

# User Manual

This is the User Manual for PC Part Information System. The following image is the GUI of the system. This User Manual is a guide for the user to easily use our PC Part Information System.

## GUI Layout

The screenshot displays the 'PC Part Information System' application window. The interface is divided into a left sidebar for data entry and a main area for search and display.

**Left Sidebar (Form Fields):**

- Company Name:** A text input field.
- Product Type:** A dropdown menu currently showing 'CPU'.
- Product Name:** A text input field.
- Warranty:** Two radio buttons labeled 'Standard' and 'Premium'.
- Quantity:** A text input field.
- Home Delivery:** A checkbox labeled 'Eligible for Home Delivery'.
- Price:** A text input field.
- Buttons:** 'ADD' and 'CLEAR' buttons at the bottom of the sidebar.

**Main Area:**

- Search:** A text input field followed by a dropdown menu (currently 'CPU') and a 'Delete Data' button.
- Search By:** Five buttons: 'Company', 'Product Type', 'Product Name', 'Quantity', and 'Price'.
- Table:** A table with 8 columns: 'Product No.', 'Company', 'Product Type', 'Product Na...', 'Warranty', 'Home Deliv...', 'Quantity', and 'Price'. The table body is currently empty.

Figure 1 GUI Layout

## Inputting Data

The screenshot shows a software window titled "PC Part Information System". On the left is a form with the following fields: "Company Name" (text box with "Intel"), "Product Type" (dropdown menu with "CPU"), "Product Name" (text box with "i7-10900K"), "Warranty" (radio buttons for "Standard" and "Premium", with "Premium" selected), "Quantity" (text box with "77"), "Home Delivery" (checkbox for "Eligible for Home Delivery", which is checked), and "Price" (text box with "399"). At the bottom of the form are "ADD" and "CLEAR" buttons. On the right, there is a search area with a "Search:" text box, a dropdown menu set to "CPU", and a "Delete Data" button. Below this is a "Search By:" section with buttons for "Company", "Product Type", "Product Name", "Quantity", and "Price". A table displays the following data:

| Product No. | Company | Product Type | Product Na... | Warranty | Home Deliv... | Quantity | Price |
|-------------|---------|--------------|---------------|----------|---------------|----------|-------|
| 1           | AMD     | CPU          | Ryzen 5900X   | Premium  | Not Eligible  | 5        | 499   |

Figure 2 Entering Data

- Data can be entered by the user in the *Text Fields* (Left side on the GUI) as shown in the image above.
- Data can range from *Numeric* to *Alphabetic* depending on the User's Choice.
- Please Note that Certain Sections in the System only Accept *Numeric* Data (*Price* and *Quantity*), where as some sections do not need data to be entered through text and data can rather easily be entered through interactive boxes (*Product Type*, *Warranty*, *Home Delivery*).

## Adding and Clearing Data in the System

The screenshot shows a web application titled "PC Part Information System". On the left is a form for adding new data with fields for Company Name, Product Type (set to CPU), Product Name, Warranty (radio buttons for Standard and Premium), Quantity, Home Delivery (checkbox for Eligible for Home Delivery), and Price. At the bottom of this form are "ADD" and "CLEAR" buttons. On the right, there is a search section with a "Search:" input field, a dropdown menu set to "CPU", and a "Delete Data" button. Below this is a "Search By:" section with buttons for Company, Product Type, Product Name, Quantity, and Price. A table displays the current data:

| Product No. | Company | Product Type | Product Na... | Warranty | Home Deliv... | Quantity | Price |
|-------------|---------|--------------|---------------|----------|---------------|----------|-------|
| 1           | AMD     | CPU          | Ryzen 5900X   | Premium  | Not Eligible  | 5        | 399   |
| 2           | Intel   | CPU          | i7-10900K     | Premium  | Eligible      | 77       | 399   |

Figure 3 Adding and Clearing Data

- Pressing the *ADD* (bottom left corner) button saves the data and displays it in the Table.
- Pressing the *CLEAR* (bottom left corner besides *ADD* button) button clears the existing entered data and resets it.

## Updating Data

The screenshot shows the 'PC Part Information System' window. On the left, there are input fields for 'Company Name' (Intel), 'Product Type' (CPU), 'Product Name' (i7-10900K), 'Warranty' (Premium selected), 'Quantity' (77), 'Home Delivery' (Eligible for Home Delivery checked), and 'Price' (399). On the right, there is a 'Search' field, a 'Search By' dropdown (CPU), and a 'Delete Data' button. Below these is a table with the following data:

| Product No. | Company | Product Type | Product Na... | Warranty | Home Deliv... | Quantity | Price |
|-------------|---------|--------------|---------------|----------|---------------|----------|-------|
| 1           | AMD     | CPU          | Ryzen 5900X   | Premium  | Not Eligible  | 5        | 499   |
| 2           | Intel   | CPU          | i7-10900K     | Premium  | Eligible      | 77       | 399   |

The 'UPDATE' button at the bottom left is highlighted with a blue border.

