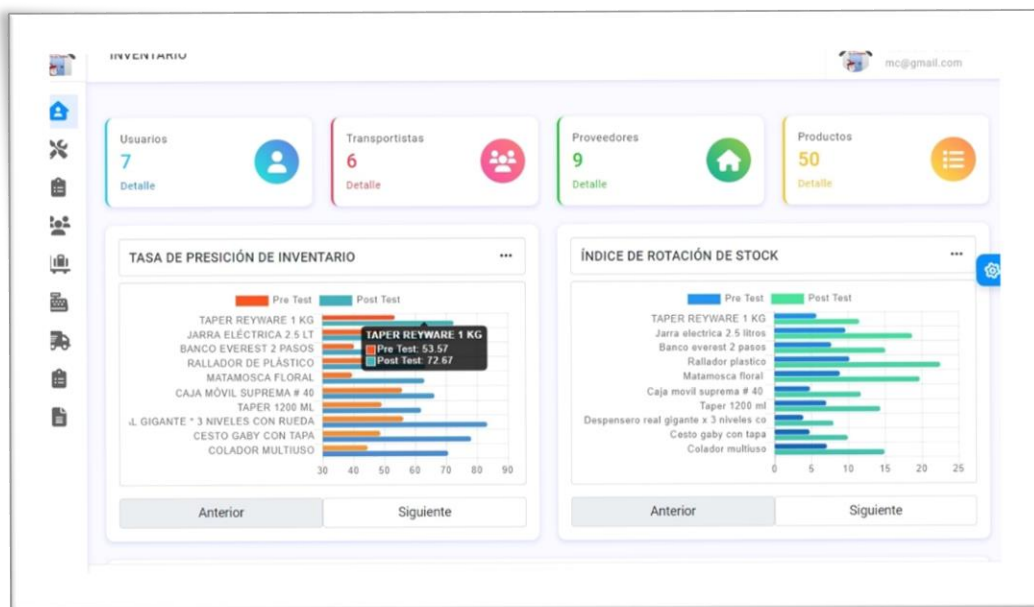


MANUAL OF THE WEB SYSTEM FOR INVENTORY CONTROL



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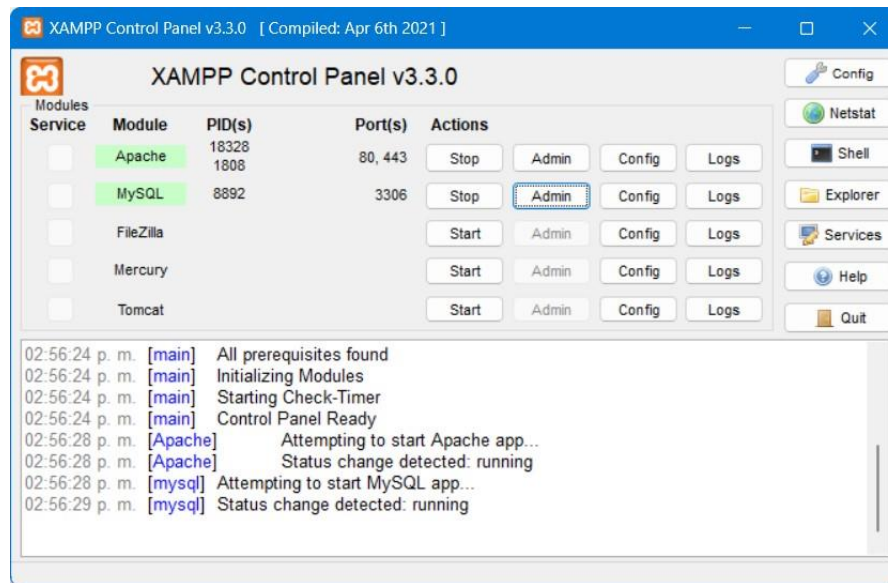
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WEB SYSTEM USER MANUAL

Initialization in XAMPP

The Apache module is activated so that it allows having a web server locally on the computer where the web system is implemented. And with the MySQL module activated you can manage the database for communication with the web system through phpMyAdmin and carry out all inventory control operations.

