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

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| CLIENTE | Videogame Enterprise |
| USUARIO | player |
| REQUERIMIENTOS FUNCIONALES | 1. Register player 2. Register level 3. Register treasures 4. Register enemies 5. Edit player score 6. Increase the player level, in case that couldnt increase the level,must be report the user what score required for up 7. Report the treasures and enemies (separated by comma) of a level entered by user. 8. Report the quantity founded of a treasure, in all levels 9. Report the quantity founded of a enemy type in all levels 10. Report the treasure most repeated in all levels. 11. Report the quantity of consonants founded in the names of the game enemies 12. Report the top 5 of players according to score. 13. Report the enemy that gives the most score |
| CONTEXTO DEL PROBLEMA | I must be create a program that to register players, enemies, treasures and levels. Each with their respective characteristics. Also i must add enemies and treasures to the levels. I Must be possible to display data requested by user, and also edit some.  And finally, the program, in general must be has maximum 20 players. 10 levels, 50 treasures and 25 enemies, also the resolution with wich it work is HD |
| REQUERIMIENTOS NO FUNCIONALES | - Performance: the deployment of the treasures and enemies of a level, in the web application, should not take more than 2 seconds.  - Portabilidad: La empresa quiere que el sistema funcione tanto como aplicación web como en una app para móviles.  - Portability: The company wants the system to work both as a web application and as a mobile app. |

