

**TABLA DE ESPECIFICACIÓN DEL PROBLEMA DE INGENIERÍA DE SOFTWARE**, identificando los siguientes elementos

CLIENTE	A video game company
USUARIO	Administrators / Managers
REQUERIMIENTOS FUNCIONALES	<p>R1. Create a Player</p> <p>R2. Register Level</p> <p>R3. Register enemy to a level</p> <p>R4. Register treasure to a level</p> <p>R5. Modify a player's score.</p> <p>R6. Increase level for a player, in case you cannot increase the level, you must inform the user what score is required to increase.</p> <p>R7. Report the treasures and enemies (separated by commas) of a level given by the user</p> <p>R8. Report the amount of treasure found in all levels, that is, several wants to know how many diamonds there are in all levels.</p> <p>R9. Report the amount found of a type of enemy in all levels, that is, if the user wants to know how many ogres exist in all levels.</p> <p>R10. Report the most repeated treasure in all levels.</p> <p>R11. Report the enemy that gives the highest score and the level where it is located.</p> <p>R12. Report the number of consonants found in the names of the enemies in the game.</p> <p>R13. Inform the top 5 of the players according to the score.</p> <p>R14. ask the user what is the resolution on which the game will run</p>

CONTEXTO DEL PROBLEMA	<p>A video game company needs you to collaborate with a video game, the game consists of 10 levels in which the player collects treasures and fights with enemies. They have requested your help to analyze the requirements and make the model of classes, responsibilities and collaborations, for now ONLY for the functionalities of the system related to the registration of players, levels, treasures and enemies.</p>
REQUERIMIENTOS NO FUNCIONALES	<ul style="list-style-type: none"><li>- The system performs very well</li><li>- The deployment of the treasures and enemies of a level, in the web application, does not take more than 2 seconds.</li><li>- The company wants the system to work both as a web application and as a mobile app</li></ul>

**Tabla de análisis de requerimientos funcionales (Nota: Una tabla por cada requerimiento funcional)**

Nombre o identificador	R1. Register a Player		
Resumen	The system must allow players to register, they have a nickname that identifies them, a name, the initial score (the player starts with 10), they have a number of lives (starts with 5). The system must allow establishing the level in which the player is considering his score and the score required to pass the level. Remember that the nickname is the identifier so it cannot be repeated.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	nickname	String	input is not null
	name	String	input is not null
Actividades generales necesarias para obtener los resultados	To carry out the process, it is necessary to enter the correct nickname and name.		
Resultado o postcondición	It will show a message that if the registration was successful or there are some error		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	msg	String	all methods of the class were executed correctly

Nombre o identificador	R2. Register level
Resumen	The system must allow recording the different levels of the game. From a level you have a number that identifies it, the points that are required to go to the next level. For each level, the treasures and the enemies to be defeated must be registered, and depending on them the level of complexity is defined (high, medium, low), if the points awarded by the treasures is greater than the points of the enemies it's low level, if it's the same it's medium, and if there are more points from the enemies than the points from the treasures it's high.( the level will be created automatically, therefore it will have preset attributes)
Actividades generales necesarias para obtener los resultados	it is necessary to have registered the video game later, it will simply call some methods to create the level, this automatically
Resultado o postcondición	the result will create the level

Nombre o identificador	R3. Register enemy to a level		
Resumen	Enemies decrease the player's score. Of them there is a name (Identifier), a type, the score that remains in case the player beats the player, the score that is added if he is defeated and the position X and Y in pixels in which he is (these X and Y positions are generated randomly, according to the resolution of the screen used (see annex)). In a level the enemies cannot be repeated because once defeated, you would already know how to defeat the others of the same level.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	name	String	input is not null
	typeEnemy	String	is not null
	Damage	int	input is not null
	score	int	input is not null
Actividades generales necesarias para obtener los resultados	it is necessary to show the result, to have registered the name, a type, the score that remains in case the player beats the player, the score that is added if he is defeated and the position X and Y.		
Resultado o postcondición	the system will show a success message when the entries are correctly registered		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	msg	String	all methods of the class were executed correctly

Nombre o identificador	R4. Register treasure to a level		
Resumen	Treasures are the mechanism that players have to reach the points that are required to pass a level. Of the treasures of a level, there is the name, a URL to the image that represents it, the score it gives the player when it is found and the position X and Y in pixels in which it is located (these positions X and Y are generated randomly, according to the resolution of the screen used (see annex)). In a level the same treasure can be found in different positions, that is, a diamond can be found in two different positions in the same level, so when entering the treasures into the game, the user will be asked how many treasures will be registered for a same level.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	numbertreasure	Int	input is not null
	name	String	input is not null
	url	String	input is not null
	score	int	input is not null
Actividades generales necesarias para obtener los resultados	it is necessary to have correctly registered the entries in the system		
Resultado o postcondición	having registered correctly, an exit message will be displayed		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	msg	String	all methods of the class were executed correctly