Figure 4 Clicking on Data to Update It

The screenshot shows the 'PC Part Information System' window. On the left, there are input fields for 'Company Name' (Intel), 'Product Type' (CPU), 'Product Name' (i7-10900K), 'Warranty' (Premium selected), 'Quantity' (80), 'Home Delivery' (Eligible for Home Delivery checked), and 'Price' (399). On the right, there is a 'Search' field, a 'Search By' dropdown (CPU), and a 'Delete Data' button. Below these is a table with the following data:

| Product No. | Company | Product Type | Product Na... | Warranty | Home Deliv... | Quantity | Price |
|-------------|---------|--------------|---------------|----------|---------------|----------|-------|
| 1           | AMD     | CPU          | Ryzen 5900X   | Premium  | Not Eligible  | 5        | 499   |
| 2           | Intel   | CPU          | i7-10900K     | Premium  | Eligible      | 80       | 399   |

The 'UPDATE' button at the bottom left is highlighted with a blue border.

Figure 5 Updating Data by Clicking Update Data

- Existing Data can be Updated by Selecting the required Data in the Table and changing its value and pressing on the **UPDATE** Button on the bottom left corner.

## Deleting Data

The screenshot shows the 'PC Part Information System' window. On the left, there are input fields for Company Name (AMD), Product Type (Graphics Card), Product Name (Radeon 6900XT), Warranty (Standard selected), Quantity (5), Home Delivery (checked), and Price (999). On the right, there is a 'Search' field, a 'CPU' dropdown, and a 'Delete Data' button. Below these are 'Search By' buttons for Company, Product Type, Product Name, Quantity, and Price. A table lists 12 products with columns: Product No., Company, Product Type, Product Name, Warranty, Home Delivery, Quantity, and Price. The second row (AMD Graphics Card) is highlighted.

| Product No. | Company  | Product Type  | Product Name   | Warranty | Home Delivery | Quantity | Price   |
|-------------|----------|---------------|----------------|----------|---------------|----------|---------|
| 1           | AMD      | CPU           | Ryzen 5950X    | Premium  | Eligible      | 14       | 799     |
| 2           | AMD      | Graphics Card | Radeon 6900XT  | Standard | Eligible      | 5        | 999     |
| 3           | Nvidia   | Graphics Card | RTX 3090       | Premium  | Eligible      | 2        | 1499.99 |
| 4           | Intel    | CPU           | i9 10900K      | Premium  | Eligible      | 200      | 499     |
| 5           | Nvidia   | Graphics Card | RTX 3080       | Standard | Eligible      | 0        | 699.99  |
| 6           | NZXT     | Case          | H710i          | Standard | Not Eligible  | 50       | 169.99  |
| 7           | Seasonic | Power Supply  | Prime TX       | Premium  | Eligible      | 159      | 686     |
| 8           | Asrock   | Motherboard   | Taichi x570    | Premium  | Eligible      | 94       | 299.99  |
| 9           | G-Skill  | Memory        | Trident Z R... | Standard | Eligible      | 106      | 189.99  |
| 10          | Noctua   | Cooler        | NH-D15         | Standard | Eligible      | 182      | 99.99   |
| 11          | Samsung  | Storage       | 970 EVO N...   | Standard | Eligible      | 216      | 139.99  |
| 12          | Samsung  | Monitor       | 49" CHG90...   | Premium  | Not Eligible  | 57       | 899.99  |

Figure 6 Selecting Data before Deleting

The screenshot shows the 'PC Part Information System' window. On the left, there are input fields for Company Name, Product Type (CPU), Product Name, Warranty (Standard selected), Quantity, Home Delivery (unchecked), and Price. On the right, there is a 'Search' field, a 'CPU' dropdown, and a 'Delete Data' button. Below these are 'Search By' buttons for Company, Product Type, Product Name, Quantity, and Price. A table lists 11 products with columns: Product No., Company, Product Type, Product Name, Warranty, Home Delivery, Quantity, and Price. The second row (Nvidia Graphics Card) is highlighted.

