



# Tecnológico de Monterrey

## **Specification of software requirements for Tempo Artist**

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**Software Construction and Decision Making**

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## User Stories User

stories are found in the following Miro board (press the button).



[https://miro.com/app/board/uXjVOAkCfwQ=?invite\\_link\\_id=91468277505](https://miro.com/app/board/uXjVOAkCfwQ=?invite_link_id=91468277505)

## Product and Sprint Backlog:

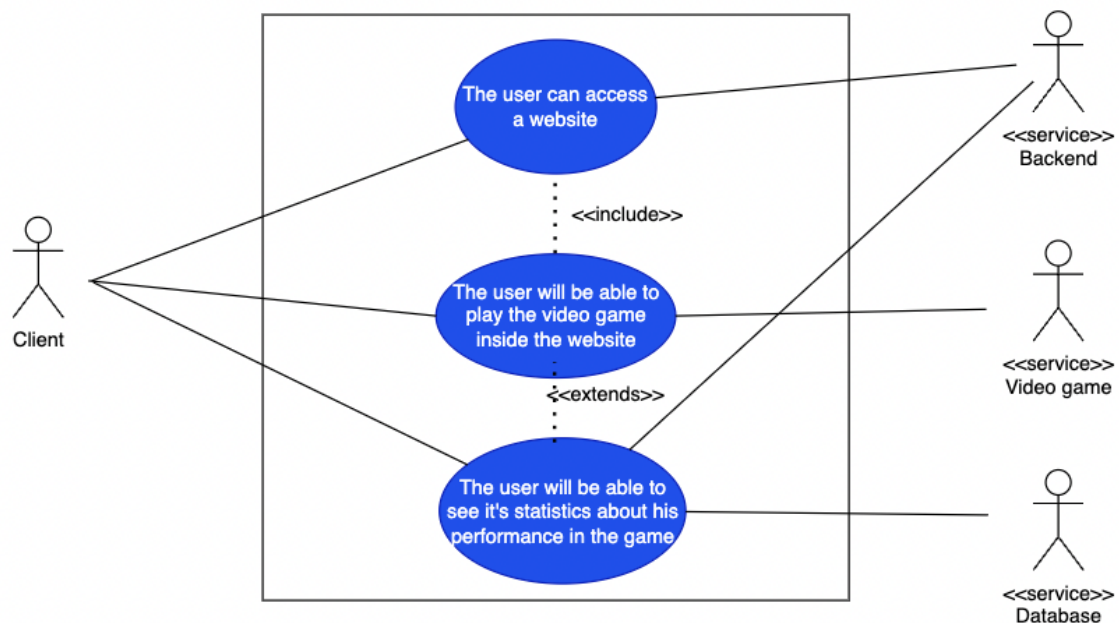
To view the board with the product backlog and sprint backlog, please press the following button.



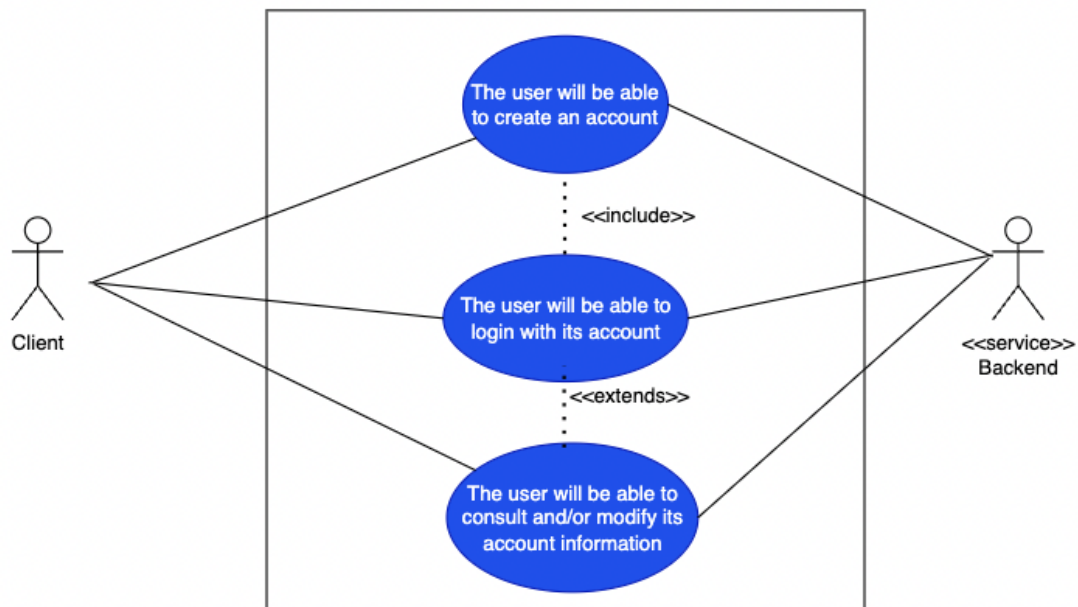
<https://trello.com/invite/b/Q228O1mw/229ccd3496f05d9a32a37f53ca0b883d/sprint-1-tempo-artist>

