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

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| --- | --- |
| CLIENTE | ReaderX |
| USUARIO | ReaderX clients and employees |
| REQUERIMIENTOS FUNCIONALES | FR0: Register users.  FR1: Register books.  FR2: Register journals.  FR3: Modify item.  FR4: Delete item.  FR5: Buy item.  FR6: Reading simulation.  FR7: Report generation. |
| CONTEXTO DEL PROBLEMA | ReaderX is an Egyptian conglomerate wants to develop a software prototype to manage its global book and magazine publishing business. |
| REQUERIMIENTOS NO FUNCIONALES | NFR0: The system must be simple and easy to use.  NFR1: The system must be able to adapt to further updates. |
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**Tabla de análisis de requerimientos funcionales (Nota: Una tabla por cada requerimiento funcional)**

| Nombre o identificador | FR0: Register user | | |
| --- | --- | --- | --- |
| Resumen | The prototype should have two types of users: regular and premium. The Regular user will be able to buy 5 books, subscribe to up to 2 magazines and during his use of the platform, he will be presented with advertisements. Premium users will be able to purchase books and subscribe to as many magazines as they wish and can afford. To register users on the platform, the following information is required: Name, ID and date of joining the platform. ReadX anticipates the evolution and dynamic growth of its platform and therefore requests that the prototype design contemplates the future creation of other types of users. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| id | int | Valid integers numbers |
| name | String |  |
| nickname | String |  |
| userType | int | Only valid integers numbers   1. Estándar) 2. Premium) |
| categoryType | Int | Only valid integers numbers   1. Plata) 2. Oro) 3. Diamante) |
| Resultado o postcondición | If the data entered by the user is valid, he/she will be registered, otherwise he/she will have to try the process again. | | |
| Salidas | Nombre salida | Tipo de dato | Condición de selección o repetición |
| msg | String | Msg = “Usuario registrado exitosamente”  Msg = “Memoria llena, no se pudo registrar el Usuario” |

| Nombre o identificador | FR1: Register book | | |
| --- | --- | --- | --- |
| Resumen | Each book has a unique identifier (3 hexadecimal characters), a name, a number of pages, a short review, a publication date, a genre, a URL leading to a repository with the book's cover, the retail value (in dollars), the number of copies sold and the accumulated number of pages read. The possible genres existing in the prototype are Science Fiction, Fantasy and Historical Novel. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| bookId | String | Hexadecimal and contain 3 characters |
| bookName | String |  |
| pages | int | Valid integers numbers |
| review | String |  |
| genre | Int | Only valid integers numbers   1. Ciencia ficción) 2. Fantasía) 3. Novela histórica) |
| publicationDate | Date | dd/mm/yyyy |
| price | int | It must be in dollars |
| soldsNumber | int |  |
| URL | String | url type |
| Resultado o postcondición | If the data entered by the user is valid, the book will be registered. | | |
| Salidas | Nombre salida | Tipo de dato | Condición de selección o repetición |
| msg | String | Msg = “Libro registrado exitosamente”  Msg = “Memoria llena, no se pudo registrar el libro” |

| Nombre o identificador | FR2: Register journal | | |
| --- | --- | --- | --- |
| Resumen | Each journal has a unique identifier (3 hexadecimal characters), a name, a number of pages, a short review, a publication date, a genre, a URL leading to a repository with the journal´s cover, the retail value (in dollars), the frequency of emission, the number of active subscriptions and the accumulated number of pages read. The possible existing categories in the prototype are Varieties, Design and Scientific | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| journalId | String | Hexadecimal and contain 3 characters |
| journalName | String |  |
| pages | int | Valid integers numbers |
| category | Int | Only valid integers numbers   1. Variedades) 2. Diseño) 3. Científico) |
| publicationDate | Date | dd/mm/yyyy |
| subscription | int | It must be in dollars |
| soldsNumber | int |  |
| frecuency | String |  |
| URL | String | url type |
| Resultado o postcondición | If the data entered by the user is valid, the journal will be registered. | | |
| Salidas | Nombre salida | Tipo de dato | Condición de selección o repetición |
| msg | String | msg = “Revista registrada exitosamente”  msg = “Memoria llena, no se pudo registrar la revista” |