| Product No. | Company  | Product Type  | Product Name   | Warranty | Home Delivery | Quantity | Price   |
|-------------|----------|---------------|----------------|----------|---------------|----------|---------|
| 1           | AMD      | CPU           | Ryzen 5950X    | Premium  | Eligible      | 14       | 799     |
| 2           | Nvidia   | Graphics Card | RTX 3090       | Premium  | Eligible      | 2        | 1499.99 |
| 3           | Intel    | CPU           | i9 10900K      | Premium  | Eligible      | 200      | 499     |
| 4           | Nvidia   | Graphics Card | RTX 3080       | Standard | Eligible      | 0        | 699.99  |
| 5           | NZXT     | Case          | H710i          | Standard | Not Eligible  | 50       | 169.99  |
| 6           | Seasonic | Power Supply  | Prime TX       | Premium  | Eligible      | 159      | 686     |
| 7           | Asrock   | Motherboard   | Taichi x570    | Premium  | Eligible      | 94       | 299.99  |
| 8           | G-Skill  | Memory        | Trident Z R... | Standard | Eligible      | 106      | 189.99  |
| 9           | Noctua   | Cooler        | NH-D15         | Standard | Eligible      | 182      | 99.99   |
| 10          | Samsung  | Storage       | 970 EVO N...   | Standard | Eligible      | 216      | 139.99  |
| 11          | Samsung  | Monitor       | 49" CHG90...   | Premium  | Not Eligible  | 57       | 899.99  |

Figure 7 Deleting Data by Selecting Delete Data Button

- Data can be deleted by Selecting the data on the Table and the pressing the *Delete Data* button on the Top Right Corner of the GUI.

# Searching Data

PC Part Information System

File Help

**PC Part Information System**

Company Name

Product Type  
CPU

Product Name

Warranty  
☐ Standard ☐ Premium

Quantity

Home Delivery  
☐ Eligible for Home Delivery

Price

ADD CLEAR

Search : 799 CPU Delete Data

Search By : Company Product Type Product Name Quantity Price

| Product No. | Company  | Product Type  | Product Na...  | Warranty | Home Deliv... | Quantity | Price   |
|-------------|----------|---------------|----------------|----------|---------------|----------|---------|
| 1           | Nvidia   | Graphics C... | RTX 3080       | Standard | Eligible      | 0        | 699.99  |
| 2           | Nvidia   | Graphics C... | RTX 3090       | Premium  | Eligible      | 2        | 1499.99 |
| 3           | AMD      | Graphics C... | Radeon 69...   | Standard | Eligible      | 5        | 999     |
| 4           | AMD      | CPU           | Ryzen 5950X    | Premium  | Eligible      | 14       | 799     |
| 5           | NZXT     | Case          | H710i          | Standard | Not Eligible  | 50       | 169.99  |
| 6           | Samsung  | Monitor       | 49" CHG90...   | Premium  | Not Eligible  | 57       | 899.99  |
| 7           | Asrock   | Motherboard   | Taichi x570    | Premium  | Eligible      | 94       | 299.99  |
| 8           | G-Skill  | Memory        | Trident Z R... | Standard | Eligible      | 106      | 189.99  |
| 9           | Seasonic | Power Sup...  | Prime TX       | Premium  | Eligible      | 159      | 686     |
| 10          | Noctua   | Cooler        | NH-D15         | Standard | Eligible      | 182      | 99.99   |
| 11          | Intel    | CPU           | i9 10900K      | Premium  | Eligible      | 200      | 499     |
| 12          | Samsung  | Storage       | 970 EVO N...   | Standard | Eligible      | 216      | 139.99  |

Figure 8 Entering Data to be Searched

PC Part Information System

File Help

**PC Part Information System**

Company Name

Product Type  
CPU

Product Name

Warranty  
☐ Standard ☐ Premium

Quantity

Home Delivery  
☐ Eligible for Home Delivery

Price

ADD CLEAR

Search : 799 CPU Delete Data

Search By : Company Product Type Product Name Quantity Price

Search Results

First Entry:  
AMD Ryzen 5950X  
Premium Warranty  
Eligible for Home Delivery  
Price: 799