## Use case diagrams

**Process: Main system operation.**



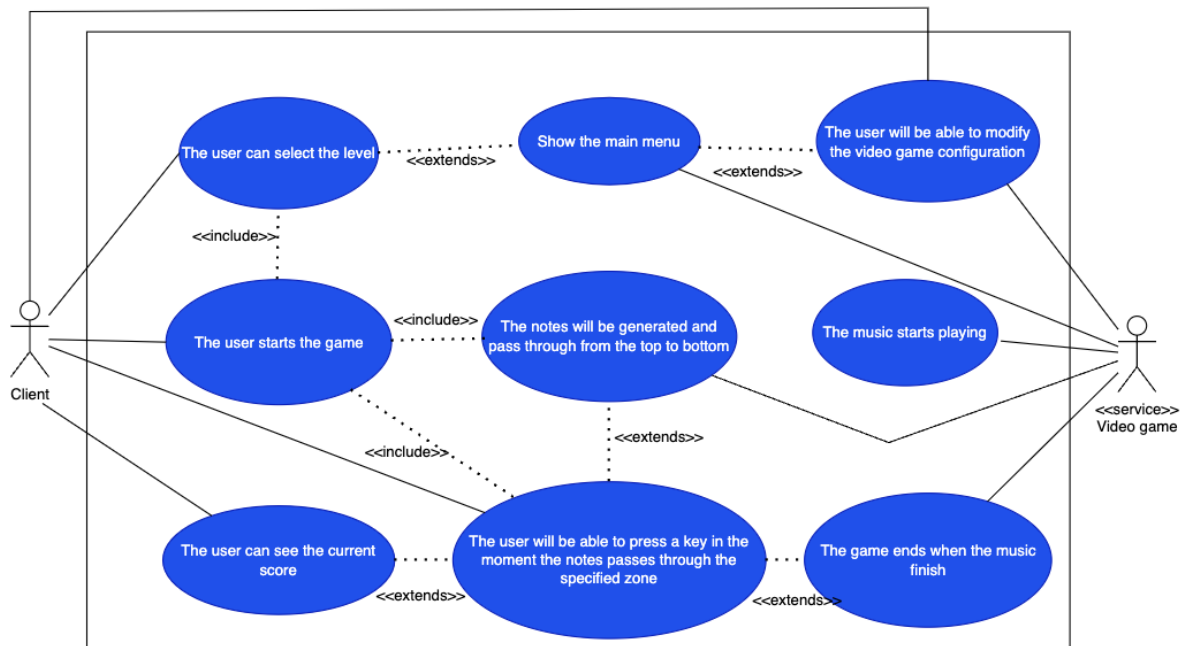
## Process: Authentication and account



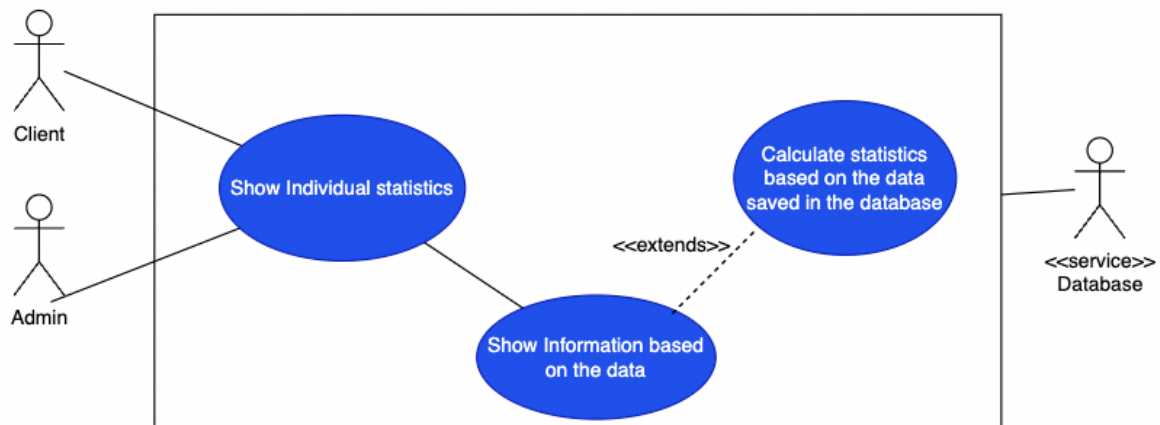
## Process: User-Videogame interaction



## Process: Video Game operation



## Process: Statistics visualization



## Descriptive Tables of Requirements

### Main system operation:

The user can access a website

<b>Related requirements</b>	play the video game on the website, check statistics, log in
<b>Description</b>	The user will be able to enter the website, in order to choose between starting the video game, or viewing its statistics.
<b>Requirement goal</b>	Enter the project website.
<b>Main actors</b>	client, backend
<b>Acceptance case</b>	If the user enters correctly, it will redirect him to the main page of the application.