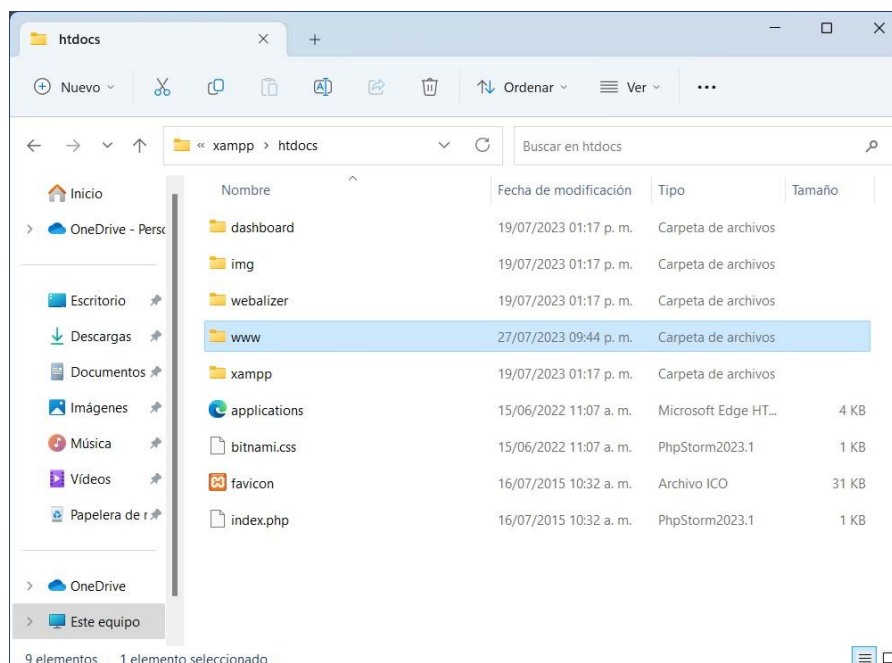
Figure 1. XAMPP running



Files in htdocs

The files from the web system are copied to the www folder for execution in the daily use browser.

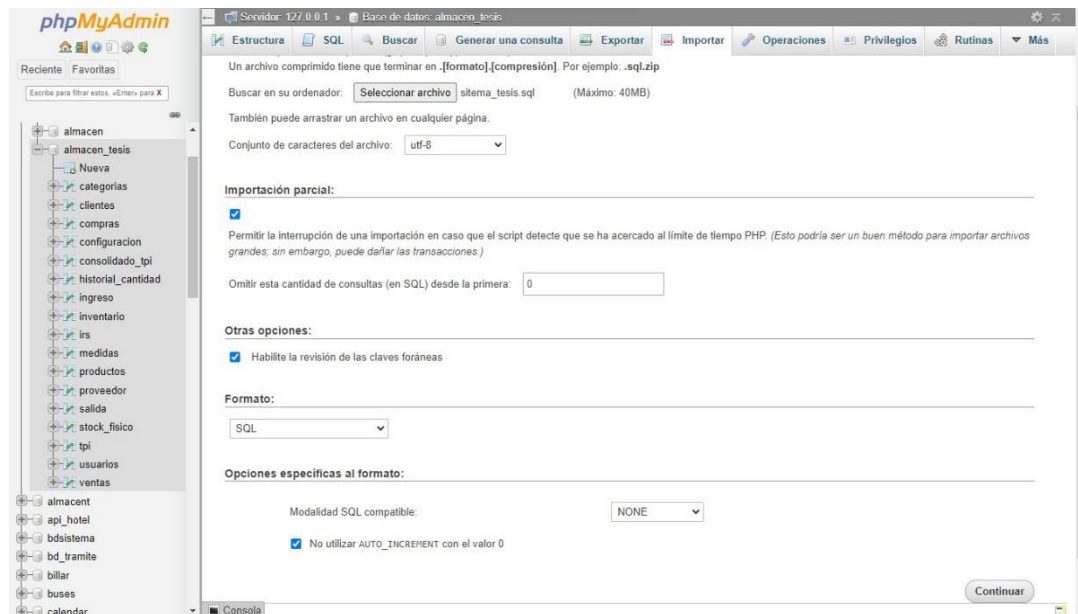
Figure 2. htdocs folder on C: drive in Windows 11



Importing the database in PhpmyAdmin

filesistema_tesis.sql is selected to continue with the import process and the database is ready to be used by the web system.

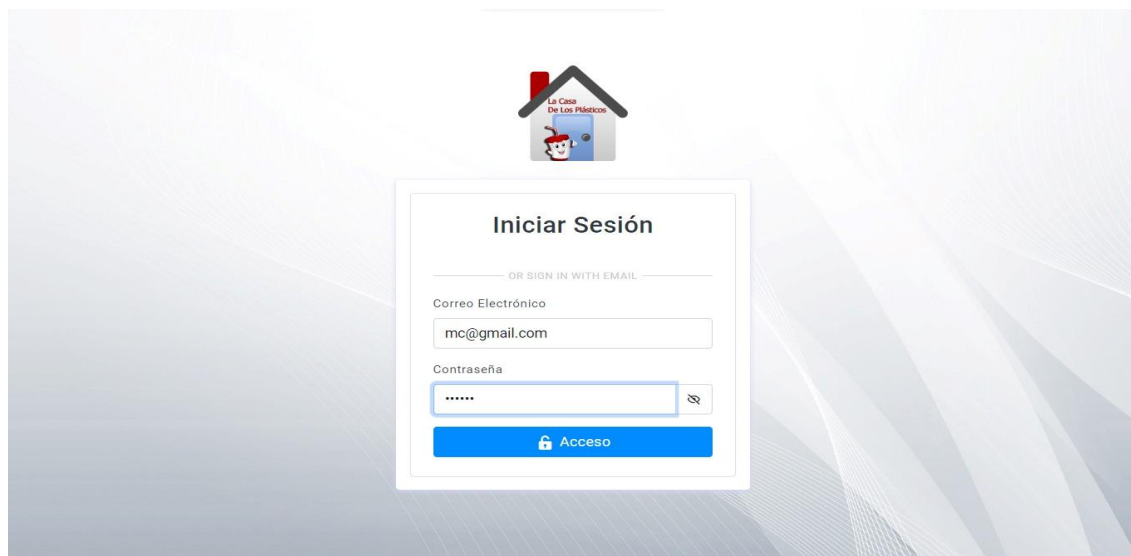
Figure 3. Database import.



