**FUNDACION UNIVERSITARIA INTERNACIONAL DE LA RIOJA - UNIR**

**Laboratorio:** [**Desarrollo de un Back-End utilizando Java y Spring**](https://micampus.unir.net/courses/33242/assignments/525396)

**Grupo No 9**

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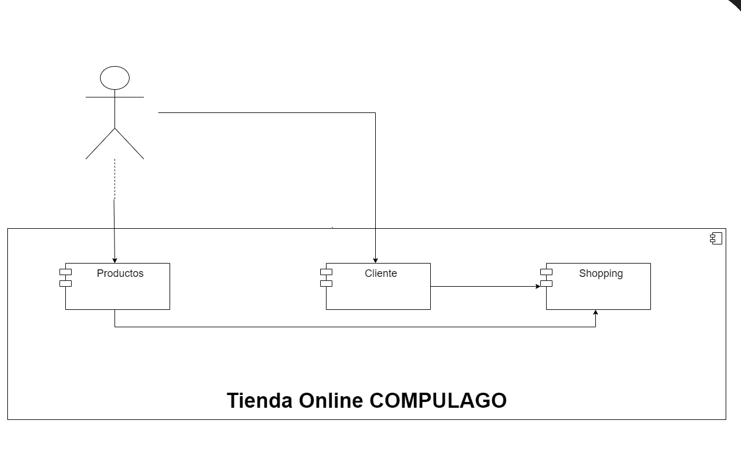
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# INTRODUCCION

El objetivo del presente documento es especificar, documentar y gestionar los perfiles de diferentes servicios web para la tienda de Tecnología ONLINE COMPULAGO.

Se estarían presentado los servicios relacionados con:

* Productos.
* Clientes.
* Shopping.



## FICHAS TECNICAS DE SERVICIOS Y FICHAS DE OPERACION

**Ficha TÉCNICA del Servicio PRODUCTS**

|  |  |
| --- | --- |
| **Servicio** | |
| Nombre | **Product** |
| Descripción | Servicio que permite consultar, actualizar , crear y eliminar productos de la tienda COMPULAGO |
| Versión | 1.0 |
| Estado | Diseño / Desarrollo / Implementado / Operación |
| URL del Servicio | localHOST |
| Procesos y Actividades de Negocio relacionadas | Datos usados por el servicio: Invoice |
| Fuente de datos del servicio | Nombre |
| Base de datos H2 |
| Consumidores del servicio identificados | Nombre |
| Portal Web |
| Seguridad | N/A |
| Nivel de Servicio (Disponibilidad) | N/A |
| Restricciones | Indica condiciones de operación dentro de las cuales el servicio puede ser consumido. N/A |
| **Datos Técnicos** | |
| Tipo de Servicio | REST |
| Lenguaje | Java, SpringBoot |
| **Operaciones** | |
| * Creación product (post) * Consulta products (get) * Consulta un único producto (get) * Modificación product (put) * Eliminación product(delete) | |

**Ficha de la OPERACIÓN de PRODUCT**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Operación** | | | | | | | |
| Nombre | **- Listar products** | | | | | | |
| Precondiciones | - Carga de ítems BD H2 , datos inicialmente cargados y/o ingresados como nuevos a través del servicios products | | | | | | |
| Postcondiciones |  | | | | | | |
| **Entradas** | | | | | | | |
| **Nombre** | **Tipo (numérico, Texto, etc)** | | | **Longitud** | | **Obligatorio (S/N)** | **Observación** |
| Solicitud a lista | Lista | | |  | | S |  |
| **Salidas** | | | | | | | |
| **Nombre** | **Tipo** | | | **Longitud** | | **Obligatorio** | **Observación** |
| Id | Long | | |  | |  | Identificador único |
| Model | String | | |  | |  | Modelo del dispositivo |
| maker | String | | |  | |  |  |
| Processor | String | | |  | |  |  |
| Memory | String | | |  | |  |  |
| Hdd | String | | |  | |  |  |
| Ssd | String | | |  | |  |  |
| screen | String | | |  | |  |  |
| Stock | Double | | |  | |  |  |
| price | Double | | |  | |  |  |
| Status | String | | |  | |  |  |
| Create\_at | Date | | |  | |  | Fecha de creación |
| Category\_id | Category | | |  | |  | Categoría a la que pertenece |
| img | String | | |  | |  | Imagen del producto |
| **Transformaciones Asociadas** | | | | | | | |
| **Campo Origen** | **Regla de la transformación** | | | | | **Campo destino** | |
| Id | N/A | | | | | N/A | |
| **Secuencia de Ejecución** | | | | | | | |
|  | | **Paso** | | | **Acción** | | |
| **Secuencia Normal** | | 1 | | | Invocación del servicio / recepción de parámetros | | |
| 2 | | | Consulta de Información a BD H2 | | |
| 3 | | | Entrega del resultado | | |
| **Secuencia Alterna 1** | | N/A | | | N/A | | |
| **Excepciones** | | | | | | | |
| Sin resultados | | | La consulta no arroja resultados | | | | |

