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

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| CLIENTE | Videogame’s Enterprise |
| USUARIO | Videogame’s developers |
| REQUERIMIENTOS FUNCIONALES | -Register Players  -Registrar an enemy to a level  -Registrar a treasure to a level  -Modificar el puntaje de un jugador  -Upgrade a player’s level if it has enough points  -display treasures and enemies per level  - display the total value of every level’s treasures  -Display the quantity of an enemy type found in every level  - Display the mode treasure  - Display the enemy that gives the most points to the player and the level it is in  -Display the quantity of consonants in the names of all enemies  -calculate the top 5 players by score |
| CONTEXTO DEL PROBLEMA | The players have a Nickname that identifies them and a name, the other attributes must be calculated by the system (score starts at 10, lives start at 5, level starts at the lowest)there’s a maximun of 20 levels  The levels have an id that identifies them and points needed to get to the next level, these contain up to a maximum of 25 enemies and 50 treasures, they also have a difficulty that the system must calculate depending on the value of the treasures and the points from enemies  (treasures>enemies, bajo)  (treasures = enemies, intermedio)  (treasures < enemies, alto)  The enemies have a name that identifies them, a score that SUBTRACTS from the player if they are victorious, a score that ADDS if they are defeated and a type (ogro, abstracto, jefe o magico), Enemies cannot be repeated in a level. the system must calculate their position randomly according to the screen.  The treasures have a name that identifies them, an image url that represents them and a value that ADD to the player. The system must calculate their position randomly according to the screen  The screen will be static with a 1280x720 resolution |
| REQUERIMIENTOS NO FUNCIONALES | The system needs to deploy the treasures and enemies in less than 2 seconds (Performance)  It is required that the application works for both mobile and web application (Responsive Design) |

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

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| Nombre o identificador | -Register players | | |
| Resumen | The system could register a maximum of 20 players | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| nickname | String | Not null |
| name | String |  |
| Actividades generales necesarias para obtener los resultados | -Create tha Player  -Verify that the nickname doesn’t exist already in the game  -Verify that there’s space in the game to add the player | | |
| Resultado o postcondición | The players is succesfully added to the game, the score, the lifes and the level are assigned by the system | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| msj | String |  |

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| --- | --- | --- | --- |
| Nombre o identificador | -Registrar an enemy to a level | | |
| Resumen | The system can register an enemy to an specific level | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| EnemyName | String | Not null |
| LvlID | String |  |
|  | attack | int | Greater than 1 |
|  | loot | int |  |
|  | tipo | int |  |
| Actividades generales necesarias para obtener los resultados | -Create the enemy  -Verify that the level exists  -Verify that the enemy doesn’t exists already in the level  -Verify that there’s is space in the level to add the enemy | | |
| Resultado o postcondición | The enemy is succesfully added to the level, the position is calculated by the system | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| msj | String |  |

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| --- | --- | --- | --- |
| Nombre o identificador | - Registrar a treasure to a level | | |
| Resumen | The system can register a treasure to a specific level | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| treasureName | String | Not null |
| LvlID | String |  |
|  | ImgUrl | String |  |
|  | diamonds | int | Greater than 1 |
| Actividades generales necesarias para obtener los resultados | -Create the treasure  -Verify that the treasure exists  -Verify that the name doesn’t exists already in the level  -Verify that there’s space in the level to add it | | |
| Resultado o postcondición | The treasure is succesfully added to the level, its position is calculated by the system | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| msj | String |  |

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| --- | --- | --- | --- |
| Nombre o identificador | -change the score of a player | | |
| Resumen | The system can change the score of a specific player | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| Nick | String | Not null |
|  | newScore | int | Positive |
| Actividades generales necesarias para obtener los resultados | -Verify that the player exists | | |
| Resultado o postcondición | Player’s score is succesfully changed | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| msj | String |  |

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| --- | --- | --- | --- |
| Nombre o identificador | -Upgrade a player’s level if it has enough points | | |
| Resumen | The system can upgrade a specific player to a level | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| Nick | String | Not null |
| Actividades generales necesarias para obtener los resultados | -Verify that the player exists  -Get actual score  -Verify if its actual score is enough to advance to a higher level  -Verify the above until it reach the maximum level possible with its socre | | |
| Resultado o postcondición | If the player has enough points it’ll be upgraded to the max level for its points, else player won’t be promoved | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| msj | String |  |