Login

Figure 4 shows the login interface that has the fields to enter the operator's email and password to access the system.

Figure 4. Login interface



Personnel record

Figure 5 shows the personnel registration interface where you enter the names, surnames, email access to the web system, telephone number, address, password and your role.

Figure 5. *Personnel registration interface*

The screenshot shows the 'INVENTARIO - Usuarios' interface. The left sidebar contains a menu with 'Administración' expanded, showing 'Usuarios', 'Configuración', and 'Log de Acceso'. The main area is titled 'INVENTARIO' and shows a 'Nuevo' tab. The form fields are: 'Nombres' (Marisol Cecilia), 'Apellidos' (Robles Trejo), 'Correo' (mc@gmail.com), 'Teléfono' (918235459), 'Dirección' (Huaraz), 'Clave' (password field), and 'Rol' (ADMINISTRADOR). There are 'Nuevo' and 'Registrar' buttons at the bottom right. The footer text is 'Control de Almacén V.1.0 © | 2023 | Todos los Derechos Reservados...'.

Supplier registration

Figure 6 shows the supplier registration interface where the RUC, name, telephone, email and address are registered after clicking on the register button.

Figure 6. *Supplier registration interface*

The screenshot shows the 'INVENTARIO - Proveedores' interface. The left sidebar contains a menu with 'Proveedores' selected. The main area is titled 'INVENTARIO' and shows a 'Nuevo' tab. The form fields are: 'Ruc' (10723087495), 'Nombre' (REY), 'Teléfono' (918235459), 'Correo' (REY@GMAIL.COM), and 'Dirección' (Lima - Perú). There are 'Nuevo' and 'Registrar' buttons at the bottom right. The footer text is 'Control de Almacén V.1.0 © | 2023 | Todos los Derechos Reservados...'.

Record of measurements

In Figure 7 the recording of measurements is carried out, with two fields designated for 'name' and 'short name'. In the first field, enter the full name of the measurement, for example: centimeters, grams, kilos and liters. And in the second field, a short name corresponding to the term entered in the first field is entered, 'cm', 'gm', 'kl' and 'lt' would be entered according to the previous terms.

Figure 7. *Measurement recording interface*

The screenshot displays the 'Medidas' (Measurements) registration interface. The sidebar on the left lists various system modules, with 'Almacén' expanded to show 'Medidas', 'Categorías', and 'Productos'. The main content area is titled 'Medidas' and 'Nuevo'. It features two input fields: 'Nombre *' (Name) containing 'KILOS' and 'Nombre Corto *' (Short Name) containing 'KL'. Below these fields are 'Nuevo' and 'Registrar' buttons. The footer of the interface reads 'Control de Almacén V.1.0 © 2023 | Todos los Derechos Reservados...'.

Product category registration

In figure 8 in this section, the categories of products that arrive at the warehouse are recorded. On this occasion, the categories are included, 'HOUSEHOLD ARTICLE', 'BOTTLE', 'BOX', 'BATEA', 'BOX', among others.

Figure 8. *Product category registration interface*

The screenshot displays the 'Categorías' (Product Categories) registration interface. The sidebar on the left lists various system modules, with 'Almacén' expanded to show 'Medidas', 'Categorías', and 'Productos'. The main content area is titled 'Categorías' and 'Nuevo'. It features a single input field: 'Nombre *' (Name) containing 'ARTICULO DE HOGAR'. Below this field are 'Nuevo' and 'Registrar' buttons. The footer of the interface reads 'Control de Almacén V.1.0 © 2023 | Todos los Derechos Reservados...'.

Product registration

In figure 9, product registration is carried out, entering the information in the following fields: code, name, purchase price, sale price, stock, measurement, category, supplier, and selecting a photograph of the product. Finally, the location is indicated before pressing the register button.

Figure 9. *Product registration interface*

The screenshot displays the 'INVENTARIO - Productos' web application interface. The left sidebar shows the navigation menu with 'Almacén' selected, leading to the 'Productos' section. The main area shows the 'Nuevo' (New) product registration form. The form includes the following fields and values:

- Código ***: MF-REY
- Nombre ***: MATAMOSCA FLORAL
- Precio Referencial Compra ***: \$ 1.50
- Precio Referencial Venta ***: \$ 3.50
- Stock ***: \$ 0
- Medida ***: GRAMOS
- Categorías ***: MATAMOSCA
- Proveedor ***: REY
- Foto (Opcional)**: Selection of file 'matamosca-floral.jpg' (with a preview image of flowers)
- Ubicación ***: MF-REY

At the bottom right, there are two buttons: 'Nuevo' (highlighted in red) and 'Registrar' (blue). The footer indicates 'Control de Almacén V.1.0 © | 2023 | Todos los Derechos Reservados...'.