The user will be able to play the video game within the website

<b>Related requirements</b>	access the website, log in
<b>Description</b>	The user will be able to enter and play the video game through the website.
<b>Requirement goal</b>	Play the video game.
<b>Main actors</b>	client, videogame, backend
<b>Case of acceptance</b>	If the user enters correctly, he will be able to view the videogame through the website.

The user will be able to consult statistics about their performance in the game

<b>Related requirements</b>	enter the website, log in
<b>Description</b>	The user will be able to obtain certain data stored in the database, displayed in the form of graphs and statistics
<b>Requirement goal</b>	Consult the statistics related to your account
<b>Main actors</b>	client, backend, database
<b>Acceptance case</b>	If the user enters correctly, he will obtain specific graphs and statistics.

### Authentication and account:

The user can create a new account

<b>Related requirements</b>	Login, data query and statistics
<b>Description</b>	The user must enter personal information such as name, email and password in order to register their account and save it in the database.
<b>Requirement goal</b>	Obtain information from the user in order to identify the user

<b>him Main actors</b>	client, database, backend
<b>Case of acceptance</b>	The data is correctly saved in the database and the user navigates to the main page.

The user will be able to log in

<b>Related requirements</b>	Account creation, access to the main page
<b>Description</b>	The user will be able to log in through the website, in order to see the statistics and play the video game.
<b>Requirement goal</b>	Identify yourself through the website.
<b>Main actors</b>	client, backend
<b>Case of acceptance</b>	If the user enters the data correctly, he will be redirected to the main page of the website.

The user will be able to consult the information of his account.

<b>Related requirements</b>	Login, consultation of data and statistics, authentication.
<b>Description</b>	The user can view, edit and confirm the data related to his account, such as email, name, password, among others.
<b>Requirement goal</b>	Visualize the user's data in order to be modified and/or confirmed
<b>Main actors</b>	client, database, backend, videogame
<b>Acceptance case</b>	The modified data is correct, the user will return to the main page

**User-videogame interaction:**

The user will be able to stop and start the game



<b>Related requirements</b>	choose level, view current score
<b>Description</b>	The user can pause or resume the current game, to have flexibility during the game.
<b>Requirement goal</b>	Pause or resume the current game.
<b>Main actors</b>	client, videogame
<b>Case of acceptance</b>	If the game is paused, all the processes of the game will be “frozen”, and a menu will appear to be able to resume the game. If the game is resumed, it will continue with its process and continue the game.

The user will be able to visualize the score of the level

<b>Related requirements</b>	choose level, pause or resume the game, choose difficulty
<b>Description</b>	The user will be able to visualize the current score of his game, which is related to the mechanism of the video game
<b>Requirement goal</b>	Visualize the score of the current game.
<b>Main actors</b>	client, videogame
<b>Acceptance case</b>	The client visualizes the score, so the game will continue in progress

## Video game operation

The user can modify the configuration

<b>Related requirements</b>	pause game, start level
<b>Description</b>	The user will be able to modify the

	default/current configuration, such as the volume, brightness, etc.
<b>Requirement goal</b>	Modify the current configuration of the game.
<b>Main actors</b>	client, videogame
<b>Acceptance case</b>	Values within configuration

Musical notes are generated in a top-down direction.

<b>Related requirements</b>	choose level, choose difficulty, start game
<b>Description</b>	Notes will scroll vertically, simulating some kind of gravity.
<b>Requirement goal</b>	Have a default traversal method at all levels.
<b>Main actors</b>	videogame
<b>Acceptance case</b>	The client sees the notes of the current game falling from the top of the screen.