OK

| Product No. | Company  | Product Type  | Product Na...  | Warranty | Home Deliv... | Quantity | Price   |
|-------------|----------|---------------|----------------|----------|---------------|----------|---------|
| 1           | Noctua   | Cooler        | NH-D15         | Standard | Eligible      | 182      | 99.99   |
| 2           | Samsung  | Storage       | 970 EVO N...   | Standard | Eligible      | 216      | 139.99  |
| 3           | NZXT     | Case          | H710i          | Standard | Not Eligible  | 50       | 169.99  |
| 4           | G-Skill  | Memory        | Trident Z R... | Standard | Eligible      | 106      | 189.99  |
| 5           | Asrock   | Motherboard   | Taichi x570    | Premium  | Eligible      | 94       | 299.99  |
| 6           | Intel    | CPU           | i9 10900K      | Premium  | Eligible      | 200      | 499     |
| 7           | Seasonic | Power Sup...  | Prime TX       | Premium  | Eligible      | 159      | 686     |
| 8           | Nvidia   | Graphics C... | RTX 3080       | Standard | Eligible      | 0        | 699.99  |
| 9           | AMD      | CPU           | Ryzen 5950X    | Premium  | Eligible      | 14       | 799     |
| 10          | Samsung  | Monitor       | 49" CHG90...   | Premium  | Not Eligible  | 57       | 899.99  |
| 11          | AMD      | Graphics C... | Radeon 69...   | Standard | Eligible      | 5        | 999     |
| 12          | Nvidia   | Graphics C... | RTX 3090       | Premium  | Eligible      | 2        | 1499.99 |

Figure 9 Searching for the Data by Pressing Search by Price Button

- Data can be searched by entering the required data in the *Text Field* provided in the top portion of the GUI that is besides the *Search Text*.
- Data can be Searched on the basis of *Company Name*, *Product Type*, *Product Name*, *Quantity* as well as on the basis of Price.
- *Price* and *Quantity* data are Searched and Sorted using Selection Sort and Binary Search Algorithm.
- *Company Name*, *Product Type* and *Product Name* data are Searched but not sorted and do not use Binary Search Algorithm.

## Opening and Exiting the Application

The screenshot shows the 'PC Part Information System' application window. It features a menu bar with 'File' and 'Help'. The 'File' menu is open, showing 'Open File' and 'Exit' options. The main interface includes a search bar with the value '399', a dropdown menu for 'CPU', and a 'Delete Data' button. Below these are buttons for 'Search By' with options: 'Company', 'Product Type', 'Product Name', 'Quantity', and 'Price'. A table displays 14 product entries with columns for Product No., Company, Product Type, Product Name, Warranty, Home Delivery, Quantity, and Price. On the left side, there are input fields for 'Company Name', 'Product Name', 'Quantity', and 'Price', along with radio buttons for 'Warranty' (Standard and Premium) and a checkbox for 'Home Delivery' (Eligible for Home Delivery). 'ADD' and 'CLEAR' buttons are at the bottom left.

| Product No. | Company  | Product Type  | Product Na...  | Warranty | Home Deliv... | Quantity | Price   |
|-------------|----------|---------------|----------------|----------|---------------|----------|---------|
| 1           | Noctua   | Cooler        | NH-D15         | Standard | Eligible      | 182      | 99.99   |
| 2           | Samsung  | Storage       | 970 EVO N...   | Standard | Eligible      | 216      | 139.99  |
| 3           | NZXT     | Case          | H710i          | Standard | Not Eligible  | 50       | 169.99  |
| 4           | G-Skill  | Memory        | Trident Z R... | Standard | Eligible      | 106      | 189.99  |
| 5           | Asrock   | Motherboard   | Taichi x570    | Premium  | Eligible      | 94       | 299.99  |
| 6           | Intel    | CPU           | i7-10900K      | Premium  | Eligible      | 80       | 399     |
| 7           | AMD      | CPU           | Ryzen 5900X    | Premium  | Not Eligible  | 5        | 499     |
| 8           | AMD      | CPU           | Ryzen 5900X    | Premium  | Not Eligible  | 5        | 499     |
| 9           | Intel    | CPU           | i9 10900K      | Premium  | Eligible      | 200      | 499     |
| 10          | Seasonic | Power Sup...  | Prime TX       | Premium  | Eligible      | 159      | 686     |
| 11          | Nvidia   | Graphics C... | RTX 3080       | Standard | Eligible      | 0        | 699.99  |
| 12          | Samsung  | Monitor       | 49" CHG90...   | Premium  | Not Eligible  | 57       | 899.99  |
| 13          | AMD      | Graphics C... | Radeon 69...   | Standard | Eligible      | 5        | 999     |
| 14          | Nvidia   | Graphics C... | RTX 3090       | Premium  | Eligible      | 2        | 1499.99 |

Figure 10 Opening Existing File and Exiting System

- Existing data can be imported to the system by going to *File> Open File* (Top Left Corner).
- The system can be Exited similarly by pressing on *Exit* (Below *Open File* Option).

**THANK YOU FOR USING OUR SYSTEM**