Carrier registration

In this section designated for the carrier in figure 10, the following fields are entered for corresponding registration: identification, identification number, name, telephone, email and, finally, the address. Then, proceed to click on the registration button.

Figure 10. Carrier Registration Interface

The screenshot shows a web application interface for 'INVENTARIO - Clientes'. The browser address bar shows 'localhost/sistema_tesis_almacen/clientes'. The user is logged in as 'Marisol Cecilia' with email 'mc@gmail.com'. The left sidebar contains a menu with items: 'Tablero', 'Administración', 'Almacén', 'Transportistas' (highlighted), 'Proveedores', 'Pedido', 'Ingreso', 'Indicadores', and 'Movimiento'. The main content area is titled 'INVENTARIO' and shows a 'Transportistas' form. The form has tabs for 'Transportistas' and 'Nuevo'. The 'Nuevo' tab is active, showing a form with the following fields: 'Identidad *' (DNI), 'N° Identidad *' (41758696), 'Nombre *' (Guillermo Vera Montes), 'Teléfono *' (925812547), 'Correo' (guillermo@gmail.com), and 'Dirección *' (Lima). The form has a 'Nuevo' button and a 'Registrar' button. The footer of the page reads 'Control de Almacén V.1.0 © | 2023 | Todos los Derechos Reservados...'.

Product order registration

In Figure 11, which details the ordering interface, a combobox search engine is available. In this search engine, you can choose between the barcode and the product name. Depending on the choice, the information is entered in the corresponding field and filtered according to what is entered. In this specific case, a search by name was performed by entering 'TAPER REYWARE 1 KG' in the designated field and selecting it in the filter to display in the table.

After this, the carrier information is entered. Once the carrier is entered, the system automatically filters its associated phone number and address. The 'operator' field is automatically completed when logged in, and the reason for the order is set to 'ORDER'. All of this is done before proceeding to click the 'complete' button to successfully complete the operation.

Figure 11. *Product order registration interface*

INVENTARIO - Ventas

localhost/sistema_tesis_almacen/ventas

INVENTARIO

Marisol Cecilia
mc@gmail.com

Pedidos Historial Ver

Nuevo Pedido

Barcode Nombre Serie 00000003 Impresión Directa

Buscar Producto

Producto	Cantidad
TAPER REYWARE 1 KG	50

Buscar Transportista
Guillermo Vera Montes

Telefono
925812547

Destino
Lima

Operario
Marisol Cecilia

Motivo
PEDIDO

Completar

Control de Almacén V.1.0 © | 2023 | Todos los Derechos Reservados...

Product entry registration

In figure 12, which details the entry interface, there is a search engine where you can select between the barcode and the product name. The information is entered in the corresponding field and filtered according to what is entered. In this specific case, a search by name was carried out by entering 'TAPER REYWARE 1 KG' in the designated field and selecting it in the filter to display it in the table. Supplier information is then recorded, then the system automatically filters the phone number and address associated with the supplier. The 'operator' field is automatically populated and the serial number of the item is entered; finally 'complete' to end the operation

Figura 12. *Interfaz de registro de ingreso de producto*

INVENTARIO - Compras

localhost/sistema_tesis_almacen/compras

INVENTARIO

Marisol Cecilia
mc@gmail.com

Ingresos Historial Ver

Nuevo Ingreso

Barcode Nombre

Buscar Producto

Producto	Cantidad
TAPER REYWARE 1 KG	150

Buscar Proveedor
REY

Telefono
95656532

Dirección
Lima - Perú

Operador
Marisol Cecilia

Serie
00000001

Completar

Control de Almacén V.1.0 © | 2023 | Todos los Derechos Reservados...

Stock in warehouse

In the 'Stock warehouse' interface in Figure 13, registration is carried out following these steps: first, a product code is entered in the field designated as 'code'. In this example, 'TP-KING' was entered. Selecting the code automatically filters the product name into a read-only field.

Then the quantity of the product is entered and the reason for the action is specified, in this case, the reason 'To Update by default' is used, since it will be edited later. Then click on the register button to successfully complete the registration.

Figure 13. Warehouse Stock Interface

The screenshot displays a web application interface for inventory management. The browser address bar shows 'localhost/sistema_tesis_almacen/almacen'. The page title is 'INVENTARIO - Almacén'. A sidebar on the left contains navigation links: Tablero, Administración, Almacén, Transportistas, Proveedores, Pedido, Ingreso, and Indicadores. The 'Indicadores' section is expanded, showing 'Stock en Almacén' as the selected option. The main content area features a form with the following fields: 'Buscar Por Código' (containing 'TP-REY'), 'Nombre del Producto' (containing 'TAPER REYWARE 1 KG'), 'Cantidad' (containing '474'), and 'Razón' (containing 'Para Actualizar'). There are 'Nuevo' and 'Registrar' buttons. The footer text reads 'Control de Almacén V.1.0 © | 2023 | Todos los Derechos Reservados...'.

