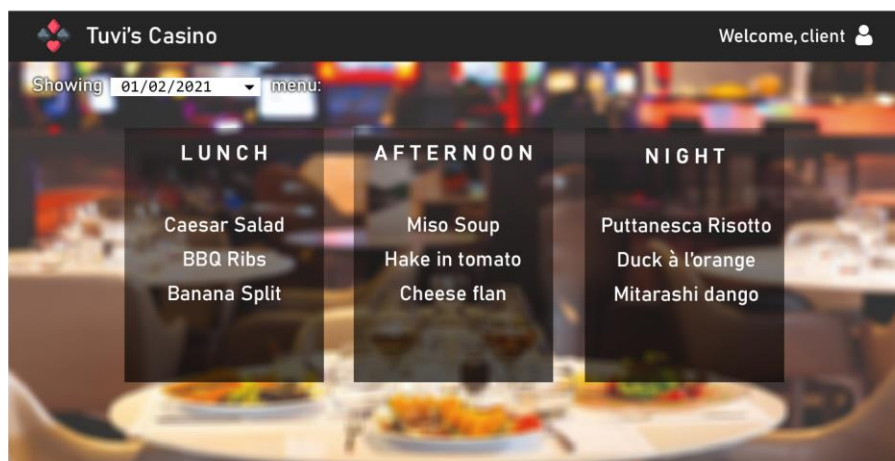
Negative cases:

H6-E1-The Salisbury steak is not yet registered

Given that we are logged in as chef1 and want to change the second dish in the night menu for the "Salisbury steak", when, he accesses the menu edition tab the current menus are displayed, once this is done, he selects the second dish field, but he is not able to find "Salisbury steak" from the available dishes, after realizing he must add the new dish first, then he adds it so it can be introduced in the menu.

H7- Check-up Menu

As a client **I want the system to** show me detailed information about the menus that the casino is offering a particular day at its different times **so I can** know the different dishes that are going to be served.

Positive cases:

H7+E1-Check-up the menu of a certain date

Given that I am a customer enjoying the casino **and** want to know what the casino's catering is offering right now**, when,** we access the casino's app "**Tuvi's Casino**"**, once this is done,** we select the "**Restaurant**" tab, **after** selecting today's date "**03-11-2020**"**, then** it will be shown all the dishes available right now.

Negative cases:

H7-E1-Mistake of dates

Given that I am a customer enjoying the casino *and* want to know what the casino's catering is offering tomorrow morning*, when,* we access the casino's app *"Tuvi's Casino", once this is done,* we select the *"Restaurant"* tab, *after* that he has to select tomorrows date but forgets about it and leaves it as the current day*, then* the system will show todays menu, not tomorrows one.

H8- Register new table

As an administrator *I want the system to* let me add new tables to it *so I can* increase the number of available tables and game and thus increase the earnings of my business.

Positive cases:

H8+E1-Casino has brought 3 new tables

Given that we are logged in as admin1 *and* that the casino has bought 3 new tables*, when* he clicks in *"Game Tables"* and then in *"Adding a table", once this is done,* he selects the game *"Blackjack"* from the game selection and writes an ID (he does this for each table), *after* clicking *"Add a new table", then* the new tables are showed among the other ones.
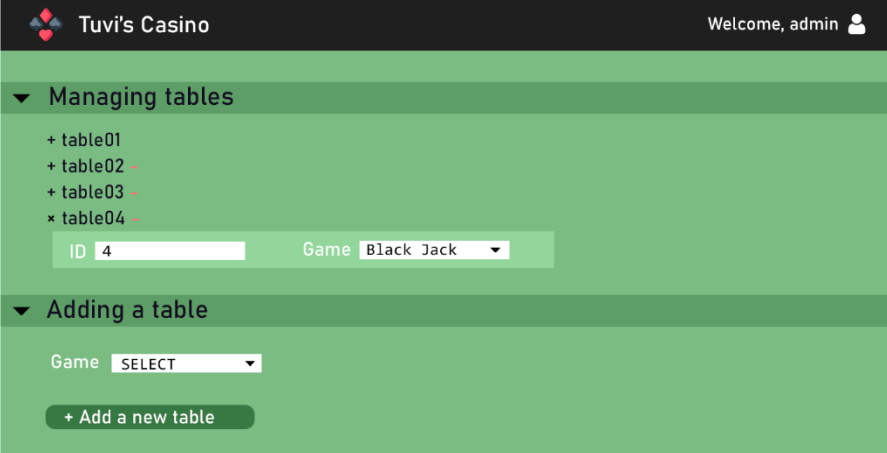
Negative cases:

H8-E1-Selecting an ID that exists

Given that we are logged in as admin1 *and* that the casino has bought 5 new tables*, when* he clicks in *"Game Tables"* and then in *"Adding a table", once this is done,* he selects the game *"Blackjack"* from the game selection and writes an ID (he does this for each table), *after* clicking *"Add a new table", then* an error window is shown explaining how a table could not be added because the written ID is already in use by another table.

H9-Modify a table's game

As an administrator *I want the system to* let me modify the current game in a table or delete that table *so I can* select the games that are more popular at any given moment so more people would want to come.

Positive cases:

H9+E1-Changing poker to blackjack in table 6

Given that we are logged in as admin1 *and* that Blackjack is getting more popular than Poker, so we can increase the tables available for it*, when* he clicks in "*Modify*" next to table six, which current game is poker, now it shows the information about this table*, once this is done,* he selects the game "*Blackjack*" from the game selection, *after* clicking "*Update*"*, then* table six is showed among the other tables with current game being now "*Blackjack*".
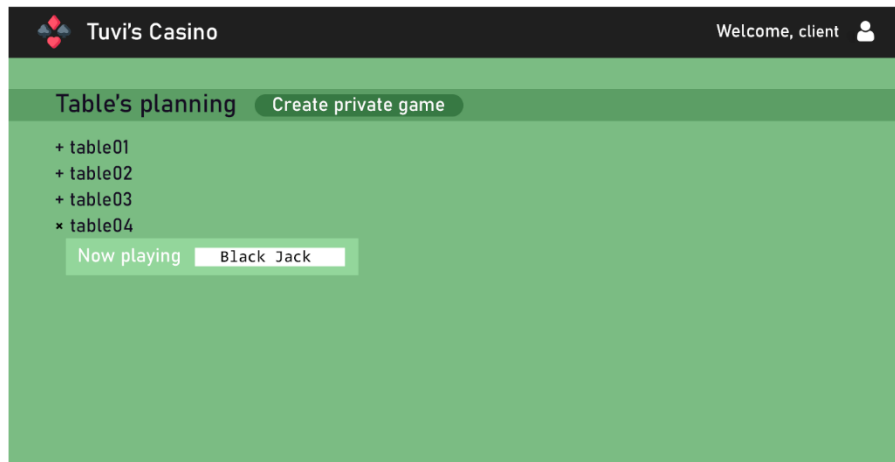
Negative cases:

H9-E1-No game was selected when modifying a table

Given that we are logged in as admin1 *and* that Blackjack is getting more popular than Poker, he wants to increase the tables available for it*, when* he clicks in "*Modify*" next to table six, which current game is poker, now it shows the information about this table*, once this is done,* he forgets to select the game "*Blackjack*" from the game selection, *after* clicking "*Update*"*, then* he reloads the page and no changes were made.

H10-Check-up table's planning

As a client *I want the system to* let me know what game is being played in a table right now *so I can* know what tables have the game I wish to join.
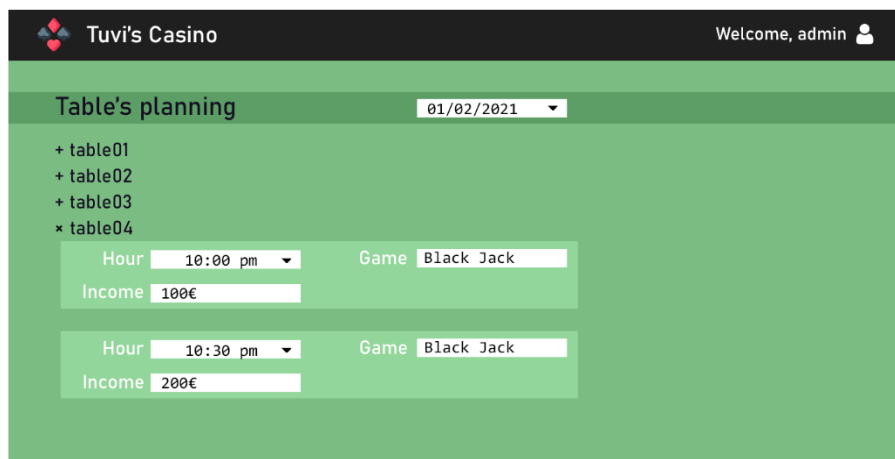

