

Mavs Ice Cream Bar

User Interface

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Menu Bar

The Headings indicate drop-down menu items on the menu bar, and the words in bold represent the menu items.

The role(s) in parentheses are the roles for which this option is sensitive. It is insensitive for all others.

The text in quotes is the tool tip.

The remaining text is a description of the behavior initiated by that menu item activation.

File

New – (Owner) “Create a New Emporium” If the data in the current Emporium has not been saved, offer to Save it, Discard it, or Cancel creating a new Emporium. If Save, save the current Emporium data as if Save were selected. Then, if not Cancel or if data was already saved, start with a brand new, empty emporium.

Open... - (Owner) “Open an Existing Emporium” If the data in the current Emporium has not been saved, offer to Save it, Discard it, or Cancel creating a new Emporium. If Save, save the current Emporium data as if Save were selected. Then, if not Cancel or if data was already saved, display a list of saved emporiums using gtkmm’s file browser, and if the user selects one, load its data into a new instance of Emporium, then set the current filename to the name of the opened file. You will need to create your own file format – a simple text format is recommended.

Save – (Owner) “Save This Emporium’s Data” If a current filename has not been set, treat this exactly as a Save As... selection. Otherwise, save all of the emporium’s data to the current filename.

Save As... – (Owner) “Save This Emporium’s Data to a New File” Get an Emporium filename using gtkmm’s file browser, and then save all of the Emporium’s data to that filename. Then, set the current filename to the selected filename.

Properties... – (All) Display a dialog showing general information about the current Emporium, suitable for viewing by a Customer.

Exit – (Owner, Manager) “Exit the program”. If the data in the current Emporium has not been saved, offer to Save it, Discard it, or Cancel creating a new Emporium. If Save, save the current Emporium data as if Save were selected. Then, if not Cancel or if data was already saved, exit the program.

NOTE: Clicking the “x” in the title bar to close the program should be treated exactly like clicking File → Exit.

Edit

Undo – (All) “Undo the Last Action” Undo the results of the most recent menu selection. The undo list should be cleared when a new role is selected.

Restock – (Server) “Restock an Item on the Server Preparation Counter” Allow the user to select an Item from a list of all Items, and reset it to its maximum value or a value specified by the user. Credit the Server with 2 Orders filled for this restocking action.

Customer – (Owner, Manager, Server) “Edit the Properties of a Customer” Allow the users to select a person from a list of all active and inactive Customers, then open that Customer’s properties in an editable dialog to modify their data. Click Archive to remove an active Customer from active lists (except the one presented with this menu item), Restore to move an inactive Customer to active status again, OK to save the updated Customer properties, or Cancel to leave the properties unchanged.

Server – (Owner, Manager) “Edit the Properties of a Server” Allow the users to select a person from a list of all active and inactive Servers, then open that Server’s properties in an editable dialog to modify their data. Click Archive to set an active Server to inactive status and remove them from all lists (except the one presented with this menu item), Restore to set an inactive Server to active status, OK to save the updated Server properties, or Cancel to leave the properties unchanged.

Manager – (Owner) “Edit the Properties of a Manager” Allow the users to select a person from a list of all active and inactive Managers, then open that Manager’s properties in an editable dialog to modify their data. Click Archive to remove an active Manager from active lists (except the one presented with this menu item), Restore to move an inactive Manager back to active status again, OK to save the updated Manager properties, or Cancel to leave the properties unchanged.

Owner – (Owner) “Edit the Properties of a Manager” Allow the users to select a person from a list of all active and inactive Owners, then open that Owner’s properties in an editable dialog to modify their data. Click Archive to remove an active Owner from active lists (except the one presented with this

menu item), Restore to move an inactive Owner back to active status again, OK to save the updated Owner properties, or Cancel to leave the properties unchanged.

Item – (Manager) “Edit the Properties of an Item” Allow the user to select an Item from a list of all Items, then open that Item in an editable dialog to modify all of its data. Click Retire to set the item as Inactive, Restore to set the Item as active again, OK to save the updated Item properties, or Cancel to leave the properties unchanged.

Create

Order... – (All) “Create Delicious Ice Cream Treats” If not a Customer, select a Customer from a list for whom this order is intended. Then display one or more dialogs to define one or more Servings that will comprise the Order, without limit, creating an Order to add to the list. A Serving consists of exactly one Container, from 1 to the maximum number for that Container of scoops of various ice cream flavors, and any number of toppings. The price of a Serving is the sum of its constituent Items, and the price of an Order the sum of its constituent Servings. Initially the Order is unfilled (and thus unpaid).

Customer... – (Owner, Manager, Server) “Create a New Customer” Display a dialog asking for all data needed to create a new Customer, and then add that Customer to the list. If a Customer with that name already exists, throw an exception (internally) that results in an error dialog.