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

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| Nombre o identificador | R1. Register players | | |
| Resumen | Registers players in the program with object’s data that entered by the user | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| nickname | String |  |
| name | String |  |
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| Actividades generales necesarias para obtener los resultados | - Read the nickname  - Read the name  - automatically generate the initial score  - automatically generate the lives number  - Create the Player object. | | |
| Resultado o postcondición | An object of type Player with the data entered by the user will be saved in the database. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| Registered successfully | String | Show "Registered successfully" only if the user has filled in all the information fields that are requested and these have been saved normally in the level |
| Registry error | String | Show " Registry error " when the user has not filled in all the information fields that are requested or when these have not been saved normally in the database. |
| Error, already registered | String | It will show "Already registered" when the nickname that the user typed has already been registered previously |
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| Nombre o identificador | R2. Register levels | | |
| Resumen | Registers levels in the program with object’s data that entered by the user | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| numberLevel | int |  |
| pointsForNextLevel | double |  |
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| Actividades generales necesarias para obtener los resultados | - Read the numberLevel  - Read the pointsForNextLevel  - automatically define the difficulty  - Create the Level object. | | |
| Resultado o postcondición | An object of type Level with the data entered by the user will be saved in the database. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| Registered successfully | String | Show "Registered successfully" only if the user has filled in all the information fields that are requested and these have been saved normally in the level |
| Registry error | String | Show " Registry error " when the user has not filled in all the information fields that are requested or when these have not been saved normally in the database. |
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| Nombre o identificador | R3. Register treasures | | |
| Resumen | register treasures with his attributes in specific levels entered by the user | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| NumberLevel | int |  |
| typeTreasure | int |  |
| urlImage | String |  |
| scoreToGive | double |  |
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| Actividades generales necesarias para obtener los resultados | - Read the numberLevel  - Read the typeTreasure  - Read the urlImage  - Read the scoreToGive  - automatically generate the Treasure Name  - check if the level number where you are going to register it exists  - Create the Treasure object. | | |
| Resultado o postcondición | An object of type Treasure with the data entered by the user will be saved in a level. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| Registered successfully | String | Show "Registered successfully" only if the user has filled in all the information fields that are requested and these have been saved normally in the level |
| Registry error | String | Show " Registry error " when the user has not filled in all the information fields that are requested or when these have not been saved normally in the database. |
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| Nombre o identificador | R4. Register enemies | | |
| Resumen | register enemies with his attributes in specific levels entered by the user | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| NumberLevel | int |  |
| name | String |  |
| scoreToRemove | int |  |
| ScoreToGive | double |  |
| enemieType | int (debido a que es enumeración) |  |
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| Actividades generales necesarias para obtener los resultados | - Read the numberLevel  - Read the name  - Read the ScoreToRemove  - Read the scoreToGive  - Read the enemieType  - automatically generate the level of complexity of the enemy  - check if the level number where you are going to register it exists  - Create the Enemy object. | | |
| Resultado o postcondición | An object of type Enemy with the data entered by the user will be saved in a Level.  the level of complexity of the enemy registered by the user will be defined depending on the score to gives if you beat him, and the score you have left, if you lose against him. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| Registered successfully | String | Show "Registered successfully" only if the user has filled in all the information fields that are requested and these have been saved normally in the level |
| Registry error | String | Show " Registry error " when the user has not filled in all the information fields that are requested or when these have not been saved normally in the database. |
| Error, already registered | String | It will show "Already registered" when the nickname that the user typed has already been registered previously |
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| Nombre o identificador | R5. Edit player score | | |
| Resumen | Modify the player’s score requested that type the new score, and the player to the  Modifica el puntaje de un jugador pidiendo que se digite los nuevos puntos, y el jugador al que se los va a modificar. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| newScore | double |  |
| nickname | String |  |
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| Actividades generales necesarias para obtener los resultados | - Read the nickname of the player to edit the score  - Read the newScore  - check if player exists  - Modify a player’s score | | |
| Resultado o postcondición | It modifies the points that it had previously, to the new ones entered by the user. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| score modified successfully | String | Show “score modified successfully” when the player's new score has been saved to the database normally. |
| Error modifying points | String | Show "Error modifying points" when the player's new score has not been saved normally in the database. |
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| Nombre o identificador | R6. Increase player level | | |
| Resumen | The user can increase the level of the player, and for this he will be asked for the player's new score and the program, depending on the score he places, will assign him a level and show him how many points he needs for the next level. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| newScore | double |  |
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| Actividades generales necesarias para obtener los resultados | - check if there is at least one level registered  - check if there is at least one player registered  - Read the newScore  - automatically generates a level number for the player | | |
| Resultado o postcondición | The user will have changed his score and therefore also his level, but if the points that he increased were not enough for a new level, he will be shown how many are missing to reach that level. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| pointsForNextLevel | double |  |
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| Nombre o identificador | R7. Report the treasures and enemies (separated by comma) of a level entered by user | | |
| Resumen | The user will be asked if they want to see the treasures and enemies, if they decide yes, the user will be asked which level they want to see, and will be shown the treasures and enemies that are contained therein. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| showTreasuresAndEnemies | boolean |  |
| numberLevel | int |  |
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| Actividades generales necesarias para obtener los resultados | - Read showTreasuresAndEnemies  - Read numberLevel (if showTreasuresandEnemies is true)  - check if there is at least one level registered (if showTreasuresandEnemies is true)  - check if there is at least one Treasure registered in a level (if showTreasuresandEnemies is true)  - check if there is at least one Enemy registered in a level (if showTreasuresandEnemies is true) | | |
| Resultado o postcondición | If the user decides yes, he will be shown the treasures and enemies that are in a level that he chose. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| TreasuresAndEnemies | String | If the user decided that it should be shown and chose the level, it will be shown. |
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| Nombre o identificador | R8. Report the quantity founded of a treasure, in all levels | | |
| Resumen | The user Will be asked if he want to see the quantity of a treasure founded in all levels, and which treasure | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| showTreasures | boolean |  |
| typeTreasure | int |  |
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| Actividades generales necesarias para obtener los resultados | - Read showTreasures  - Read typeTreasure (if showTreasures is true)  - check if there is at least one Treasure registered in a level (if showTreasures is true)  - count the amount of each type of treasure | | |
| Resultado o postcondición | If the user decides yes, they will be shown the amount of treasure in all levels. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| quantityTreasures | int |  |
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| Nombre o identificador | R9. Report the quantity founded of an enemy type in all levels | | |
| Resumen | The user will be asked if they want to see the amount of the specific type of enemy found in all levels, and which type of enemy. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| showEnemies | boolean |  |
| typeEnemies | int |  |
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| Actividades generales necesarias para obtener los resultados | - Read showEnemies  - Read typeEnemies (if showEnemies is true)  - check if there is at least one Enemy registered in a level (if showEnemies is true)  - count the amount of each type of enemy | | |
| Resultado o postcondición | Si el usuario decide que sí, se le preguntara a qué tipo de enemigo quiere que se le muestre, y después de esto se lo mostrara. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| quantityTypeEnemies | int |  |
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| Nombre o identificador | R10. Report the treasure most repeated in all levels. | | |
| Resumen | The user will be asked if he wants to see the treasure that is repeated the most in the whole game, if he decides yes, it will be shown. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| showMostRepeatTreasure | boolean |  |
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| Actividades generales necesarias para obtener los resultados | - Read showMostRepeatedTreasure  - check if there is at least one Treasure registered in a level (if showMostRepeatedTreasure is true)  - count the amount of a treasure (if showMostRepeatedTreasure is true) | | |
| Resultado o postcondición | If the user decides yes, they will be shown the most repeated treasure in the game(name and the times it is repeated). | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| mostRepeatTreasure | String |  |
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| Nombre o identificador | R11. Report the quantity of consonants founded in the names of the game enemies | | |
| Resumen | The user will be asked if want to see the number of consonants in a specific enemy's name and which enemy. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| showConsonants | boolean |  |
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| Actividades generales necesarias para obtener los resultados | - Read showConsonants  - obtain the names of the enemies  - count the number of consonants in the enemy name (if showConsonants is true)  - check if there is at least one Enemy registered in a level | | |
| Resultado o postcondición | If the user decides yes, they will be asked which enemy they want to show how many consonants their name has, and after that it will show them. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| quantityConsonants |  | If the user decides that they do want to be shown, and chooses the enemy, it will be shown to them. |
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| Nombre o identificador | R12. Report the top 5 of players according to score. | | |
| Resumen | The user Will be asked if want see the top 5 according to the score, if decides that yes, so, he Will be shown | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| showTop5 | boolean |  |
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| Actividades generales necesarias para obtener los resultados | - Read showTop5  - check if there are at least five players registered in the game  - compares the score of all the players and organizes them from highest to lowest | | |
| Resultado o postcondición | If the user decides yes, the top 5 players will be shown according to the score, with their names and scores | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| Top5players | String | The top 5 will be shown if the user decides that he wants to see them |
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| Nombre o identificador | R13. Informar el enemigo que otorga mayor puntaje | | |
| Resumen | The user is asked if they want to see the enemy that gives the highest score, if they decide yes, then they will be shown | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| enemyMaxScoreToGive | boolean |  |
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| Actividades generales necesarias para obtener los resultados | - check if there are at least one Enemy registered in the game  - compares the score to Give of all Enemies registered | | |
| Resultado o postcondición | If the user decides yes, the enemy that gives the most points will be shown. | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| EnemyMaxScore | String | The enemy with the highest score will be shown, if the user decides that he wants to see it |
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