

TABLA DE ESPECIFICACIÓN DEL PROBLEMA DE INGENIERÍA DE SOFTWARE :

CLIENTE	Video game Company
USUARIO	players
REQUERIMIENTOS FUNCIONALES	<ul style="list-style-type: none"> -Register players -Register level -Register enemy -Register treasure -Add enemy to level -Add treasure to level -edit score to player -Increase level of player -Show the treasures and enemies for a level required. -Report how many treasures there are in the game. -Report how many enemies there are in the game. -Show the most repeated treasure. -Show the enemy that gives more score and its level. -Show how many consonants have the names of enemies. -Report the top 5 of players
CONTEXTO DEL PROBLEMA	<p>A company wants to develop a video game. For this, we must do all software design processes. First, analyze the problem and separate requirements. Second, make the class diagram. Finally, we must develop the program in java.</p>
REQUERIMIENTOS NO FUNCIONALES	<ul style="list-style-type: none"> -The system has to be fast and high-performance. -The enemies and treasures deployed must be before two seconds. -The system must work in the web application and in the mobile application.

Tabla de análisis de requerimientos funcionales:

Name or identifier	R1. Register players		
Resume	System must be able to register a maximum of 20 players. For this, he requests some data about the player. And the program generates the initial statistics like level, lives, and score. The system cannot has players with the same nickname.		
inputs	input name	datatype	Condición de selección o repetición
	name	String	If a new player is registering. If the limit of players hasn't been reached.
	nickName	String	If a new player is registering. If the limit of players hasn't been reached. If there's not a player with the same nickname.
Actividades generales necesarias para obtener los resultados	Create the new player in the system, associate the information entered to the player, and generate the initial statistics.		
Resultado o postcondición	The player will be saved in the system and be ready to play.		
outputs	Output name	datatype	Condición de selección o repetición
	confMesage	String	If the player was registered correctly.
	rrorMesage	String	If the player failed to register.

Nombre o identificador	R2. Register level		
Resumen	The system must register 10 levels. for that, it requires the necessary score to pass each level.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	pointsToPass	int	if the system are registering a new level
Actividades generales necesarias para obtener los resultados	The level will registered		
Resultado o postcondición	The level will be recorded		

Nombre o identificador	R3. Register enemy		
Resumen	The system must be able to register enemies. For this, it requires some data about the new enemy, and the enemy's position will be generated randomly.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	name	String	If the system is registering a new enemy
	enemyType	Type	If the system is registering a new enemy and if the enemy type exists.
	pointsToRemove	int	If the system is registering a new enemy
	pointsToGive	int	If the system is registering a new enemy
Actividades generales necesarias para obtener los resultados	Register the enemy in the system with the required data and generate its coordinates.		
Resultado o postcondición	The enemy will be recorded		
Salidas	Nombre de salida	Tipo de dato	Condición de selección o repetición
	msjConfir	String	if the enemy was registered.
	msjError	String	if the enemy was not registered.

Nombre o identificador	R4. Register treasure		
Resumen	The system must be able to register treasures. For this, it requests some data about new treasure. The position of the treasure will be generated randomly.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	name	string	If the system is registering a new treasure
	urlImage	string	If the system is registering a new treasure
	poitnsGiven	int	If the system is registering a new treasure
Actividades generales necesarias para obtener los resultados	The system is restering the new treasure with entered data. After it is generating the treasure position randomly.		
Resultado o postcondición	The treasure will be recorded		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	confirm	string	If the treasure was registered.
	error	string	If the treasure was not registered.

Nombre o identificador	R5. Add enemy to level		
Resumen	The system must be able to save an enemy on one level. The user must enter the level that is adding the enemy. Also, the system shows all enemies with its position and the user enters the position of the enemy that would like to add to level. The level cannot repeat the same enemy.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	enemyPostion	int	If the enemy position exists. And if the enemy is not at the level yet.
	levelNumber	int	If the level was initialized.
Actividades generales necesarias para obtener los resultados	The system searches the enemy in the enemy's position entered and adds this enemy to the level required.		
Resultado o postcondición	The enemy will be added to the level.		
Salidas	Nombre de salida	Tipo de dato	Condición de selección o repetición
	confirm	String	If the enemy was added to level.
	error	String	If the enemy was not added to level.