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| **Operación** | | | | | | | | |
| Nombre | - **Buscar product** | | | | | | | |
| Precondiciones | - Carga de ítems BD H2 , datos inicialmente cargados y/o ingresados como nuevos a través del servicio products | | | | | | | |
| Postcondiciones |  | | | | | | | |
| **Entradas** | | | | | | | | |
| **Nombre** | | **Tipo (numérico, Texto, etc)** | | | **Longitud** | | **Obligatorio (S/N)** | **Observación** |
| Id | | string | | |  | | S |  |
| **Salidas** | | | | | | | | |
| **Nombre** | | **Tipo** | | | **Longitud** | | **Obligatorio** | **Observación** |
| Id | | Long | | |  | |  |  |
| Model | | String | | |  | |  |  |
| maker | | String | | |  | |  |  |
| Proessor | | String | | |  | |  |  |
| Memory | | String | | |  | |  |  |
| Hdd | | String | | |  | |  |  |
| Ssd | | String | | |  | |  |  |
| screen | | String | | |  | |  |  |
| Stock | | Double | | |  | |  |  |
| price | | Double | | |  | |  |  |
| Status | | String | | |  | |  |  |
| Create\_at | | Date | | |  | |  |  |
| Category\_id | | Category | | |  | |  |  |
| img | | String | | |  | |  |  |
| **Transformaciones Asociadas** | | | | | | | | |
| **Campo Origen** | **Regla de la transformación** | | | | | | **Campo destino** | |
| Id | N/A | | | | | | N/A | |
| **Secuencia de Ejecución** | | | | | | | | |
|  | | | **Paso** | | | **Acción** | | |
| **Secuencia Normal** | | | 1 | | | Invocación del servicio / recepción de parámetros | | |
| 2 | | | Consulta de Información a BD H2 | | |
| 3 | | | Entrega del resultado | | |
| **Secuencia Alterna 1** | | | N/A | | | N/A | | |
| **Excepciones** | | | | | | | | |
| Sin resultados | | | | La consulta no arroja resultados | | | | |

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| **Operación** | | | | | | | | |
| Nombre | - **Crear products** | | | | | | | |
| Precondiciones | - Estructura de la BD H2 existente, datos inicialmente cargados y/o ingresados como nuevos a través del servicio products. | | | | | | | |
| Postcondiciones |  | | | | | | | |
| **Entradas** | | | | | | | | |
| **Nombre** | | **Tipo (numérico, Texto, etc)** | | | **Longitud** | | **Obligatorio (S/N)** | **Observación** |
| Model | | String | | |  | | S |  |
| maker | | String | | |  | | S |  |
| Proessor | | String | | |  | | S |  |
| Memory | | String | | |  | | S |  |
| Hdd | | String | | |  | | S |  |
| Ssd | | String | | |  | | S |  |
| screen | | String | | |  | | S |  |
| Stock | | Double | | |  | | S |  |
| price | | Double | | |  | | S |  |
| Create\_at | | Date | | |  | | S |  |
| Category\_id | | Category | | |  | | S |  |
| img | | String | | |  | |  |  |
| **Salidas** | | | | | | | | |
| **Nombre** | | **Tipo** | | | **Longitud** | | **Obligatorio** | **Observación** |
| Id | | Long | | |  | |  |  |
| Model | | String | | |  | |  |  |
| maker | | String | | |  | |  |  |
| Proessor | | String | | |  | |  |  |
| Memory | | String | | |  | |  |  |
| Hdd | | String | | |  | |  |  |
| Ssd | | String | | |  | |  |  |
| screen | | String | | |  | |  |  |
| Stock | | Double | | |  | |  |  |
| price | | Double | | |  | |  |  |
| Status | | String | | |  | |  |  |
| Create\_at | | Date | | |  | |  |  |
| Category\_id | | Category | | |  | |  |  |
| img | | String | | |  | |  |  |
| **Transformaciones Asociadas** | | | | | | | | |
| **Campo Origen** | **Regla de la transformación** | | | | | | **Campo destino** | |
| Id | N/A | | | | | | N/A | |
| **Secuencia de Ejecución** | | | | | | | | |
|  | | | **Paso** | | | **Acción** | | |
| **Secuencia Normal** | | | 1 | | | Invocación del servicio / recepción de parámetros | | |
| 2 | | | Carga de Información a BD H2 | | |
| 3 | | | N/A | | |
| **Secuencia Alterna 1** | | | N/A | | | N/A | | |
| **Excepciones** | | | | | | | | |
| Error de I/O | | | | No se pueden almacenar los datos | | | | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Operación** | | | | | | | | |
| Nombre | - **Actualizar un product** | | | | | | | |
| Precondiciones | - Carga de ítems BD H2 , datos inicialmente cargados y/o ingresados como nuevos a través de los servicios de customer y products | | | | | | | |
| Postcondiciones |  | | | | | | | |
| **Entradas** | | | | | | | | |
| **Nombre** | | **Tipo (numérico, Texto, etc)** | | | **Longitud** | | **Obligatorio (S/N)** | **Observación** |
| Id | | Long | | |  | | S |  |
| **Salidas** | | | | | | | | |
| **Nombre** | | **Tipo** | | | **Longitud** | | **Obligatorio** | **Observación** |
| Id | | Long | | |  | | S |  |
| Model | | String | | |  | | S |  |
| maker | | String | | |  | | S |  |
| Proessor | | String | | |  | | S |  |
| Memory | | String | | |  | | S |  |
| Hdd | | String | | |  | | S |  |
| Ssd | | String | | |  | | S |  |
| screen | | String | | |  | | S |  |
| Stock | | Double | | |  | | S |  |
| price | | Double | | |  | | S |  |
| Create\_at | | Date | | |  | | S |  |
| Category\_id | | Category | | |  | | S |  |
| img | | String | | |  | |  |  |
| **Transformaciones Asociadas** | | | | | | | | |
| **Campo Origen** | **Regla de la transformación** | | | | | | **Campo destino** | |
| Id | N/A | | | | | | N/A | |
| **Secuencia de Ejecución** | | | | | | | | |
|  | | | **Paso** | | | **Acción** | | |
| **Secuencia Normal** | | | 1 | | | Invocación del servicio / recepción de parámetros | | |
| 2 | | | Carga de Información a BD H2 | | |
| 3 | | | N/A | | |
| **Secuencia Alterna 1** | | | N/A | | | N/A | | |
| **Excepciones** | | | | | | | | |
| Error de I/O | | | | No se pueden almacenar los datos | | | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Operación** | | | | | | | |
| Nombre | - **Eliminar un product** | | | | | | |
| Precondiciones | - Carga de ítems BD H2 , datos inicialmente cargados y/o ingresados como nuevos a través de los servicios de el servicio | | | | | | |
| Postcondiciones |  | | | | | | |
| **Entradas** | | | | | | | |
| **Nombre** | **Tipo (numérico, Texto, etc)** | | | **Longitud** | | **Obligatorio (S/N)** | **Observación** |
| Id | Long | | |  | | S |  |
| **Salidas** | | | | | | | |
| **Nombre** | **Tipo** | | | **Longitud** | | **Obligatorio** | **Observación** |
| Id | Long | | |  | | S |  |
| Model | String | | |  | | S |  |
| maker | String | | |  | | S |  |
| Proessor | String | | |  | | S |  |
| Memory | String | | |  | | S |  |
| Hdd | String | | |  | | S |  |
| Ssd | String | | |  | | S |  |
| screen | String | | |  | | S |  |
| Stock | Double | | |  | | S |  |
| price | Double | | |  | | S |  |
| Status | String | | |  | | S |  |
| Créate\_at | Date | | |  | | S |  |
| Categoría\_id | Category | | |  | | S |  |
| img | String | | |  | |  |  |
| **Transformaciones Asociadas** | | | | | | | |
| **Campo Origen** | **Regla de la transformación** | | | | | **Campo destino** | |
| Id | N/A | | | | | N/A | |
| **Secuencia de Ejecución** | | | | | | | |
|  | | **Paso** | | | **Acción** | | |
| **Secuencia Normal** | | 1 | | | Invocación del servicio / recepción de parámetros | | |
| 2 | | | Eliminacion Información a BD H2 | | |
| 3 | | | N/A | | |
| **Secuencia Alterna 1** | | N/A | | | N/A | | |
| **Excepciones** | | | | | | | |
| Error de I/O | | | No se pueden encontrar los datos | | | | |