Positive cases:

H10+E1-Paco wants to check available games

Given that Paco is a customer *and* that he wants to know what games are being played right now*, when* he clicks in "**Game Tables**" new information is displayed*, once this is done,* he can look up at every game available and the tables in which they are being played.
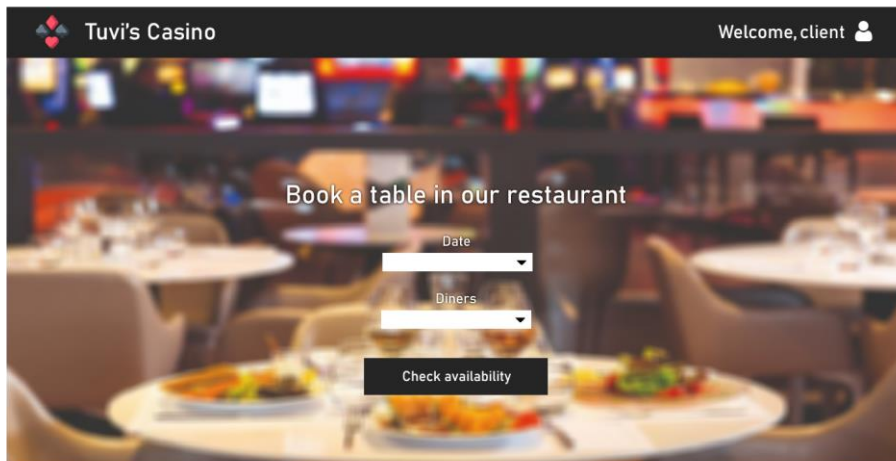
H10+E2-admin1 wants to check tables' incomes

Given that we are logged in as admin1 *and* that he wants to know the income of every table*, when* he clicks in the title new information is displayed*, once this is done,* he can look up at every table's income (this is calculated with the gains of every game played at this table).

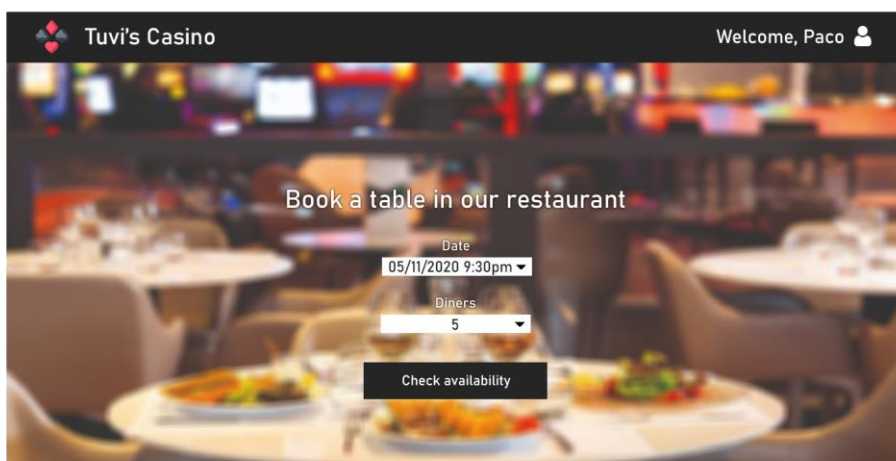*We have not found a negative case for this user story.*