TPI by product

In the 'Inventory Accuracy Rate' interface in Figure 14, the functionality is described as follows: first, a code search is performed by entering an existing code, such as "MR-KING". Selecting the code automatically activates a filter on the 'product name' and 'quantity in system' field. The current quantity is then entered and the 'inventory accuracy rate' field automatically calculates based on these last two fields. After completing these steps, you click on the 'register' button.

Figure 14. Inventory Accuracy Rate Interface

The screenshot shows the 'INVENTARIO' web application interface. The left sidebar contains a menu with options: Tablero, Administración, Almacén, Transportistas, Proveedores, Pedido, Ingreso, and Indicadores. The 'Indicadores' section is expanded, showing 'Stock en Almacén', 'Tasa de Precisión de Inventario', 'Tasa de Precisión de Inventario - Consolidado', and 'Índice de Rotación de Stock'. The main content area displays the 'Nuevo' form for adding a new inventory item. The form includes the following fields and values:

- Buscar Por Código:** MR-REY
- Nombre del Producto:** Taper Reyware 1 kg
- Cantidad Actual:** 474
- Tasa de Precisión de Inventario:** 100.00

Buttons for 'Nuevo' and 'Registrar' are located at the bottom right of the form. The footer of the application reads 'Control de Almacén V.1.0 © | 2023 | Todos los Derechos Reservados...'.

Inventory Accuracy Rate - Consolidated

In the 'Inventory Accuracy Rate - Consolidated' interface in Figure 15, the product code is entered, and a period is also entered to calculate the average of the product accuracy rate obtained within the evaluation days, to finally do Click the 'Save' button to record the result.

Figure 15. Consolidated Inventory Accuracy Rate Interface

The screenshot shows the 'INVENTARIO' web application interface. The left sidebar contains a menu with options: Tablero, Administración, Almacén, Transportistas, Proveedores, Pedido, Ingreso, and Indicadores. The 'Indicadores' section is expanded, showing 'Stock en Almacén', 'Tasa de Precisión de Inventario', 'Tasa de Precisión de Inventario - Consolidado', and 'Índice de Rotación de Stock'. The main content area displays the 'Nuevo' form for calculating the consolidated inventory accuracy rate. The form includes the following fields and values:

- Buscar Por Código:** TR-REY
- Nombre del Producto:** TAPER REYWARE 1 KG
- Fecha Inicio:** 10/07/2023
- Fecha Fin:** 12/09/2023
- Tasa de Precisión de Inventario:** 72.68

Buttons for 'Calcular', 'Limpiar', and 'Guardar' are located at the bottom right of the form. The footer of the application reads 'Control de Almacén V.1.0 © | 2023 | Todos los Derechos Reservados...'.

Stock turnover ratio

Figure 16 shows the interface of the 'Stock Turnover Index', the registration is carried out as follows: first, we perform a search using the product description field. In this case, 'TAPER REYWARE 1 KG' was entered. Afterwards, we select a date range and calculate the sum of outputs by pressing the 'calculate' button. Then, we enter the initial amount (Monday) and the final amount (Friday), after which we press the 'calculate' button again. This gives us the average amount. Finally, to obtain the stock turnover ratio, we press the 'calculate' button again. It is important to mention that this procedure involves the repeated use of the 'calculate' button, due to the different stages of calculating the stock rotation index.

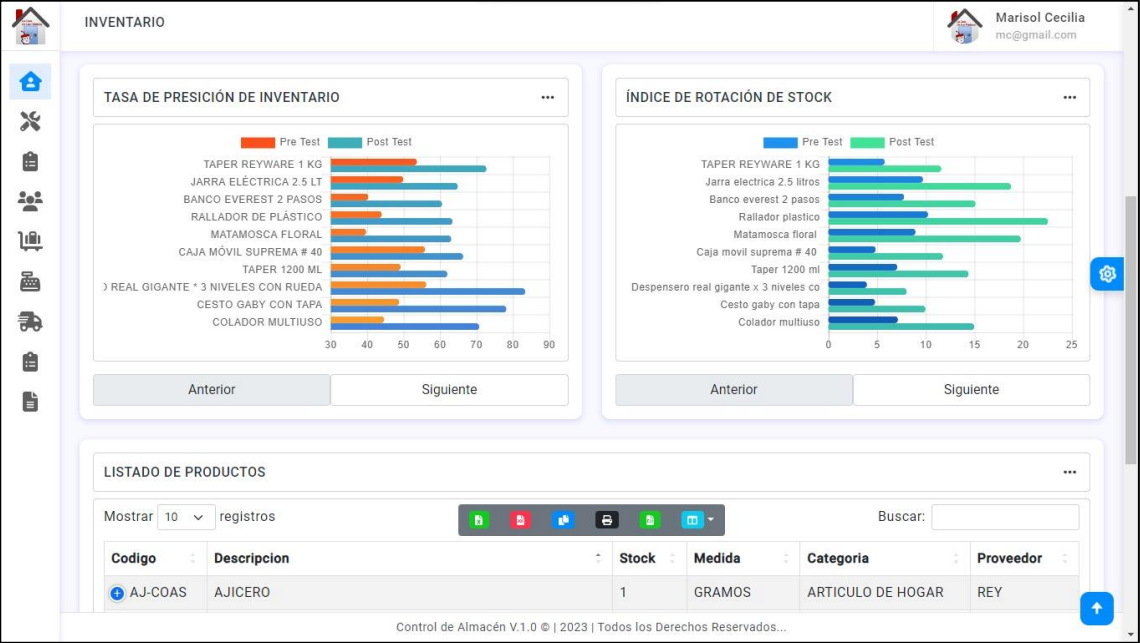
Figure 16. *Stock Turnover Ratio Interface*