**Ficha TECNICA del Servicio COSTUMERS**

|  |  |
| --- | --- |
| **Servicio** | |
| Nombre | **Costumer** |
| Descripción | Servicio que permite consultar, actualizar , crear y eliminar clientes de la tienda COMPULAGO |
| Versión | 1.0 |
| Estado | Diseño / Desarrollo / Implementado / Operación |
| URL del Servicio | localHOST |
| Procesos y Actividades de Negocio relacionadas | Datos usados por el servicio : Invoice. |
| Fuente de datos del servicio | Nombre |
| Base de datos H2 |
| Consumidores del servicio identificados | Nombre |
| Portal Web |
| Seguridad | N/A |
| Nivel de Servicio (Disponibilidad) | Acuerdo de disponibilidad del servicio. N/A. |
| Restricciones | Indica condiciones de operación dentro de las cuales el servicio puede ser consumido. N/A |
| **Datos Técnicos** | |
| Tipo de Servicio | REST |
| Lenguaje | Java, SpringBoot |
| **Operaciones** | |
| * Creación costumer (post) * Consulta costumer (get) * Buscar costumer (get) * Modificación costumer (put) * Eliminación costumer(delete) | |

**Ficha de la OPERACIÓN de COSTUMER**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Operación** | | | | | | | |
| Nombre | **- Listar COSTUMER** | | | | | | |
| Precondiciones | - Carga de ítems BD H2 , datos inicialmente cargados y/o ingresados como nuevos a través del servicio costumer | | | | | | |
| Postcondiciones |  | | | | | | |
| **Entradas** | | | | | | | |
| **Nombre** | **Tipo (numérico, Texto, etc)** | | | **Longitud** | | **Obligatorio (S/N)** | **Observación** |
| Solicitud a lista | Lista | | |  | | S |  |
| **Salidas** | | | | | | | |
| **Nombre** | **Tipo** | | | **Longitud** | | **Obligatorio** | **Observación** |
| Id | Long | | |  | |  |  |
| number\_id | String | | |  | |  |  |
| first\_name | String | | |  | |  |  |
| last\_name | Double | | |  | |  |  |
| email | Double | | |  | |  |  |
| Phone | String | | |  | |  |  |
| address | String | | |  | |  |  |
| region\_id | Region | | |  | |  |  |
| state | String | | |  | |  |  |
| **Transformaciones Asociadas** |  | | |  | |  |  |
| **Campo Origen** | | | | | | | | **Regla de la transformación** | **Campo destino** | | |
| Id | N/A | | | | | N/A | |
| **Secuencia de Ejecución** |  | | | | |  | |
|  | | | | | | | | **Paso** | | **Acción** | | |
| **Secuencia Normal** | | 1 | | | Invocación del servicio / recepción de parámetros | | |
| **Secuencia Normal**  **Secuencia Alterna 1** | | 2 | | | Consulta de Información a BD H2 | | |
| 3 | | | Entrega del resultado | | |
| N/A | | | N/A | | |
| **Excepciones** | |  | | |  | | |
| Sin resultados | | | | | | | | La consulta no arroja resultados | | |
|  | | |  | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Operación** | | | | | | | | |
| Nombre | - **Buscar costumer** | | | | | | | |
| Precondiciones | - Carga de ítems BD H2 , datos inicialmente cargados y/o ingresados como nuevos a través del servicio costumer | | | | | | | |
| Postcondiciones |  | | | | | | | |
| **Entradas** | | | | | | | | |
| **Nombre** | | **Tipo (numérico, Texto, etc)** | | | **Longitud** | | **Obligatorio (S/N)** | **Observación** |
| Id | | string | | |  | | S |  |
| **Salidas** | | | | | | | | |
| **Nombre** | | **Tipo** | | | **Longitud** | | **Obligatorio** | **Observación** |
| Id | | Long | | |  | |  |  |
| number\_id | | String | | |  | |  |  |
| first\_name | | String | | |  | |  |  |
| last\_name | | Double | | |  | |  |  |
| email | | Double | | |  | |  |  |
| Phone | | String | | |  | |  |  |
| Address | | String | | |  | |  |  |
| region\_id | | Region | | |  | |  |  |
| state | | String | | |  | |  |  |
| **Transformaciones Asociadas** | | | | | | | | |
| **Campo Origen** | **Regla de la transformación** | | | | | | **Campo destino** | |
| Id | N/A | | | | | | N/A | |
| **Secuencia de Ejecución** | | | | | | | | |
|  | | | **Paso** | | | **Acción** | | |
| **Secuencia Normal** | | | 1 | | | Invocación del servicio / recepción de parámetros | | |
| 2 | | | Consulta de Información a BD H2 | | |
| 3 | | | Entrega del resultado | | |
| **Secuencia Alterna 1** | | | N/A | | | N/A | | |
| **Excepciones** | | | | | | | | |
| Sin resultados | | | | La consulta no arroja resultados | | | | |

|  |  |  |  |  |  |  |  |  |
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| **Operación** | | | | | | | | |
| Nombre | - **Crear costumer** | | | | | | | |
| Precondiciones | - Estructura de la BD H2 existente, datos inicialmente cargados y/o ingresados como nuevos a través del servicio costumer. | | | | | | | |
| Postcondiciones |  | | | | | | | |
| **Entradas** | | | | | | | | |
| **Nombre** | | **Tipo (numérico, Texto, etc)** | | | **Longitud** | | **Obligatorio (S/N)** | **Observación** |
| number\_id | | String | | |  | | S |  |
| first\_name | | String | | |  | | S |  |
| last\_name | | Double | | |  | | S |  |
| email | | Double | | |  | | s |  |
| Phone | | String | | |  | | S |  |