Nombre o identificador	R6. Add treasure to level.		
Resumen	The system must be able to save a treasure on one level The user must enter the level that is adding the treasure. Also, the system shows all treasures with its position and the user enters the position of the treasure that would like to add to level. Finally, the system questions how many treasures would like to add to level.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	treasurePosition	int	If the level was initialited
	levelNumber	int	If the treasure exists
	howManyTreasres	int	
Actividades generales necesarias para obtener los resultados	The system search the treasure int treasure's position. And add the treasure to level entered.		
Resultado o postcondición	Tre treasures will be added to the level.		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	confirm	string	If the treasures was added to the level
	error	string	If the treasures was not added to the level

Nombre o identificador	R7. Edit score to player.		
Resumen	The user will be able to add or remove points to a player. For this, the system requests the number of points that the user is adding or removing to the player and also requests the number of player's position.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	addOrRemove	boolean	If the system is editing score to player
	points	int	If the system is editing score to player
	playerPosition	string	If the system is editing score to player. And if the player exists.
Actividades generales necesarias para obtener los resultados	Search the player in the player's position entered and do the operations necessary to update its score correctly.		
Resultado o postcondición	The treasures wil be added to level		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	confirm	string	If the treasures were added to level
	error	string	If the treasures were not added to level

Nombre o identificador	R8. Increase the level of player.		
Resumen	The system must be able to increase the level of a player when the user requires it. But before the system check if the player has points necessary to pass the level entered.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	playerpst	int	If the player is in the system.
	levels	int	If the system is increasing level to player.
Actividades generales necesarias para obtener los resultados	System searches the player en palyer's position entered. After it evaluates the score of the player. If the player has the points necessary to pass the levels entered, the system is increasing the level of player.		
Resultado o postcondición	If the player has the necessary points. The player level will be increased.		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	confirm	string	If the level player was increased
	error	string	If the level player was not increased.

Nombre o identificador	R9. Show the treasures and enemies for a level required		
Resumen	The system must be able to show all enemies and treasures for a level when the user requires it.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	level	int	If the system is showing al enemies and treasures for a level.
Actividades generales necesarias para obtener los resultados	The system searches and saves all enemies and treasures for a level entered and save it in a message.		
Resultado o postcondición	A message will be saved in the system for showing to the user.		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	message	string	If there were enemy or treasures in the level
	thereWNot	string	If there were not enemies or treasures in the level

Nombre o identificador	R10. Report how many treasures there are in the game		
Resumen	The system must be able to count how many times a treasure entered repeats. For this, the system shows all treasures registered, the user must enter the number of the treasure and the system is counting how many same treasures there are in the game.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	treasurePosition	int	If the treasure exists in the system.
Actividades generales necesarias para obtener los resultados	The system searches in all levels, it is counting how many times repeats the treasure in the level and saves the number.		
Resultado o postcondición	This number will be shown to the user.		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	number	string	If the number is greater than or equal to 1.
	thereSNot	string	If the number is less than 1.

Nombre o identificador	R11. Report how many enemies there are in the game.		
Resumen	The system must be able to count how many times an enemy type entered repeats. For this, the system shows all types, the user must enter the number of the type and the system is counting how many same enemies whit the type there are in the game.		
Entradas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	type	int	If the type exists in the system.
Actividades generales necesarias para obtener los resultados	The system searches in all levels, it is counting how many times repeats the type in the levels and saves the number.		
Resultado o postcondición	This number will be shown to the user.		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	number	string	If the number is greater than or equal to 1.
	thereSNot	string	If the number is less than 1.

Nombre o identificador	R12. Show the most repeated treasure.		
Resumen	The system must search at all levels to find the most repeated treasure. After the system shows it to the user.		
Actividades generales necesarias para obtener los resultados	The system search at all levels, and it is counting how many repeats have all treasures. Finally, the system saves the treasure most repeated.		
Resultado o postcondición	The treasure most repeated is saved and is ready to show to the user.		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	treasure	string	If there is a most repeated treasure
	treasures	string	If there are two o more treasures with the same amount of repeats and they are the most repeated treasures.
	error	string	If there are no treasures in the system

Nombre o identificador	R13. Show the enemy that gives more score and its level.		
Resumen	The system must be able to search for the enemy that gives more score and show it to the user		
Actividades generales necesarias para obtener los resultados	The system has to check all levels searching for the enemy that gives more score and save it a string variable.		
Resultado o postcondición	Show the enemy and its level to the user.		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	enemy	string	If there are enemies in the game
	therearen	string	If there are enemies in the game

Nombre o identificador	R14. Show how many consonants have the names of enemies		
Resumen	The system must be able to count how many consonants are in all the names of enemies.		
Actividades generales necesarias para obtener los resultados	The system have to check all names of enemies while count the consonants.		
Resultado o postcondición	The number will be saved in a string for show to the user.		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	number	string	If there are enmies in the game
	thereArNot	string	If there are not enmies in the game

Nombre o identificador	R15. Make the top 5 of players		
Resumen	The system must be able to show in order the five players that have more score that the others		
Actividades generales necesarias para obtener los resultados	The system is organizing all players through their score and save the 5 firsts in a string to show to the user		
Resultado o postcondición	The string with the players will be saved and will be show to the user		
Salidas	Nombre entrada	Tipo de dato	Condición de selección o repetición
	message	string	If the system is showing the top 5 of players.