The screenshot displays the 'INVENTARIO' application interface. On the left is a sidebar menu with options: Tablero, Administración, Almacén, Transportistas, Proveedores, Pedido, Ingreso, and a dropdown for 'Indicadores' which includes 'Stock en Almacén', 'Tasa de Precisión de Inventario', 'Tasa de Precisión de Inventario - Consolidado', and 'Índice de Rotación de Stock'. The main panel is titled 'INVENTARIO' and shows the 'Índice de Rotación de Stock' form. The form has tabs for 'Indicador', 'Gráfico', 'Nuevo', 'Lunes', and 'Viernes'. The 'Nuevo' tab is active. It contains a search field 'Buscar Por Descripción del Producto' with the value 'TAPER REYWARE 1 KG'. Below this are fields for 'Fecha Inicio' (10/07/2023) and 'Fecha Fin' (18/09/2023), with a 'Suma de Salidas' field showing 3110. There are three 'Calcular' buttons. The next row has 'Cantidad Inicial * (Stock de Lunes)' (474), 'Cantidad Final * (Stock de Viernes)' (64), and 'Cantidad Media *' (269), also with 'Calcular' buttons. The final row shows the 'Índice de Rotación de Stock' as 11.56, with 'Calcular', 'Limpiar', and 'Registrar' buttons. The footer indicates 'Control de Almacén V.1.0 © | 2023 | Todos los Derechos Reservados...'.

Dashboard interface

Figure 17 shows a panel that presents data on the number of suppliers, products, carriers, and users. Additionally, bar charts representing inventory accuracy rate and stock turnover rate indicators are included. By hovering the cursor over the graph, especially over one of the bars, it is possible to view the product description and the corresponding results of the pre-test and post-test. Since there are 50 records, pagination with 'previous' and 'next' buttons has been implemented in both graphs.

Figure 17. Board



Option menu

In Figure 18, buttons are presented that offer several options for exporting the document. The first green button generates an Excel file that reflects the table in the selected view. The second button generates the report in PDF format.

In addition, there are other buttons with specific functions: the third button copies the information, the fourth prints the report, the fifth exports in CSV format and the last allows you to show or hide columns in the table as necessary.

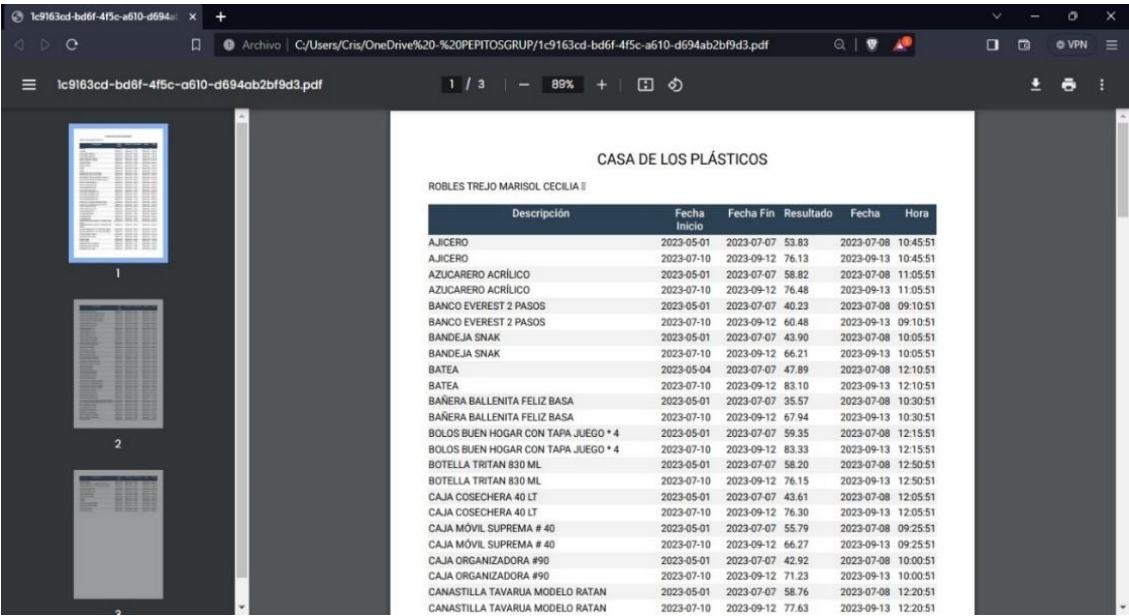
Figure 18. Option menu



Result of generating a report in PDF file

Figure 19 shows the result of generating a report in a PDF file. This report is the direct result of pressing the second red button, identified in figure 18, based on the table of the selected view.