| Address | | String | | |  | | S |  |
| región\_id | | Region | | |  | | S |  |
| state | | String | | |  | | S |  |
| **Salidas** | | | | | | | | |
| **Nombre** | | **Tipo** | | | **Longitud** | | **Obligatorio** | **Observación** |
| Id | | Long | | |  | |  |  |
| number\_id | | String | | |  | |  |  |
| first\_name | | String | | |  | |  |  |
| last\_name | | Double | | |  | |  |  |
| email | | Double | | |  | |  |  |
| Phone | | String | | |  | |  |  |
| Address | | String | | |  | |  |  |
| región\_id | | Region | | |  | |  |  |
| state | | String | | |  | |  |  |
| **Transformaciones Asociadas** | | | | | | | | |
| **Campo Origen** | **Regla de la transformación** | | | | | | **Campo destino** | |
| Id | N/A | | | | | | N/A | |
| **Secuencia de Ejecución** | | | | | | | | |
|  | | | **Paso** | | | **Acción** | | |
| **Secuencia Normal** | | | 1 | | | Invocación del servicio / recepción de parámetros | | |
| 2 | | | Carga de Información a BD H2 | | |
| 3 | | | N/A | | |
| **Secuencia Alterna 1** | | | N/A | | | N/A | | |
| **Excepciones** | | | | | | | | |
| Error de I/O | | | | No se pueden almacenar los datos | | | | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Operación** | | | | | | | | |
| Nombre | - **Actualizar un costumer** | | | | | | | |
| Precondiciones | - Carga de ítems BD H2 , datos inicialmente cargados y/o ingresados como nuevos a través de los servicios de costumer | | | | | | | |
| Postcondiciones |  | | | | | | | |
| **Entradas** | | | | | | | | |
| **Nombre** | | **Tipo (numérico, Texto, etc)** | | | **Longitud** | | **Obligatorio (S/N)** | **Observación** |
| Id | | Long | | |  | | S |  |
| Model | | String | | |  | | S |  |
| maker | | String | | |  | | S |  |
| Proessor | | String | | |  | | S |  |
| Memory | | String | | |  | | S |  |
| Hdd | | String | | |  | | S |  |
| Ssd | | String | | |  | | S |  |
| screen | | String | | |  | | S |  |
| Stock | | Double | | |  | | S |  |
| price | | Double | | |  | | S |  |
| Status | | String | | |  | | S |  |
| Créate\_at | | Date | | |  | | S |  |
| Categoría\_id | | Category | | |  | | S |  |
| **Salidas** | | | | | | | | |
| **Nombre** | | **Tipo** | | | **Longitud** | | **Obligatorio** | **Observación** |
| Id | | Long | | |  | | S |  |
| Model | | String | | |  | | S |  |
| maker | | String | | |  | | S |  |
| Processor | | String | | |  | | S |  |
| Memory | | String | | |  | | S |  |
| Hdd | | String | | |  | | S |  |
| Ssd | | String | | |  | | S |  |
| screen | | String | | |  | | S |  |
| Stock | | Double | | |  | | S |  |
| price | | Double | | |  | | S |  |
| Status | | String | | |  | | S |  |
| Créate\_at | | Date | | |  | | S |  |
| Categoría\_id | | Category | | |  | | S |  |
| **Transformaciones Asociadas** | | | | | | | | |
| **Campo Origen** | **Regla de la transformación** | | | | | | **Campo destino** | |
| Id | N/A | | | | | | N/A | |
| **Secuencia de Ejecución** | | | | | | | | |
|  | | | **Paso** | | | **Acción** | | |
| **Secuencia Normal** | | | 1 | | | Invocación del servicio / recepción de parámetros | | |
| 2 | | | Carga de Información a BD H2 | | |
| 3 | | | N/A | | |
| **Secuencia Alterna 1** | | | N/A | | | N/A | | |
| **Excepciones** | | | | | | | | |
| Error de I/O | | | | No se pueden almacenar los datos | | | | |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Operación** | | | | | | | |
| Nombre | - **Eliminar un costumer** | | | | | | |
| Precondiciones | - Carga de ítems BD H2 , datos inicialmente cargados y/o ingresados como nuevos a través de los servicios de el servicio | | | | | | |
| Postcondiciones |  | | | | | | |
| **Entradas** | | | | | | | |
| **Nombre** | **Tipo (numérico, Texto, etc)** | | | **Longitud** | | **Obligatorio (S/N)** | **Observación** |
| Id | Long | | |  | | S |  |
| **Salidas** | | | | | | | |
| **Nombre** | **Tipo** | | | **Longitud** | | **Obligatorio** | **Observación** |
| Id | Long | | |  | | S |  |
| Model | String | | |  | | S |  |
| maker | String | | |  | | S |  |
| Processor | String | | |  | | S |  |
| Memory | String | | |  | | S |  |
| Hdd | String | | |  | | S |  |
| Ssd | String | | |  | | S |  |
| screen | String | | |  | | S |  |
| Stock | Double | | |  | | S |  |
| price | Double | | |  | | S |  |
| Status | String | | |  | | S |  |
| Créate\_at | Date | | |  | | S |  |
| Categoría\_id | Category | | |  | | S |  |
| **Transformaciones Asociadas** | | | | | | | |
| **Campo Origen** | **Regla de la transformación** | | | | | **Campo destino** | |
| Id | N/A | | | | | N/A | |
| **Secuencia de Ejecución** | | | | | | | |
|  | | **Paso** | | | **Acción** | | |
| **Secuencia Normal** | | 1 | | | Invocación del servicio / recepción de parámetros | | |
| 2 | | | Eliminacion Información a BD H2 | | |
| 3 | | | N/A | | |
| **Secuencia Alterna 1** | | N/A | | | N/A | | |
| **Excepciones** | | | | | | | |
| Error de I/O | | | No se pueden encontrar los datos | | | | |

