**SPECIFICATION TABLE OF THE SOFTWARE ENGINEERING PROBLEM, showing the following elements**

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| CLIENT | Video Game Company |
| USER | Developers (User) |
| FUNCTIONAL REQUIREMENTS | **R-F1:** Create players.  **R-F2:** Register enemies for a level.  **R-F3:** Register treasures for a level.  **R-F4:** Change a player's score.  **R-F5:** Increase the level for a player.  **R-F6:** Show treasures and enemies by level  **R-F7:** Show the same treasure in every level  **R-F8:** Show TOP 5 Players  **R-F9:** Report the number of consonants found in enemy names  **R-F10:** Report the enemy that gives the highest score  **R-F11:** Report the amount found of an enemy type in all levels |
| CONTEXT OF THE PROBLEM | * What are the maximum treasures per level? * What is the maximum number of enemies per level? |
| NON-FUNCTIONAL REQUIREMENTS | **R-NF1:** The application must be developed for native web and mobile environments (Android and Apple).  **R-NF2:** The treasure deployment must be done in less than 2 seconds.  **R-NF3:** This version of the game has a resolution of 1280 x 720.  **R-NF4:** This version of the game has a maximum of 20 players, 10 levels, 50 treasures and 25 enemies. |

**Functional Requirements Analysis Table**

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| Name or identifier | **R-F1:** Create players. | | |
| Resume | It allows registering players through their nickname (player's unique id), name, initial score (10) and number of lives (5). | | |
| Inputs | Input Name | Data Type | Choice or Repeat Condition |
| playerNickName | String | If the nickname is available |
| playerName | String |  |
| initialScore | double | Default: 10 |
| initialLives | Int | Default: 5 |
| initialLevel | Int | Default: 0 (First Level) |
| General activities necessary to obtain the results | If the player limit hasn’t yet been reached (20), and the nickname is not repeated. | | |
| Result or postcondition | The player is successfully registered. | | |
| Outputs | Input Name | Data Type | Choice or Repeat Condition |
| newPlayer | Player | All data must be supplied  The Player Limit hasn’t yet been Reached. |

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| Name or identifier | **R-F2:** Register enemies for a level. | | |
| Resume | It allows registering enemies through their name (enemy's unique id), a type (Enum Type), the score that stays in case he beats the player, the score that is added to him if he is defeated. The X and Y position in pixels (When registering in a level, positions generate randomly) | | |
| Inputs | Input Name | Data Type | Choice or Repeat Condition |
| enemyName | String | If the name is available |
| enType | int |  |
| loseScore | double |  |
| winLives | double |  |
| General activities necessary to obtain the results | If the enemy limit has not yet been reached (25), and the name is not repeated. | | |
| Result or postcondition | The enemy is successfully registered. | | |
| Outputs | Input Name | Data Type | Choice or Repeat Condition |
| newEnemy | Enemy | All data must be supplied  The Enemy Limit has not yet been Reached. |

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| Name or identifier | **R-F3:** Register treasures for a level. | | |
| Resume | It allows registering treasures through their name, an image URL, the score that is added to player if it is founded. The X and Y position in pixels (When registering in a level, positions generate randomly) | | |
| Inputs | Input Name | Data Type | Choice or Repeat Condition |
| trName | String |  |
| ImageURL | String |  |
| award Score | double |  |
| locatedLevel | Int | The level where the treasure will be found |
| trInLvl | Int | The number of treasures in level |
| General activities necessary to obtain the results | If the treasure limit has not yet been reached (50) | | |
| Result or postcondition | The treasures were successfully registered. | | |
| Outputs | Input Name | Data Type | Choice or Repeat Condition |
| newTreasure | Treasure | All data must be supplied  The Treasure Limit has not yet been Reached. |