H11-Reserve table

*As a client **I want the system to** provide the option to reserve a table and meal for myself **so I can** know for sure I'll be able to eat at the casino without worrying about how many tables are taken.*
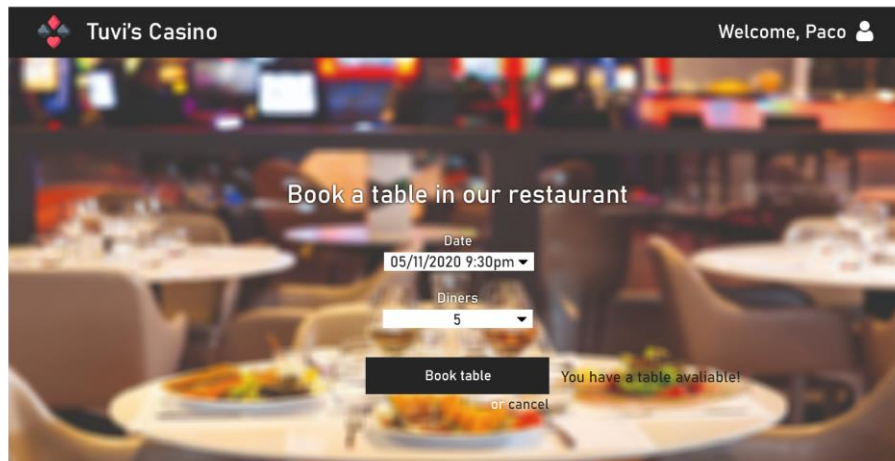

Positive cases:

H11+E1- Paco wants to have a table reserved for tomorrow dinner

***Given** that Paco is logged in as a customer **and** that he wants to reserve a table tomorrow at half past nine**, when** he clicks in "**Restaurant**" and then he chooses the "**Reserve restaurant table**" option (available only for registered clients) a window with some options is shown**, once this is done,** he selects the people number (5) and selects tomorrow at half past nine as reservation time, depending on the reservation time a specific menu will be shown (day, afternoon or night), **after** clicking the finishing button "**Reserve table**"**, then** the system shows that the reservation was made successfully and shows all the information about the reservation (table, time and menu).*

Negative cases:

H11-E1-The system does not allow the reservation because the table is already taken

Given that Paco is logged in as a customer *and* that he wants to reserve a table tomorrow at half past nine*, when* he clicks in "**Restaurant**" and then he chooses the "**Reserve restaurant table**" option (available only for registered clients) a window with some options is shown*, once this is done,* he selects the people number (6) and selects tomorrow at half past nine as reservation time, depending on the reservation time a specific menu will be shown (day, afternoon or night)*, after* clicking the finishing button "**Reserve table**"*, then* the system shows an error message explaining that the reservation was not possible due to the date and time being full.

H12-Register new dish

As an administrator *I want the system to* let me add a new dish *so I can* improve the variety that we are offering and take advantage of our cooks' abilities.

Positive cases:

H12+E1-Adding Duck à l'orange
Given that we are logged in as chef1 *and* want to add duck à l'orange as a new dish because a new French chef has been admitted in*, when* he clicks the "**Add dish**" a new window appears showing the empty fields referring to a dish's information*, once this is done,* he writes "**duck à l'orange**" in the name field, "**Second course**" in the curse option and "**afternoon**" in the shift one, *after* clicking "**finish", then** the new dish is displayed among the other dishes.

Negative cases:

H12-E1-The dish already exists
Given that we are logged in as chef2 *and* that he has learned to prepare duck a l'orange and I want to add it as an available dish so I can prepare it on Tuesday*, when* he clicks the "**Add dish**" a new window appears showing the empty fields referring to a dish's information*, once this is done,* he writes "**duck à l'orange**" in the name field, "**Second course**" in the curse option and "**afternoon**" in the shift one, *after* clicking "**finish", then** the system will point out the dish is already registered.

H13- Modify a dish
As an administrator *I want the system to* let me modify information about an available dish or delete a dish *so I can* control the type of food and variety that we are serving at our catering.

Positive cases:

H13+E1-Changing spaghetti carbonara to bolognese
Given *that we are logged in as chef1* ***and*** *that we want to change the way our spaghettis are made**, when*** *he clicks the* *"**Modify**" button next to "**spaghetti carbonara**" dish and a new window appears showing the current information of it**, once this is done,*** *he changes the name field from* *"**spaghetti carbonara**" to "**spaghetti bolognese**", **after*** *clicking "**update**", **then*** *the new name is displayed among the other dishes.*
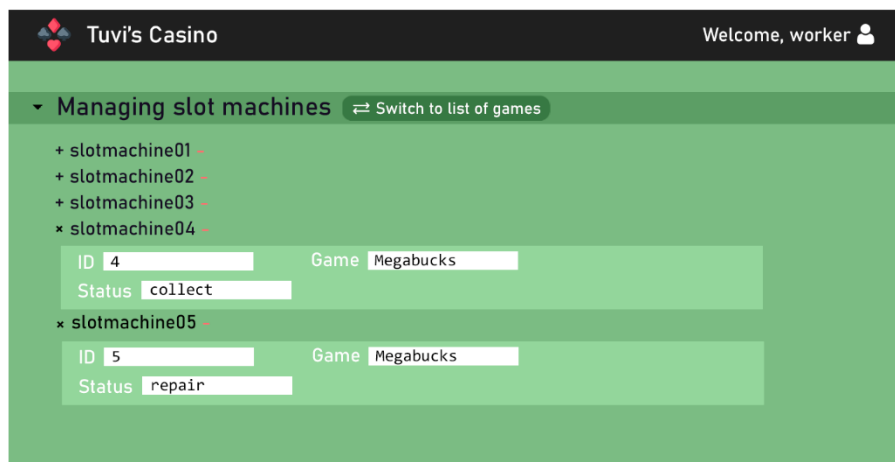
Negative cases:

H13-E1-The tuna-filled pie already exists
Given *that we are logged in as chef1* ***and*** *that he wants to change a dish**, when*** *he clicks the* *"**Modify**" button next to "**Vegan pie**" dish and a new window appears showing the current information of it**, once this is done,*** *he changes the name field from* *"**Vegan pie**" to "**Tuna-filled pie**", **after*** *clicking "**update**", **then*** *it shows an error because the tuna-filled pie already exists.*

H14-View maintenance job
As *a maintenance worker* ***I want the system to*** *show what slot machines need repairing or collecting* ***so I can*** *prepare which ones need some kind of repairing and which ones need to be collected.*

Positive cases:

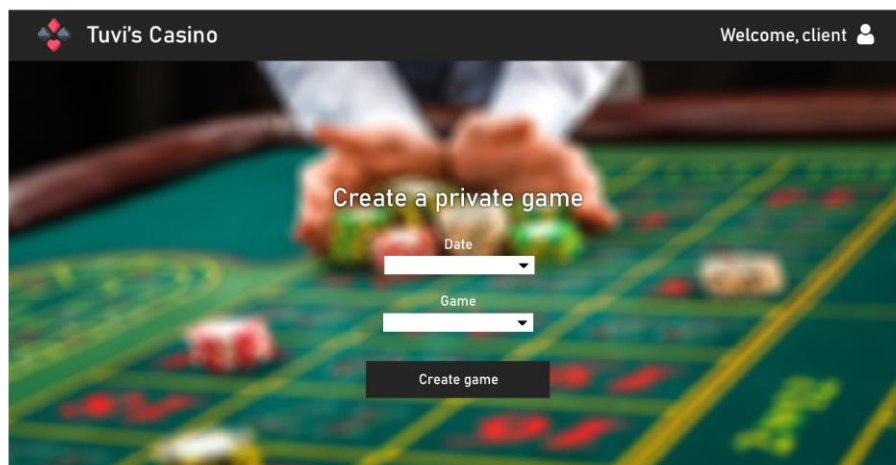### H14+E1-Slot machine 4 is broken
Given *that we are logged in as maintenanceWorker1* ***and*** *that the slot machine 4 is broken**, when*** *he clicks in* *"**Slots maintenance**" a new window is displayed showing a list of slots**, once this is done,*** *he selects the slot 4 , **after*** *seeing it needs maintenance**, then*** *he picks up his tools and go to work*

H14+E2-MaintenanceWorker1 finds there are no jobs left

Given that we are logged in as maintenanceWorker1 *and* that he does not know if one machine needs some service*, when* he clicks in *"Slots maintenance"* a new window is displayed showing a list of slots*, once this is done,* he goes reviewing all the slots but find that there is no necessary repairing/collecting from any of them.

H15-Set up a private game

As a client *I want the system to* let me set up my own private game *so I can* play only with the people I want without being disturbed by other players.