**Ficha Técnica del Servicio INVOICES**

|  |  |
| --- | --- |
| **Servicio** | |
| Nombre | **Invoices** |
| Descripción | Servicio que permite consultar, actualizar , crear y eliminar facturas de la tienda COMPULAGO |
| Versión | 1.0 |
| Estado | Diseño / Desarrollo / Implementado / Operación |
| URL del Servicio | localHOST |
| Procesos y Actividades de Negocio relacionadas | Realiza llamados a servicios de : Customer y Products. |
| Fuente de datos del servicio | Nombre |
| Base de datos H2 |
| Consumidores del servicio identificados | Nombre |
| Portal Web |
| Seguridad | N/A |
| Nivel de Servicio (Disponibilidad) | Acuerdo de disponibilidad del servicio. N/A. |
| Restricciones | Indica condiciones de operación dentro de las cuales el servicio puede ser consumido. N/A |
| **Datos Técnicos** | |
| Tipo de Servicio | REST |
| Lenguaje | Java, SpringBoot |
| **Operaciones** | |
| * Consulta invoices (get) * Buscar un invoices (get) * Creación invoices (post) * Actualiza invoices (put) * Eliminación invoices (delete) | |

**Ficha de la Operación INVOICES**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Operación** | | | | | | | | |
| Nombre | **- Listar invoices** | | | | | | | |
| Precondiciones | - Carga de ítems BD H2 , datos inicialmente cargados y/o ingresados como nuevos a través de los servicios de customer y products | | | | | | | |
| Postcondiciones |  | | | | | | | |
| **Entradas** | | | | | | | | |
| **Nombre** | | **Tipo (numérico, Texto, etc)** | | | **Longitud** | | **Obligatorio (S/N)** | **Observación** |
| Solicitud a lista | | Lista | | |  | | S |  |
| **Salidas** | | | | | | | | |
| **Nombre** | | **Tipo** | | | **Longitud** | | **Obligatorio** | **Observación** |
| Id | | Long | | |  | |  |  |
| number\_invoice | | String | | |  | |  |  |
| description | | String | | |  | |  |  |
| customer\_id | | Long | | |  | |  |  |
| create\_At | | Date | | |  | |  |  |
| state | | Strig | | |  | |  |  |
| invoiceItems | | List< invoiceItems > | | |  | |  |  |
| **Transformaciones Asociadas** | | | | | | | | |
| **Campo Origen** | **Regla de la transformación** | | | | | | **Campo destino** | |
| Id | N/A | | | | | | N/A | |
| **Secuencia de Ejecución** | | | | | | | | |
|  | | | **Paso** | | | **Acción** | | |
| **Secuencia Normal** | | | 1 | | | Invocación del servicio / recepción de parámetros | | |
| 2 | | | Consulta de Información a BD H2 | | |
| 3 | | | Entrega del resultado | | |
| **Secuencia Alterna 1** | | | N/A | | | N/A | | |
| **Excepciones** | | | | | | | | |
| Sin resultados | | | | La consulta no arroja resultados | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Operación** | | | | | | | | | | | |
| Nombre | - **Buscar un invoices** | | | | | | | | | | |
| Precondiciones | - Carga de ítems BD H2 , datos inicialmente cargados y/o ingresados como nuevos a través de los servicios de customer y products | | | | | | | | | | |
| Postcondiciones |  | | | | | | | | | | |
| **Entradas** | | | | | | | | | | | |
| **Nombre** | | **Tipo (numérico, Texto, etc)** | | | **Longitud** | | | **Obligatorio (S/N)** | | **Observación** | |
| Id | | string | | |  | | | S | |  | |
| **Salidas** | | | | | | | | | | | |
| **Nombre** | | **Tipo** | | | **Longitud** | | | **Obligatorio** | | **Observación** | |
| Id | | Long | | |  | | |  | |  | |
| number\_invoice | | String | | |  | | |  | |  | |
| description | | String | | |  | | |  | |  | |
| customer\_id | | Long | | |  | | |  | |  | |
| create\_At | | Date | | |  | | |  | |  | |
| state | | Strig | | |  | | |  | |  | |
| invoiceItems | | List< invoiceItems > | | | |  | | |  | |  |
| **Transformaciones Asociadas** | | | | | | | | | | | |
| **Campo Origen** | **Regla de la transformación** | | | | | | | **Campo destino** | | | |
| Id | N/A | | | | | | | N/A | | | |
| **Secuencia de Ejecución** | | | | | | | | | | | |
|  | | | **Paso** | | | | **Acción** | | | | |
| **Secuencia Normal** | | | 1 | | | | Invocación del servicio / recepción de parámetros | | | | |
| 2 | | | | Consulta de Información a BD H2 | | | | |
| 3 | | | | Entrega del resultado | | | | |
| **Secuencia Alterna 1** | | | N/A | | | | N/A | | | | |
| **Excepciones** | | | | | | | | | | | |
| Sin resultados | | | | La consulta no arroja resultados | | | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Operación** | | | | | | | | | | | |
| Nombre | - **Crear invoices** | | | | | | | | | | |
| Precondiciones | - Estructura de la BD H2 existente, datos inicialmente cargados y/o ingresados como nuevos a través de los servicios de customer y products | | | | | | | | | | |
| Postcondiciones |  | | | | | | | | | | |
| **Entradas** | | | | | | | | | | | |
| **Nombre** | | **Tipo (numérico, Texto, etc)** | | | **Longitud** | | | **Obligatorio (S/N)** | | **Observación** | |