| Nombre o identificador | FR3: Modify item | | |
| --- | --- | --- | --- |
| Resumen | The system must allow employees to change or edit the information of a certain product by selecting a product by their unique ID and by selecting which attribute they want to change and the new version of that attribute. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| itemId | String | Must be a item registered in the database |
| modifyAttribute | String |  |
| newAttribute | String |  |
| Resultado o postcondición | If the data entered by the user is valid, the attribute will be modified. | | |
| Salidas | Nombre salida | Tipo de dato | Condición de selección o repetición |
| msg | String | msg = “Atributo modificado exitosamente”  msg = “No se pudo modificar el atributo” |

| Nombre o identificador | FR4: Delete item | | |
| --- | --- | --- | --- |
| Resumen | The system must allow the employee to delete the information of a registered product by selecting said product by its ID and entering a confirmation. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| itemId | String | Must be a item registered in the database |
| deleteConfirmation | int | Only valid integers numbers   1. Si) 2. No) |
| Resultado o postcondición | If the data entered by the user is valid, the item will be delete. | | |
| Salidas | Nombre salida | Tipo de dato | Condición de selección o repetición |
| msg | String | msg = “Item eliminado exitosamente”  msg = “No se pudo eliminar el item” |

| Nombre o identificador | FR5: Buy item | | |
| --- | --- | --- | --- |
| Resumen | When users purchase a book or subscribe to a journal, the date of the transaction and the amount paid should be stored on an invoice, and the number of copies sold or active subscriptions should be updated, as appropriate to the type of bibliographic product. In addition, the user should be allowed to cancel the subscription to a journal at any time. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| itemId | String | Must be a item registered in the database |
| Resultado o postcondición | If the data entered by the user is valid, the item will be sold. | | |
| Salidas | Nombre salida | Tipo de dato | Condición de selección o repetición |
| msg | String | msg = “Item vendido exitosamente”  msg = “No se pudo vender el item” |

| Nombre o identificador | FR6: Reading simulation | | |
| --- | --- | --- | --- |
| Resumen | The simulation of the reading session is simply a console presentation of the name of the bibliographic product, the current page being read and navigation options to read the previous page, the next page and to return to the library. it should be noted that during the reading session, in the case of regular users, advertisements should be presented at two moments: at the beginning of the reading session and after every 20 pages read of a book or 5 pages read of a journal. | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| itemId | String | Must be a item registered in the database |
|  | navigation | int | Only valid integers numbers   1. Previous page) 2. Next page) 3. Exit) |
| Resultado o postcondición | If the item entered by the user is in the database, it will be able to read the item. | | |
| Salidas | Nombre salida | Tipo de dato | Condición de selección o repetición |
| menu | String | msg = “Previous page”  msg = “Next page”  msg = “Exit”  msg = “Current page” |

| Nombre o identificador | FR7: Report generation | | |
| --- | --- | --- | --- |
| Resumen | In order to generate targeted content, ReadX requests that the prototype can generate the following reports in real time:  For each type of bibliographic product, book and journal, report the total cumulative pages read for the entire platform (product type and number of pages read).  Report the most read book genre and journal category for the entire platform (genre or category name and number of pages read). | | |
| Entradas | Nombre entrada | Tipo de dato | Condición de selección o repetición |
| itemPages | int | Must be a item registered in the database |
|  | itemCategoryPages | int | Must be a item registered in the database |
| Resultado o postcondición | If the item entered by the user is in the database, it will be able to read the item. | | |
| Salidas | Nombre salida | Tipo de dato | Condición de selección o repetición |
| report | String | msg |