Positive cases:

H15+E1-Paco setting a private game for tomorrow

Given that Paco is logged in as a customer *and* that he doesn't have any game table's reserved for tomorrow*, when* he clicks in *"Game Tables"* and then he chooses *"set up private game"* (option that appears because he is registered) and a new window with some fields is shown*, once this is done,* he selects "*Poker*" from the available games and chooses to play tomorrow at 12 o'clock in the time field, *after* clicking the finishing button *"Reserve game", then* the system shows that the reservation was made successfully and show the information about this reservation.

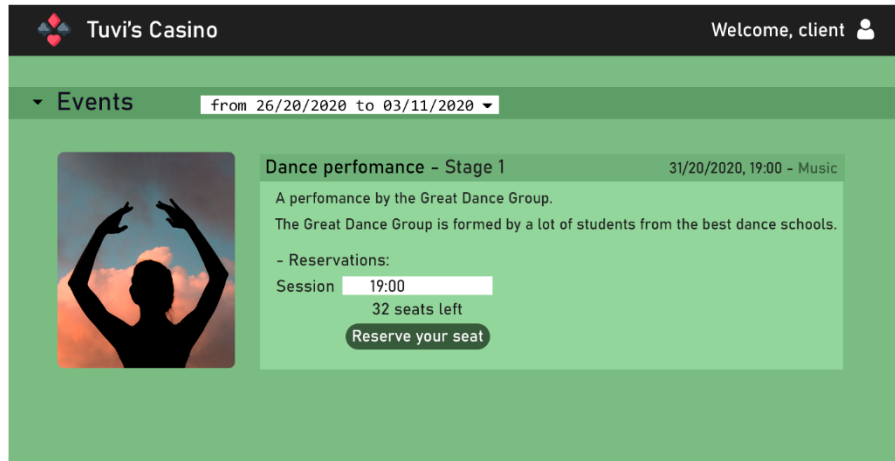**Negative cases:**

H15-E1-Paco wants to play cinquillo

Given that Paco is logged in as a customer *and* that he doesn't have any game table's reserved for tomorrow*, when* he clicks in *"Game Tables"* and then he chooses *"set up private game"* and a new window with some fields is shown*, once this is done,* opens the list of games to select cinquillo, but sadly, this game is not available.

H16-Reservation of seats for a show

As a client *I want the system to* let me have a reservation of a seat for a show *so I can* be sure that I will be able to assist the event.

Positive cases:

H16+E1- Paco wants to assist to a Malikian show

Given that Paco is logged in as a customer *and* that he wants to reserve a seat to see her favourite artist, Ara Malikian*, when* he clicks in "*Shows*" and then he chooses "*Malikian Magical Night Show*" the information about the show is displayed*, once this is done,* the option "*Reserve Seat*" appears because Paco is registered, he clicks in it and the available times appear, he chooses the 8 o'clock session , *after* clicking the finishing button "*Reserve seat*", *then* the system shows that the reservation was made successfully and show the information about this reservation.
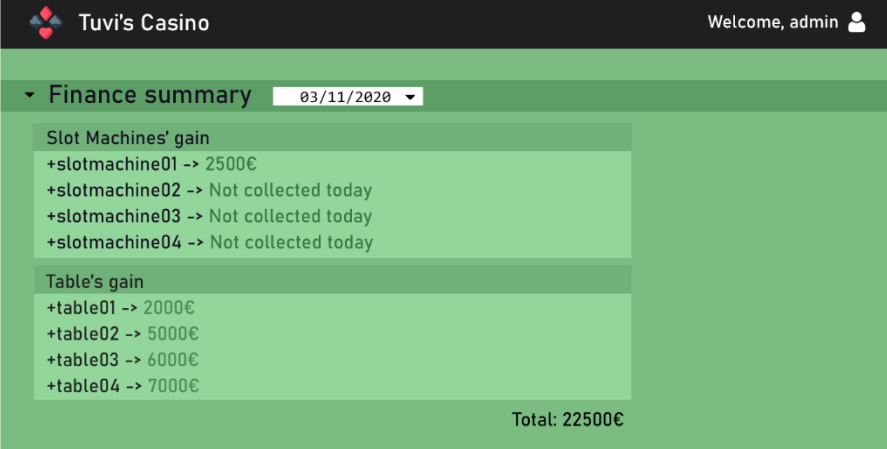
Negative cases:

H16-E1-Paco tries to go to a full show

Given that Paco is logged in as a customer *and* that he wants to reserve a seat to see "*Dancing with the stars*"*, when* he clicks in "*Shows*" and then he chooses "*Dancing with the stars*" the information about the show is displayed*, once this is done,* the option "*Reserve Seat*" appears, he changes the time of the show, but there is no seat available for the time he chose, so*, after* clicking the finishing button "*Reserve seat*", *then* a message will appear explaining that there is no available seat.