| number\_invoice | | String | | |  | | | S | |  | |
| description | | String | | |  | | | S | |  | |
| customer\_id | | Long | | |  | | | S | |  | |
| create\_At | | Date | | |  | | | S | |  | |
| state | | Strig | | |  | | | S | |  | |
| invoiceItems | | List< invoiceItems > | | | |  | | |  | |  |
| **Salidas** | | | | | | | | | | | |
| **Nombre** | | **Tipo** | | | **Longitud** | | | **Obligatorio** | | **Observación** | |
| Id | | Long | | |  | | |  | |  | |
| number\_invoice | | String | | |  | | |  | |  | |
| description | | String | | |  | | |  | |  | |
| customer\_id | | Long | | |  | | |  | |  | |
| create\_At | | Date | | |  | | |  | |  | |
| state | | Strig | | |  | | |  | |  | |
| invoiceItems | | List< invoiceItems > | | | |  | | |  | |  |
| **Transformaciones Asociadas** | | | | | | | | | | | |
| **Campo Origen** | **Regla de la transformación** | | | | | | | **Campo destino** | | | |
| Id | N/A | | | | | | | N/A | | | |
| **Secuencia de Ejecución** | | | | | | | | | | | |
|  | | | **Paso** | | | | **Acción** | | | | |
| **Secuencia Normal** | | | 1 | | | | Invocación del servicio / recepción de parámetros | | | | |
| 2 | | | | Carga de Información a BD H2 | | | | |
| 3 | | | | N/A | | | | |
| **Secuencia Alterna 1** | | | N/A | | | | N/A | | | | |
| **Excepciones** | | | | | | | | | | | |
| Error de I/O | | | | No se pueden almacenar los datos | | | | | | | |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Operación** | | | | | | | | | | | |
| Nombre | - **Actualizar un invoices** | | | | | | | | | | |
| Precondiciones | - Carga de ítems BD H2 , datos inicialmente cargados y/o ingresados como nuevos a través de los servicios de customer y products | | | | | | | | | | |
| Postcondiciones |  | | | | | | | | | | |
| **Entradas** | | | | | | | | | | | |
| **Nombre** | | **Tipo (numérico, Texto, etc)** | | | **Longitud** | | | **Obligatorio (S/N)** | | **Observación** | |
| Id | | Long | | |  | | | S | |  | |
| number\_invoice | | String | | |  | | | S | |  | |
| description | | String | | |  | | | S | |  | |
| customer\_id | | Long | | |  | | | S | |  | |
| create\_At | | Date | | |  | | | S | |  | |
| state | | Strig | | |  | | | S | |  | |
| invoiceItems | | List< invoiceItems > | | | |  | | |  | |  |
| **Salidas** | | | | | | | | | | | |
| **Nombre** | | **Tipo** | | | **Longitud** | | | **Obligatorio** | | **Observación** | |
| Id | | Long | | |  | | | S | |  | |
| number\_invoice | | String | | |  | | | S | |  | |
| description | | String | | |  | | | S | |  | |
| customer\_id | | Long | | |  | | | S | |  | |
| create\_At | | Date | | |  | | | S | |  | |
| state | | Strig | | |  | | | S | |  | |
| invoiceItems | | List< invoiceItems > | | | |  | | |  | |  |
| **Transformaciones Asociadas** | | | | | | | | | | | |
| **Campo Origen** | **Regla de la transformación** | | | | | | | **Campo destino** | | | |
| Id | N/A | | | | | | | N/A | | | |
| **Secuencia de Ejecución** | | | | | | | | | | | |
|  | | | **Paso** | | | | **Acción** | | | | |
| **Secuencia Normal** | | | 1 | | | | Invocación del servicio / recepción de parámetros | | | | |
| 2 | | | | Carga de Información a BD H2 | | | | |
| 3 | | | | N/A | | | | |
| **Secuencia Alterna 1** | | | N/A | | | | N/A | | | | |
| **Excepciones** | | | | | | | | | | | |
| Error de I/O | | | | No se pueden almacenar los datos | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Operación** | | | | | | | | |
| Nombre | - **Eliminar un invoices** | | | | | | | |
| Precondiciones | - Carga de ítems BD H2 , datos inicialmente cargados y/o ingresados como nuevos a través de los servicios de customer y products | | | | | | | |
| Postcondiciones |  | | | | | | | |
| **Entradas** | | | | | | | | |
| **Nombre** | | **Tipo (numérico, Texto, etc)** | | | **Longitud** | | **Obligatorio (S/N)** | **Observación** |
| Id | | Long | | |  | | S |  |
| **Salidas** | | | | | | | | |
| **Nombre** | | **Tipo** | | | **Longitud** | | **Obligatorio** | **Observación** |
| Id | | Long | | |  | | S |  |
| number\_invoice | | String | | |  | | S |  |
| description | | String | | |  | | S |  |
| customer\_id | | Long | | |  | | S |  |
| create\_At | | Date | | |  | | S |  |
| state | | Strig | | |  | | S |  |
| **Transformaciones Asociadas** | | | | | | | | |
| **Campo Origen** | **Regla de la transformación** | | | | | | **Campo destino** | |
| Id | N/A | | | | | | N/A | |
| **Secuencia de Ejecución** | | | | | | | | |
|  | | | **Paso** | | | **Acción** | | |
| **Secuencia Normal** | | | 1 | | | Invocación del servicio / recepción de parámetros | | |
| 2 | | | Eliminación Información a BD H2 | | |
| 3 | | | N/A | | |
| **Secuencia Alterna 1** | | | N/A | | | N/A | | |
| **Excepciones** | | | | | | | | |
| Error de I/O | | | | No se pueden encontrar los datos | | | | |