Figure 19. Result of generating a report in PDF file



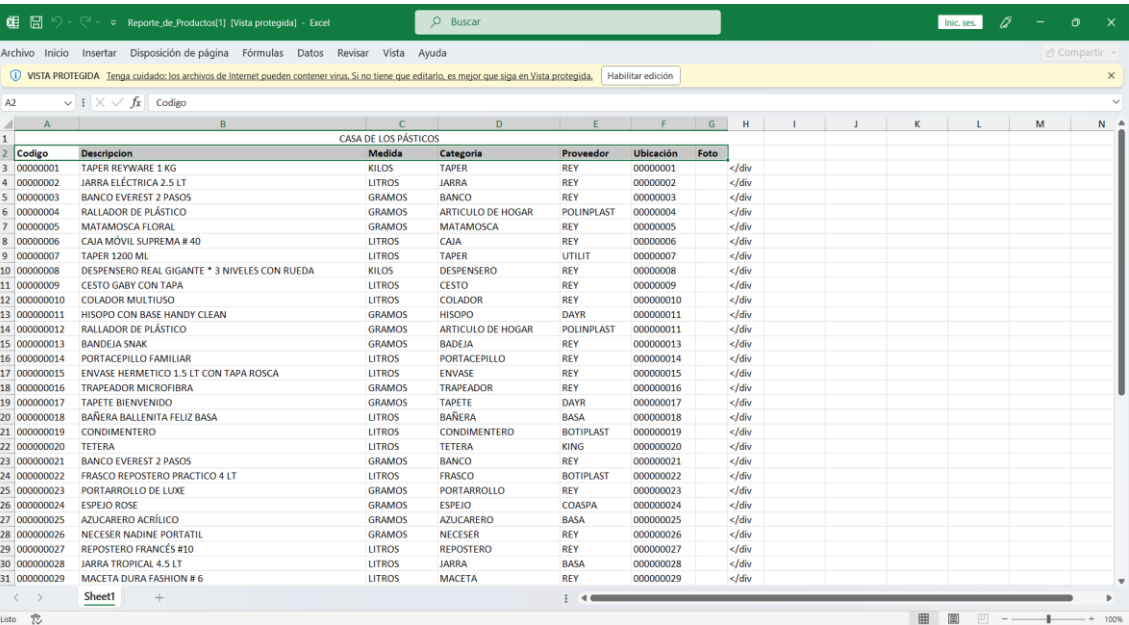
The screenshot shows a PDF document titled "CASA DE LOS PLÁSTICOS" with a subtitle "ROBLES TREJO MARISOL CECILIA II". It contains a table with the following columns: Descripción, Fecha Inicio, Fecha Fin, Resultado, Fecha, and Hora. The table lists various household items and their associated dates and results.

Descripción	Fecha Inicio	Fecha Fin	Resultado	Fecha	Hora
AJICERO	2023-05-01	2023-07-07	53.83	2023-07-08	10:45:51
AJICERO	2023-07-10	2023-09-12	76.13	2023-09-13	10:45:51
AZUCARERO ACRÍLICO	2023-05-01	2023-07-07	58.82	2023-07-08	11:05:51
AZUCARERO ACRÍLICO	2023-07-10	2023-09-12	76.48	2023-09-13	11:05:51
BANCO EVEREST 2 PASOS	2023-05-01	2023-07-07	40.23	2023-07-08	09:10:51
BANCO EVEREST 2 PASOS	2023-07-10	2023-09-12	60.48	2023-09-13	09:10:51
BANDEJA SNAK	2023-05-01	2023-07-07	43.90	2023-07-08	10:05:51
BANDEJA SNAK	2023-07-10	2023-09-12	66.21	2023-09-13	10:05:51
BATEA	2023-05-04	2023-07-07	47.89	2023-07-08	12:10:51
BATEA	2023-07-10	2023-09-12	83.10	2023-09-13	12:10:51
BAÑERA BALLENTA FELIZ BASA	2023-05-01	2023-07-07	35.57	2023-07-08	10:30:51
BAÑERA BALLENTA FELIZ BASA	2023-07-10	2023-09-12	67.94	2023-09-13	10:30:51
BOLOS BUEN HOGAR CON TAPA JUEGO * 4	2023-05-01	2023-07-07	59.35	2023-07-08	12:15:51
BOLOS BUEN HOGAR CON TAPA JUEGO * 4	2023-07-10	2023-09-12	83.33	2023-09-13	12:15:51
BOTELLA TRITAN 830 ML	2023-05-01	2023-07-07	58.20	2023-07-08	12:50:51
BOTELLA TRITAN 830 ML	2023-07-10	2023-09-12	76.15	2023-09-13	12:50:51
CAJA COSECHERA 40 LT	2023-05-01	2023-07-07	43.61	2023-07-08	12:05:51
CAJA COSECHERA 40 LT	2023-07-10	2023-09-12	76.30	2023-09-13	12:05:51
CAJA MÓVIL SUPREMA # 40	2023-05-01	2023-07-07	55.79	2023-07-08	09:25:51
CAJA MÓVIL SUPREMA # 40	2023-07-10	2023-09-12	66.27	2023-09-13	09:25:51
CAJA ORGANIZADORA #90	2023-05-01	2023-07-07	42.92	2023-07-08	10:00:51
CAJA ORGANIZADORA #90	2023-07-10	2023-09-12	71.23	2023-09-13	10:00:51
CANASTILLA TAVARUA MODELO RATAN	2023-05-01	2023-07-07	58.76	2023-07-08	12:20:51
CANASTILLA TAVARUA MODELO RATAN	2023-07-10	2023-09-12	77.63	2023-09-13	12:20:51