H17- Show total income

As an admin *I want the system to* show me financial information about games and slot machines *so I can* manage the casino accounts and finance according to the income.

Positive cases:

H17+E1-Admin1 wants to know the income of the casino

Given that admin1 is an administrator *and* that he does not know the income from all the casino's services*, when* he clicks in "**Finance**" a new window appears*, once this is done,* the system lists the incomes from every game and every slot and shows other data related to finances.
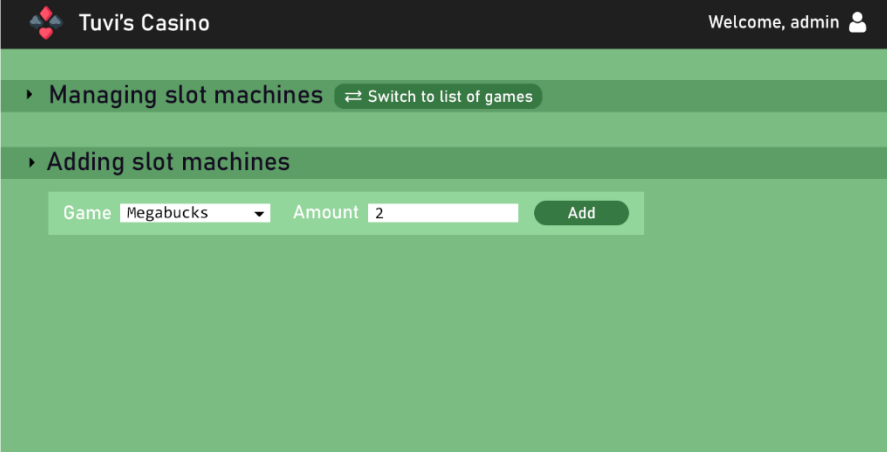
H17+E2-Admin1 to review old gain records

Given that admin1 is an administrator *and* that he does not remember the income of the casino a month ago*, when* he clicks in "**Finance**" a new window appears*, once this is done,* then he chooses a date from a month ago and now is able to check all the data from that day.

We have not found a negative case for this user story.

H18- Register new slot machine

As an admin *I want the system to* let me introduce new slot machines into the system *so I can* buy new slot machines and incorporate them to the casino and also include them in the system to manage their gain and status.

Positive cases:

H18+E1- admin1 buys 10 new slot machines

Given admin is an administrator *and* that the casino has bought 10 new slot machines, *when* he clicks in "*Slots maintenance*" all the slot machines are displayed (without showing the current status)*, once this is done,* he chooses the "*Register new(s) slot machine(s)*" option, a form will appear with an option to select how many slots he wants to add and the name of the game they have, when all data is typed in, he clicks "*Finish*"*, then* the system shows all the slots machines again showing also their game's name and their income.

Negative cases:

H18-E1- admin1 forgets the number

Given admin is an administrator *and* that the casino has bought 5 new slot machines, *when* he clicks in "*Slots maintenance*" all the slot machines are displayed*, once this is done,* he chooses the "*Register new(s) slot machine(s)*" option, a form will appear with an option to select how many slots he wants to add and the name of the game they have, he types the name of the game and he clicks "*Finish*"*, then* the system informs admin1 that the number field is empty and that the add operation could not be completed.

H19-Check-up slot machines information

As an admin I want the system to let me see every slot machine and what income and status they are generating so I can control how many need repairing/collecting and the income they produce

Positive cases:

H19+E1- admin1 wants to check the income in slot 9

Given admin is an administrator and that he wants to know the income from slot 9, when he clicks in "Slots maintenance" all the slot machines are displayed showing their game's name, their status and their income, he searches for slot 9 and reviews the data related to the slot.