## DIAGRAMAAS DE DISEÑO

## CONSUMOS DE SERVICIOS

**PRODUCTS**

package com.unir.tiendacompulago.productservice.service;

import java.util.Date;

import java.util.List;

import com.unir.tiendacompulago.productservice.repository.CategoryRepository;

import lombok.RequiredArgsConstructor;

import org.springframework.stereotype.Service;

import com.unir.tiendacompulago.productservice.entity.Category;

import com.unir.tiendacompulago.productservice.entity.Product;

import com.unir.tiendacompulago.productservice.repository.ProductRepository;

@Service

@RequiredArgsConstructor

public class ProductServiceImpl implements ProductService{

private final ProductRepository productRepository;

private final CategoryRepository categoryRepository;

@Override

public List<Product> listAllProduct(){

return productRepository.findAll();

}

@Override

public Product getProduct(Long id) {

return productRepository.findById(id).orElse(null);

}

@Override

public Product createProduct(Product product) {

product.setStatus("CREATED");

product.setCreateAt(new Date());

Category category = categoryRepository.findByname(product.getCategory().getName());

if(category == null){

categoryRepository.save(product.getCategory());

}

return productRepository.save(product);

}

@Override

public Product updateProduct(Product product) {

Product productDB =getProduct(product.getId());

if (null == productDB) {

return null;

}

productDB.setModel(product.getModel());

productDB.setMaker(product.getMaker());

productDB.setProcessor(product.getProcessor());

productDB.setMemory(product.getMemory());

productDB.setHdd(product.getHdd());

productDB.setSsd(product.getSsd());

productDB.setScreen(product.getScreen());

productDB.setCategory(product.getCategory());

productDB.setPrice(product.getPrice());

return productRepository.save(productDB);

}

@Override

public Product deleteProduct(Long id) {

Product productDB =getProduct(id);

if (null == productDB) {

return null;

}

productDB.setStatus("DELETED");

return productRepository.save(productDB);

}

@Override

public List<Product> findByCategory(Category category) {

return productRepository.findByCategory(category);