Result of generating a report in Excel file

Figure 20 shows the result of generating a report in an Excel file. This report is the direct result of clicking the first green button, identified in Figure 18, in relation to the table displayed in the selected view.

Figure 20. Result of generating a report in Excel file



The screenshot shows an Excel spreadsheet titled "Reporte de Productos[1] - Excel". It contains a table with the following columns: Código, Descripción, Medida, Categoría, Proveedor, Ubicación, and Foto. The table lists various household items and their associated codes, measures, categories, providers, and locations.

Código	Descripción	Medida	Categoría	Proveedor	Ubicación	Foto
00000001	TAPER REYWARE 1 KG	KILOS	TAPER	REY	00000001	</div>
00000002	JARRA ELÉCTRICA 2.5 LT	LITROS	JARRA	REY	00000002	</div>
00000003	BANCO EVEREST 2 PASOS	GRAMOS	BANCO	REY	00000003	</div>
00000004	RALLADOR DE PLÁSTICO	GRAMOS	ARTICULO DE HOGAR	POLINPLAST	00000004	</div>
00000005	MATAMOSCA FLORAL	GRAMOS	MATAMOSCA	REY	00000005	</div>
00000006	CAJA MÓVIL SUPREMA # 40	LITROS	CAJA	REY	00000006	</div>
00000007	TAPER 1200 ML	LITROS	TAPER	UTILIT	00000007	</div>
00000008	DESPENSERO REAL GIGANTE * 3 NIVELES CON RUEDA	KILOS	DESPENSERO	REY	00000008	</div>
00000009	CESTO GABY CON TAPA	LITROS	CESTO	REY	00000009	</div>
00000010	COLADOR MULTIUSO	LITROS	COLADOR	REY	00000010	</div>
00000011	HISOPO CON BASE HANDY CLEAN	GRAMOS	HISOPO	DAYR	00000011	</div>
00000012	RALLADOR DE PLÁSTICO	GRAMOS	ARTICULO DE HOGAR	POLINPLAST	00000012	</div>
00000013	BANDEJA SNAK	GRAMOS	BANDEJA	REY	00000013	</div>
00000014	PORTACEPILLO FAMILIAR	LITROS	PORTACEPILLO	REY	00000014	</div>
00000015	ENVASE HERMETICO 1.5 LT CON TAPA ROSCA	LITROS	ENVASE	REY	00000015	</div>
00000016	TRAPEADOR MICROFIBRA	GRAMOS	TRAPEADOR	REY	00000016	</div>
00000017	TAPETE BIENVENIDO	GRAMOS	TAPETE	DAYR	00000017	</div>
00000018	BAÑERA BALLENTA FELIZ BASA	LITROS	BAÑERA	BASA	00000018	</div>
00000019	CONDIMENTERO	LITROS	CONDIMENTERO	BOTIPLAST	00000019	</div>
00000020	TETERA	LITROS	TETERA	KING	00000020	</div>
00000021	BANCO EVEREST 2 PASOS	GRAMOS	BANCO	REY	00000021	</div>
00000022	FRASCO REPOSTERO PRACTICO 4 LT	LITROS	FRASCO	BOTIPLAST	00000022	</div>
00000023	PORTARROLLO DE LUXE	GRAMOS	PORTARROLLO	REY	00000023	</div>
00000024	ESPEJO ROSE	GRAMOS	ESPEJO	COASPA	00000024	</div>
00000025	AZUCARERO ACRÍLICO	GRAMOS	AZUCARERO	BASA	00000025	</div>
00000026	NECESER NADINE PORTATIL	GRAMOS	NECESER	REY	00000026	</div>
00000027	REPOSTERO FRANCÉS #10	LITROS	REPOSTERO	REY	00000027	</div>
00000028	JARRA TROPICAL 4.5 LT	LITROS	JARRA	BASA	00000028	</div>
00000029	MACETA DURA FASHION # 6	LITROS	MACETA	REY	00000029	</div>