Negative cases:

H19-E1-admin1 wants to check the average gain

Given admin1 is an administrator and that he wants to know the average game about slot 8, when he clicks in "Slots maintenance" all the slot machines are displayed but he is not able to see the slots' average gain, only the gain history is available to see.

H20- Check-up available slot games
As a client *I want the system to* show me all slot games and their jackpot (if they have one) *so I can* decide which games I will play in the casino.

Positive cases:

H20+E1-Paco wants to know the jackpot in Phoenix Fury
Given that Paco is a customer *and* that he is curious about the jackpot amount in his favourite slot game "*Phoenix Fury*", *when* he clicks in "*Slots*" all the slot games are displayed showing their jackpot if they have it (when clicking in one it shows which slot machines have the game)*, once this is done,* he searches for "*Phoenix Fury*" and, after finding it, he is able to see the jackpot behind the name.

Negative cases:

H20-E1-Paco's child wants to see the slots
Given that Paco's son is a minor *and* that he is interested in slots because they have many colours, *when* he tries to enter the casino's page a message appears showing you have to be an adult to enter*, once this is done,* he is a responsible kid, so he closes the page.

Data model

To see the image in full quality:

https://github.com/gii-is-DP1/dp1-2020-g1-07/blob/master/uml/Conceptual%20Model.png

Business rules

R1-Unknown dishes
When making a daily menu for a given shift, at least one cook must know how to cook each dish.

R2-Discontinued slot machine games
When removing a slot machine game, all data from those slot machines will be erased too, including earnings data from those slot machines.

R3-Incompatible games
Games of a certain type can only be played at their respective tables. For example, card games such as poker or blackjack cannot be assigned to a table with a roulette.

R4-Professional players
Players with a total gain of 25000$ or more in a certain game cannot play that specific game at an amateur table, instead they will have to look for a professional one. Amateur players may sit in both types of tables though.

R5-"Lucky" players
Players with a total gain of 500000$ or more in a single day in any table game will have to leave the table and they will not be able to play anymore that day. However, they can still play with the slot machines.

R6-Repetitive shows
Shows held on the same day must be of different type, except for music shows. Music shows held on the same day must have different artists at them.

Planification

Type	Element	Asignation	Sprint
General Description	-	Beatriz Beltrán Álvarez Vicente Soria Vázquez	*1*
Types of users/roles creation	-	Daniel Muñoz Heredia Daniel Caro Olmedo	*1*
Actors creation	-	Antonio González Gómez David Barragán Salazar	*1*
Entity creation	-	Antonio González Gómez David Barragán Salazar	*1*
Relations creation	-	Antonio González Gómez David Barragán Salazar	*1*
Simple Restraint creation	-	Antonio González Gómez David Barragán Salazar	*1*
N:N Relations creation	-	Antonio González Gómez David Barragán Salazar	*1*
Business Rules creation	-	Antonio González Gómez David Barragán Salazar	*1*
User stories creation	-	Daniel Muñoz Heredia Daniel Caro Olmedo	*1*
Mock-Ups creation	-	Vicente Soria Vázquez Beatriz Beltrán Álvarez	*1*
User Stories Implementation	*H1, H2, H7, H11, H15, H16, H19*	Beatriz Beltrán Álvarez Vicente Soria Vázquez	*2*
User Stories test	*H1, H2, H7, H11, H15, H16, H19*	Daniel Muñoz Heredia Daniel Caro Olmedo	*3*
User Stories Implementation	*H4, H5, H8, H12, H13, H18*	Daniel Muñoz Heredia Daniel Caro Olmedo	*2*
User Stories test	*H4, H5, H8, H12, H13, H18*	Antonio González Gómez David Barragán Salazar	*3*
User Stories Implementation	*H3, H6, H9, H10, H14, H17, H20*	Antonio González Gómez David Barragán Salazar	*2*
User Stories test	*H3, H6, H9, H10, H14, H17, H20*	Beatriz Beltrán Álvarez Vicente Soria Vázquez	*3*

Project Metrics

Metrics	Value
Number of entities (excluding actors)	*15*
Relations	*22*
N:N Relations	*3*
Simple Restraint	*49*
Business Rules	*6*
Total User Stories	*20*
User Stories involving 2 or more entities	*13*
User Stories involving 3 or more entities	*5*
Actors	*3*

Project Metrics