}

@Override

public Product updateStock(Long id, Double quantity) {

Product productDB =getProduct(id);

if (null == productDB) {

return null;

}

Double stock = productDB.getStock() + quantity;

productDB.setStock(stock);

return productRepository.save(productDB);

}

@Override

public Category createCategory(Category category) {

return categoryRepository.save(category);

}

@Override

public List<Category> listAllCategory() { return categoryRepository.findAll(); }

@Override

public Category getCategory(Long id) {

return categoryRepository.findById(id).orElse(null);

}

**CUSTOMER**

package com.unir.tiendacompulago.productservice.service;

import java.util.Date;

import java.util.List;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Service;

import com.unir.tiendacompulago.productservice.entity.Category;

import com.unir.tiendacompulago.productservice.entity.Product;

import com.unir.tiendacompulago.productservice.repository.ProductRepository;

@Service

public class ProductServiceImpl implements ProductService{

@Autowired

private ProductRepository productRepository;

@Override

public List<Product> listAllProduct(){

return productRepository.findAll();

}

@Override

public Product getProduct(Long id) {

return productRepository.findById(id).orElse(null);

}

@Override

public Product createProduct(Product product) {

product.setStatus("CREATED");

product.setCreateAt(new Date());

return productRepository.save(product);

}

@Override

public Product updateProduct(Product product) {

Product productDB =getProduct(product.getId());

if (null == productDB) {

return null;

}

productDB.setName(product.getName());

productDB.setDescripcion(product.getDescripcion());

productDB.setCategory(product.getCategory());

productDB.setPrecio(product.getPrecio());

return productRepository.save(productDB);

}

@Override

public Product deleteProduct(Long id) {

Product productDB =getProduct(id);

if (null == productDB) {

return null;

}

productDB.setStatus("DELETED");

return productRepository.save(productDB);

}

@Override

public List<Product> findByCategory(Category category) {

return productRepository.findByCategory(category);

}

@Override

public Product updateStock(Long id, Double quantity) {

Product productDB =getProduct(id);

if (null == productDB) {

return null;

}

Double stock = productDB.getStock() + quantity;

productDB.setStock(stock);

return productRepository.save(productDB);

}

}

**INVOICES**

package com.unir.tiendacompulago.shoppingservice.service;

import com.unir.tiendacompulago.shoppingservice.client.CustomerClient;

import com.unir.tiendacompulago.shoppingservice.client.ProductClient;

import com.unir.tiendacompulago.shoppingservice.entity.Invoice;

import com.unir.tiendacompulago.shoppingservice.entity.InvoiceItem;

import com.unir.tiendacompulago.shoppingservice.domain.Customer;

import com.unir.tiendacompulago.shoppingservice.domain.Product;

import com.unir.tiendacompulago.shoppingservice.repository.InvoiceItemsRepository;

import com.unir.tiendacompulago.shoppingservice.repository.InvoiceRepository;

import lombok.extern.slf4j.Slf4j;

import org.springframework.beans.factory.annotation.Autowired;

import org.springframework.stereotype.Service;

import java.util.List;

import java.util.stream.Collectors;

@Slf4j

@Service

public class InvoiceServiceImpl implements InvoiceService{

@Autowired

InvoiceRepository invoiceRepository;

@Autowired

InvoiceItemsRepository invoiceItemsRepository;

@Autowired

CustomerClient customerClient;

@Autowired

ProductClient productClient;

@Override

public List<Invoice> findInvoiceAll() {

return invoiceRepository.findAll();

}

@Override

public Invoice createInvoice(Invoice invoice) {

Invoice invoiceDB = getInvoice(invoice.getNumberInvoice());

if (invoiceDB !=null){

return invoiceDB;

}

invoice.setState("CREATED");

invoiceDB = invoiceRepository.save(invoice);

invoiceDB.getItems().forEach(invoiceItem -> {

productClient.updateStockProduct(invoiceItem.getProductId(), invoiceItem.getQuantity() \* -1);

});

return invoiceDB;

}

@Override

public Invoice updateInvoice(Invoice invoice) {

Invoice invoiceDB = getInvoice(invoice.getNumberInvoice());

if (invoiceDB == null){

return null;

}

invoiceDB.setCustomerId(invoice.getCustomerId());

invoiceDB.setDescription(invoice.getDescription());

invoiceDB.setNumberInvoice(invoice.getNumberInvoice());

invoiceDB.getItems().clear();

invoiceDB.setItems(invoice.getItems());

return invoiceRepository.save(invoiceDB);

}

@Override

public Invoice deleteInvoice(Invoice invoice) {

Invoice invoiceDB = getInvoice(invoice.getNumberInvoice());

if (invoiceDB == null) {

return null;

}

invoiceDB.setState("DELETED");

return invoiceRepository.save(invoiceDB);

}

@Override

public Invoice getInvoice(String numberInvoice) {

Invoice invoice = invoiceRepository.findByNumberInvoice(numberInvoice);

if(invoice != null){

Customer customer = customerClient.getCustomer(invoice.getCustomerId()).getBody();

invoice.setCustomer(customer);

List<InvoiceItem> listItem = invoice.getItems().stream().map(invoiceItem -> {

Product product = productClient.getProduct(invoiceItem.getProductId()).getBody();

invoiceItem.setProduct(product);

return invoiceItem;

}).collect(Collectors.toList());

invoice.setItems(listItem);

}

return invoice; }}

## **OTROS**

https://github.com/diegoahumadasegurosalfa/tiendacompulago

# CONCLUSIONES