The user can click when the notes pass through the appropriate area

<b>Related requirements</b>	pause or resume the game, show current score, scroll notes vertically
<b>Description</b>	The user can click on any of the valid keys when he thinks it's time suitable. With this you can determine the trajectory of the game.
<b>Requirement goal</b>	Record client signals and verify input.
<b>Main actors</b>	client, videogame
<b>Acceptance case</b>	The client will receive a positive or negative

	score, depending on the methods applied to the videogame.
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## View statistics

See individual statistics

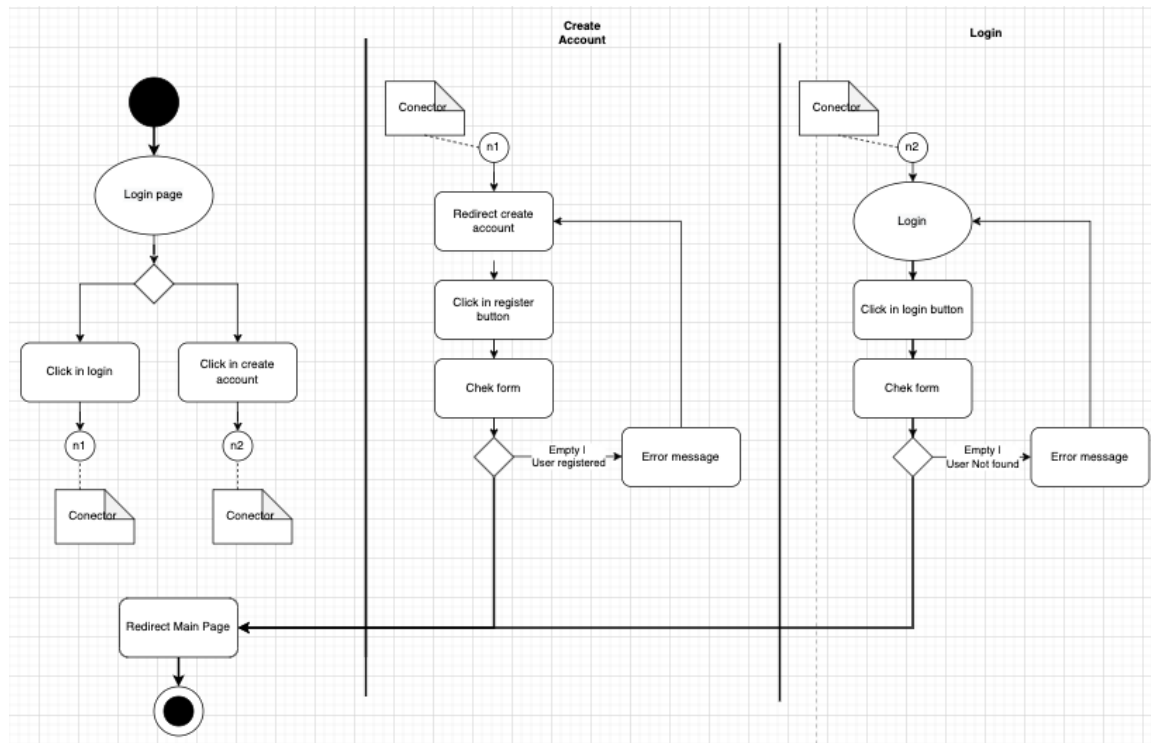
<b>Related requirements</b>	select global statistics, display data information.
<b>Description</b>	The user will be able to view the data and statistics on his account, which are registered in the database.
<b>Requirement goal</b>	View customer statistics and data.
<b>Main actors</b>	client, server
<b>Acceptance case</b>	The client will be able to visualize the data through some type of graph.

Show Data Information

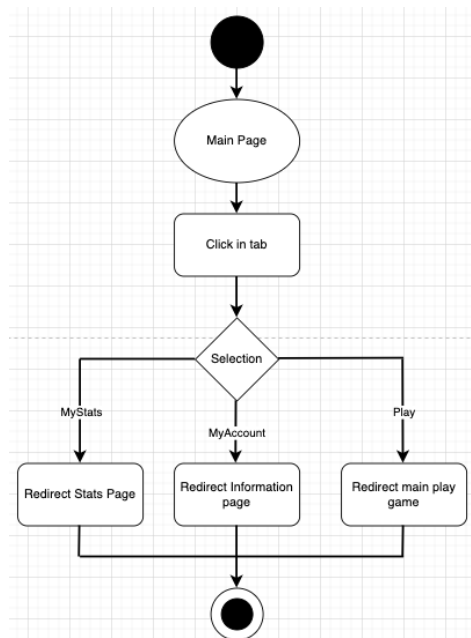
<b>Related requirements</b>	select individual statistics, select global statistics.
<b>Description</b>	The user will be able to view the data and statistics selected by the user through a graph. The graph will depend on the data entered, in order to make an appropriate selection of what type of graph to use.
<b>Requirement goal</b>	Visualize the entered data through graphs.
<b>Main actors</b>	client, server
<b>Acceptance case</b>	The client will be able to visualize the entered data through some type of graphic selected specifically for that data.

## Diagramas de Actividad

### Login and create account.



### Main system operation.



## Videogame Operation

