# **Identificación del problema y análisis de requerimientos**

## **Caso de Estudio :**

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| Cliente | Eric Barone Main designer of Stardew Valley |
| Usuario | Stardew Valley Players |
| Requerimientos funcionales | *R1-Plant*  *R2-Harvest*  *R3-Chest Crafting*  *R4-Place Items in Chest*  *R5-Take out items from chest*  *R6-Organize chest items*  *R7-Classify Chest*  *R8-Chest Item Searching* |
| Contexto del problema | *[Eric Barone, the lead designer of the videogame Stardew Valley, has contacted us because he wanted help with the development of some aspects of the game. The game has been having trouble with its chest features, such as low time efficiency when managing your items, so we were asked to improve this aspect of the game in order to make it more efficient. It´ll be done by adding new chest management features, such as chest creation, chest classification, search for items and chest usage. All these features will be centered around plantations and all items related to them. ]* |
| Requerimientos no funcionales | *RNF1-User Mistake Protection*  *RNF2-Serialization through JSON*  *RNF3-Data persistency*  *RNF4-Software in java programing language* |

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| Identificador y nombre | *[RF1-Plant]* | | | |
| Resumen | *[The user must be able to plant different types of seeds, depending of the station of the year, the seeds should only be planted if it is currently the correct station]* | | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | | **Condición valores válidos** |
| plantType | int | | *[integer numbers, from 1 to 5]* |
| plant | int | | *[integer numbers, from 1 to 4]* |
| Resultado o Postcondición | The plantation is succesfully created | | | |
| Salidas | **Nombre salida** | | **Tipo de dato** | **Formato** |
| successMessage | | String | *[Text string with the message*  *“Successful plantation”]* |
| Unsuccessful plantation creation | | | |
| unsuccessMessage | | String | [String with the message  “The plantation was unsuccesful””] |

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| Identificador y nombre | *[RF2-Harvest]* | | | |
| Resumen | *[The user must be able to harvest the planted seeds, it should only be doable when all the time necessary to harvest the plant has elapsed]* | | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | | **Condición valores válidos** |
| plant | String | | *[String with the name of the plant ready to harvest]* |
| Resultado o Postcondición | Successful harvesting and the plant is saved to the character inventory | | | |
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| Salidas | **Nombre salida** | | **Tipo de dato** | **Formato** |
| successMessage | | String | *[Text string with the message*  *“Successful Harvesting”]* |
| unsuccessMessage | | String | [String with the message  “The harvest couldn't be done ”] |
| Unsuccessful harvesting | | | | |

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| Identificador y nombre | *[RF3-Chest crafting]* | | | |
| Resumen | *[The user must be able to craft a chest when needed if he has the right materials, resulting in the creation of a usable chest.]* | | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | | **Condición valores válidos** |
|  |  | |  |
|  |  | |  |
| Resultado o Postcondición | The chest is successfully created | | | |
|  |  | | | |
| Salidas | **Nombre salida** | | **Tipo de dato** | **Formato** |
| succesfulMessage | | String | *[String message with the text:*  *“The chest was successfully created”]* |
| unsuccesfulMessage | | String | [String message with the text:  “The chest was not created successfully” ] |
| Unsuccessful chest creation | | | | |

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| Identificador y nombre | *[RF4-Place Items in Chest]* | | | |
| Resumen | *[The user must be able to take items from the character inventory and place them in an existent chest, resulting in the item being eliminated from the characters inventory and storing it in the chest.]* | | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | | **Condición valores válidos** |
| inventoryItemPlace | int | | *[integer numbers, from 1 to 20]* |
| newPlaceInChest | int | | *[integer numbers, from 1 to 50]* |
| Resultado o Postcondición | The item is successfully saved in the chest | | | |
|  |  | | | |
| Salidas | **Nombre salida** | | **Tipo de dato** | **Formato** |
| succesMessage | | String | *[String message with the text:*  *“The item was saved”]* |
| errorMessage | | String | [String message with the text:  “The item couldnt be saved” ] |
| the item couldn´t be saved in the chest | | | | |

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| Identificador y nombre | *[RF5-Take out items from chest]* | | | |
| Resumen | *[The user must be able to take items from a chest and those items will be saved on the character´s inventory]* | | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | | **Condición valores válidos** |
| chestItemPlace | int | | *[integer numbers, from 1 to 50]* |
| Resultado o Postcondición | The item is successfully saved in the inventory | | | |
|  |  | | | |
| Salidas | **Nombre salida** | | **Tipo de dato** | **Formato** |
| succesMessage | | String | *[String message with the text:*  *“The item was saved”]* |
| errorMessage | | String | [String message with the text:  “The item couldnt be saved” ] |
| The item couldnt be saved in the inventory | | | | |

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| Identificador y nombre | *[RF6-Organize chest items]* | | | |
| Resumen | *[The user must be able to organize the items saved in a chest, modifying their old place to a new place in the chest]* | | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | | **Condición valores válidos** |
| itemPlace | int | | *[integer numbers, from 1 to 50]* |
| itemNewPlace | int | | *[integer numbers, from 1 to 50]* |
| Resultado o Postcondición | The item place is modified | | | |
|  |  | | | |
| Salidas | **Nombre salida** | | **Tipo de dato** | **Formato** |
| succesMessage | | String | *[String message with the text:*  *“The item place was modified”]* |
| errorMessage | | String | [String message with the text:  “The item couldnt be moved” ] |
| The item couldnt be placed | | | | |

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| Identificador y nombre | *[RF7-Classify chest]* | | | |
| Resumen | *[The user must be able to classify chests by selecting different criterias, resulting in the chest only storing items that meet the criteria, items that do not meet the criteria can not be stored in the chest and in case of trying an error message will appear.]* | | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | | **Condición valores válidos** |
| plantationName | String | | *[String with the plantation name set to classify]* |
| plantationType | int | | *[integer numbers, from 1 to 4]* |
| GrowingDays | int | | *integer number from 1 to 28* |
|  |  | |  |
| Resultado o Postcondición | The chest is successfully sorted depending on the criteria. | | | |
|  |  | | | |
| Salidas | **Nombre salida** | | **Tipo de dato** | **Formato** |
| SuccessfullMesage | | String | *[*String with the message:  “The chest criteria was applied.”*]* |
| unsuccess Message | | String | [String with the message:  “The chest criteria couldn´t be applied.”] |

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| Identificador y nombre | *[RF8-chest item searching]* | | | |
| Resumen | *[The user must be able to search an specific item, when a name is searched it should only display items that matches that name ]* | | | |
| Entradas | **Nombre entrada** | **Tipo de dato** | | **Condición valores válidos** |
| plantationName | String | | *[String with the plant name set to be searched]* |
|  |  | |  |
| Resultado o Postcondición | The searched item becomes the only item displayed | | | |
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| Salidas | **Nombre salida** | | **Tipo de dato** | **Formato** |
| unsuccesfulMessage | | String | *[“the item could not be found”]* |
| The searched item couldn´t be found. | | | |