Nombre o identificador	R5. Modify a player's score.		
Resumen	the system gets the score of the said player, to then change the score with the value to be entered		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	namePlayer	String	the player must exist
	newScore	int	input is not null
Actividades generales necesarias para obtener los resultados	it is necessary to look for the player entered and if it exists, call his current score and change it with the new one entered		
Resultado o postcondición	. A success message will be displayed if the score was changed, and if the player does not exist, an error message will be displayed.		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	msg	String	all methods of the class were executed correctly

Nombre o identificador	R6. Increase level for a player, in case you cannot increase the level, you must inform the user what score is required to increase.		
Resumen	this requirement asks us to Increase level for a player, in case you cannot increase the level, you must inform the user what score is required to raise.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	nickname	String	the player must exist
Actividades generales necesarias para obtener los resultados	what this requirement needs to obtain results, are the points that are needed to climb from one level to another, know at what level the player is currently, know if the player is registered and their points obtained so far, to level it up or to tell you how much you need to climb		
Resultado o postcondición	a success message will be displayed if the level could be increased, a failure message will be displayed if the user does not have enough points to raise the level. and if the entered game does not exist, an error message will be displayed		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	msg	String	if the level is increased



Nombre o identificador	R7. Report the treasures and enemies (separated by commas) of a level given by the user		
Resumen	the system Reports the treasures and enemies (separated by commas) of a level given by the user		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	Level	int	Level must exist
Actividades generales necesarias para obtener los resultados	requires the user to enter an existing level, and then get the level's treasures and enemies		
Resultado o postcondición	a message is displayed where the treasures and enemies are, and if the level is not found an error message is displayed		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	AllEnemiesAndTreasures	String	all methods of the class were executed correctly

Nombre o identificador	R8. Report the amount found of a treasure at all levels		
Resumen	the system must allow reporting the amount of treasure found in all levels, that is, if the user wants to know how many diamonds there are in all levels.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	TreasureName	String	The tresure must exist
Actividades generales necesarias para obtener los resultados	it is necessary that the name obtained from the treasure is entered correctly, and that the treasure has been registered. After these data, he will search each level for that treasure and count it.		
Resultado o postcondición	the system will display the amount of a treasure found in all levels and if the registered treasure does not exist an error message will be displayed		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	amountTreasure	String	all methods of the class were executed correctly

Nombre o identificador	R9. Report the amount found of a type of enemy in all level		
Resumen	the system Inform the amount found of a type of enemy in all levels, that is, if the user wants to know how many ogres exist in all levels.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	enemyType	String	the enemy must exist and
Actividades generales necesarias para obtener los resultados	it is necessary that the entered enemy exists, and therefore then search in the levels how many enemies there are of that type		
Resultado o postcondición	the system will show the number of enemies found and then show them on the screen, if the enemy does not exist an error message will be displayed		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	countEnemy	String	all methods of the class were executed correctly

Nombre o identificador	R10.Report the most repeated treasure in all levels		
Resumen	The system will show the most repeated treasure in all levels		
Actividades generales necesarias para obtener los resultados	It is necessary that there are registered treasures, so that later the system will count each treasure until it has the one with the largest amount.		
Resultado o postcondición	the system will show the treasure with the greatest quantity in all levels, if there are no treasures it will show an error message		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	mostTreasure	String	all methods of the class were executed correctly

Nombre o identificador	R11. Report the enemy that gives the highest score and the level where it is located.		
Resumen	the system must report the enemy that gives the highest score and the level where it is located.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
Actividades generales necesarias para obtener los resultados	It is necessary before the process that there is an enemy registered by some levels of the game to be able to make the comparison of points. and so, return the message with the enemy that gives more points		
Resultado o postcondición	the system will show a message, the enemy with the highest score and the enemy located, but if there are no enemies it will show an error message		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	bestEnemy	String	all methods of the class were executed correctly

Nombre o identificador	R12. Report the number of consonants found in the names of the enemies in the game.		
Resumen	the system should report the number of consonants found in the names of the enemies in the game.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
Actividades generales necesarias para obtener los resultados	it is necessary that there are enemies found, so that later the system takes each name of each enemy and counts its consonants		
Resultado o postcondición	The system will show a message with the number of consonants and also, if there are no enemies, it will show an error message.		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	consonants	String	all methods of the class were executed correctly

Nombre o identificador	R13.Inform the top 5 of the players according to the score.		
Resumen	the system must inform the top 5 of the players according to the score.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
Actividades generales necesarias para obtener los resultados	it is necessary that there are registered players, to then compare their scores and then show the top 5		
Resultado o postcondición	the system will display a message with the top 5 players for later, and if there are no registered players an error message will be displayed		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	top	String	all methods of the class were executed correctly

Nombre o identificador	R14. ask the user what is the resolution on which the game will run		
Resumen	the system must ask the user what is the resolution on which the game will be executed.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	Resolution_option	int	input is not null
Actividades generales necesarias para obtener los resultados	it is necessary that the user has correctly chosen the resolution and that it has not been null		
Resultado o postcondición	the system applies the resolution chosen by the user, and will display a success message		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	msg	String	all methods of the class were executed correctly