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| Name or identifier | **R-F4:** Change a player's score. | | |
| Resume | It allows registering treasures through their name, an image URL, the score that is added to player if it is founded. The X and Y position in pixels (When registering in a level, positions generate randomly) | | |
| Inputs | Input Name | Data Type | Choice or Repeat Condition |
| modPlayer | String | The nickname of the player exists |
| playerNewScore | Double |  |
| General activities necessary to obtain the results | All data must be supplied. | | |
| Result or postcondition | Score Successfully Changed. | | |
| Outputs | Input Name | Data Type | Choice or Repeat Condition |
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| Name or identifier | **R-F5:** Increase the level for a player. | | |
| Resume | Increases a player's current level automatically when the player's score increases. | | |
| Inputs | Input Name | Data Type | Choice or Repeat Condition |
| modPlayer | String | The nickname of the player exists |
| playerNewScore | Double |  |
| General activities necessary to obtain the results | All data must be supplied. It also returns the missing points to reach the next level. | | |
| Result or postcondition | Score Successfully Changed. | | |
| Outputs | Input Name | Data Type | Choice or Repeat Condition |
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| Name or identifier | **R-F6:** Show treasures and enemies by level. | | |
| Resume | Show all treasures and enemies that were added previously in a level | | |
| Inputs | Input Name | Data Type | Choice or Repeat Condition |
| objLvl | int | The level must be (1-10) |
| General activities necessary to obtain the results | All data must be supplied. | | |
| Result or postcondition | Treasures: (All the treasures in level)  Enemies: (All the enemies in level) | | |
| Outputs | Input Name | Data Type | Choice or Repeat Condition |
| showObjinLvl | print () | - |

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| Name or identifier | **R-F7:** Show the same treasure in every level | | |
| Resume | Show treasures with the same name on different levels | | |
| Inputs | Input Name | Data Type | Choice or Repeat Condition |
| tRName | String | The treasures Names exists |
| General activities necessary to obtain the results | All data must be supplied. There must be registered treasures | | |
| Result or postcondition | The amount of the treasures in every level that have the same name (tRName) | | |
| Outputs | Input Name | Data Type | Choice or Repeat Condition |
| searchTreasinLvl | print () | - |

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| Name or identifier | **R-F8:** Show TOP 5 Players | | |
| Resume | Shows the top 5 players with the highest score | | |
| Inputs | Input Name | Data Type | Choice or Repeat Condition |
| - | - | - |
| General activities necessary to obtain the results | There must be registered players | | |
| Result or postcondition | TOP 5 Players | | |
| Outputs | Input Name | Data Type | Choice or Repeat Condition |
| getOrderedScores | print () | - |

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| Name or identifier | **R-F9:** Report the number of consonants found in enemy names | | |
| Resume | Gives you the number of consonants in each name of each enemy | | |
| Inputs | Input Name | Data Type | Choice or Repeat Condition |
| - | - | - |
| General activities necessary to obtain the results | There must be registered enemies | | |
| Result or postcondition | The consonants of every name of every enemy | | |
| Outputs | Input Name | Data Type | Choice or Repeat Condition |
| consonantsInEnemies | print () | - |

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| Name or identifier | **R-F10:** Report the enemy that gives the highest score | | |
| Resume | Increases a player's current level automatically when the player's score increases. | | |
| Inputs | Input Name | Data Type | Choice or Repeat Condition |
| - | - | - |
| General activities necessary to obtain the results | There must be registered enemies | | |
| Result or postcondition | The name of the enemy with the max given score and it’s score | | |
| Outputs | Input Name | Data Type | Choice or Repeat Condition |
| searchEnemyMaxScore | print () | - |

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| Name or identifier | **R-F11:** Report the amount of an enemy with its type in all levels | | |
| Resume | Allows user to see how many enemies of a type there are in each level | | |
| Inputs | Input Name | Data Type | Choice or Repeat Condition |
| - | - | - |
| General activities necessary to obtain the results | There must be registered enemies | | |
| Result or postcondition | The types and the amount of the enemies by type in every level | | |
| Outputs | Input Name | Data Type | Choice or Repeat Condition |
| searchTreasinLvl | print () | - |