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| --- | --- | --- | --- |
| Nombre o identificador | -display treasures and enemies per level | | |
| Resumen | The system can display the treasures and enemies from a level separated by a comma | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| levelId | String | Not null |
| Actividades generales necesarias para obtener los resultados | -Verify that the level exists  -get the Treasure list from the level  -get treasure’ names form the Treasure list  -get treasures’ names form the Treasure list  -get the Enemy list from the level  -get enemies’ names from the Enemy list  -get enemies’ attack from the Enemy list  -get enemies’ loot from the Enemy list | | |
| Resultado o postcondición | Treasures and enemies of the respective level are displayed | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| enemiesAndTresures | String |  |

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| --- | --- | --- | --- |
| Nombre o identificador | -display the total value of every level’s treasures | | |
| Resumen | The system can get the total value of the treasures in every single level | | |
| Actividades generales necesarias para obtener los resultados | -get the Treasure list from the each level  -get the value of each treasure in each level  -add all the values | | |
| Resultado o postcondición | The total value of all Treasures is displayed | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| totalValue | String |  |

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| --- | --- | --- | --- |
| Nombre o identificador | Display the quantity of an enemy type found in every level | | |
| Resumen | The system can count how many enemies of a specific kind are there in the levels and display it | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| type | id |  |
| Actividades generales necesarias para obtener los resultados | -Evaluate the type in the enumeration  -Get the Enemy list from each level  -Get the enemy type from each list in each level  -Add the type to the counter if it’s equal to the evaluated before | | |
| Resultado o postcondición | The total quantity of the type of enemy found in all levels is displayed | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| enemiesFound | String |  |

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| --- | --- | --- | --- |
| Nombre o identificador | -Display the mode treasure | | |
| Resumen | The system can calculate the mode treasure and display it | | |
| Actividades generales necesarias para obtener los resultados | -Create a list to count the value and how many Treasures of each kind are there in the levels  -Get the treasure list of each level  -Get the value of each treasure in each level  -Count all the coincidences and add them to its respective count in the list created before  -Once all the treasures lists are count and added on the list, calculate the greatest value of that last list | | |
| Resultado o postcondición | The mode treasures is successfully displayed | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| modeTreasure | String |  |

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| --- | --- | --- | --- |
| Nombre o identificador | -Display the enemy that gives the most points to the player and the level it is in | | |
| Resumen | The system can calculate the enemy that gives the most points and the level where is located | | |
| Actividades generales necesarias para obtener los resultados | -Get the enemy list of each level  -Get the points of each enemy in each level  -Count all the coincidences and add them to its respective count in the  -Compare all the values until the one with the most points is found | | |
| Resultado o postcondición | The enemy that gives the most points to the player and the level it’s located is displayed | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| maxEnemy | String |  |

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| --- | --- | --- | --- |
| Nombre o identificador | -Display the quantity of consonants in the names of all enemies | | |
| Resumen | The system can count the consonants in the names of the enemies in every level | | |
| Actividades generales necesarias para obtener los resultados | -Creating a list with all the consonants  -Get the enemy’s list of each level  -Get the names of the enemy’s list in each level  -Compare every letter of every name with every consonant until one is matches or getting to the end of the consonants  -If one matches add 1 to the counter | | |
| Resultado o postcondición | The total quantity of consonants in the name of every enemy is displayed | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| NumberOfConsonanst | String |  |

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| --- | --- | --- | --- |
| Nombre o identificador | -Calculate the top 5 players by score | | |
| Resumen | The system can organize del players from greatest to lowest score and display the first 5 | | |
| Actividades generales necesarias para obtener los resultados | -Creating a list with all the players  -Get all the players scores  -Compare the players scores until getting the greatest  -Putting the greatest player in the scoreboard  -Delete the player that was added to the scoreboard from the list  -Reapeat from comparation until the scoreboard is full | | |
| Resultado o postcondición | The top 5 players by score is successfully displayed | | |
| Salidas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| scoreboard | String |  |