Item... – (Owner, Manager) “Create a New Container, Ice Cream Flavor, or Topping” Display a dialog asking if the user wants to create a new ice cream Flavor, Container, or Topping, and then collect all data needed to create the new Item, and then add that item to the list so that Customers can create each Serving to include in an Order. Start with a fresh tub of 25 servings for a new ice cream flavor, 100 of each new container, and unlimited quantities for each topping.

Server... – (Owner, Manager) “Add a New Employee” Display a dialog asking for all data needed to create a new Server, and then add that Server to the active list. If a Server with that name already exists, throw an exception (internally) that results in an error dialog.

Process

Process may be set insensitive for Owners.

Fill Order... – (Server) “Prepare an Order for a Customer” Select an unfilled Order from a list.

- If sufficient items are available to fill the order, subtract all of the constituent items from stock on hand, set the Order’s Server to the current Server, increment that Server’s count of filled orders, and set that Order to filled.
- If insufficient items are available to fill the order, throw an exception internally and display a dialog asking the server to restock the Item. Once acknowledged, credit the Server with 2 additional orders filled (for restocking the item), reset the number of that item available to the maximum amount or the amount selected, and then resume filling the Order.

- We assume unlimited Containers, tubs of ice cream Flavors, and Toppings in the back of the parlor.

Payment... – (Server) “Accept Payment from a Customer for an Order” Select a filled but unpaid Order from a list in a dialog.

- Add the price to the Cash Register. Then set that Order to paid.

Cancel Order... – (Manager, Server, Customer) “Cancel an Existing Order” Select an unfilled Order from a list in a dialog. Show a confirmation dialog with details of the order, and if “OK” is selected, set that order to canceled. If “Cancel” is selected, close the dialog without changing the order’s status.

- For a Manager or Server, show *all* unfilled orders. For a Customer, show only *their own* unfilled orders.
- If only one order is available, don’t show the list, but rather select that order.
- If no orders are available, throw an exception internally that results in an error message.

Report

Report may be set insensitive for Servers and Customers.

Servers – (Owner, Manager) “Show All Server Data” All Server data including how many orders each has filled and howmuch each has earned.

Customer – (Owner, Manager) “Show All Customer Data” All known Customer data.

Inventory – (Owner, Manager) “Show Availability of All Items” Every Item and how many of each are currently available.

Orders – (Owner, Manager) “Show All Active Orders” Every active Order, its current state, its wholesale cost and retail price, and the profit for that Order. Add an option also includes Filled and Canceled orders.

P&L – (Owner, Manager) “Show Profit and Loss Statement” A Profit and Loss statement, showing income from all Orders, the cost of Server salaries and of Items added to stock, and calculating the difference as net profit.

Role

Owner – (All) “Login as an Owner” Make menu and tool bar actions available to an Owner sensitive, all others insensitive. Eventually this should require a password.

Manager – (All) “Login as a Manager” Select the Manager from a list of active Managers, and (eventually) verify their password. If successful, make menu and tool bar actions available to a Manager sensitive, all others insensitive.

Server – (All) “Login as a Server” Select the Server from a list of active Servers, and (eventually) verify their password. If successful, make all menu and tool bar actions available to a Server sensitive, all others insensitive.

Customer – (All) Select the Customer from a list of active Customers, and (eventually) verify their password. If successful, make menu and tool bar actions available to a Customer sensitive, all others insensitive.

Help

Manual – (Owner, Manager, Server) “Get Help Using this Program” Open a PDF file into the system viewer with information on using this program.

About... – (All) Open an About Dialog showing the program name, version, and other pertinent information.

Tool Bar

Tool bar buttons will be provided for the following selections above, with the same sensitivity and tool tips.

File → Open

File → Save

Create → Order

Create → Customer

Process → Fill Order

Process → Payment

Process → Cancel Order

Role → Owner

Role → Manager

Role → Server

Role → Customer

Main Data Area

Owner

Show the P&L report. Update the report each time it is clicked, or (stretch goal) every minute.

Manager

Show the Orders report, for unfilled and unpaid orders only. Update the report each time it is clicked, or (stretch goal) every minute.

Server

Show the servings that comprise the current order being filled or for which payment is being collected, with the total price to be paid in larger font than the others. If no order has been selected, show in large font “Select or Start an Order”.

Customer

If an order is pending for this Customer, show the details at the top of this area.

Below it (if present), show 3 large colorful buttons, horizontally aligned.

- **Place a New Order** – (Same as Create → Order) This is sensitive if the current Customer has no unfilled or unpaid orders pending.
- **Pay Here** – (Same as Process → Payment) This is sensitive if the current Customer has an unpaid or unfilled order pending.
- **Cancel Order** – (Same as Process → Cancel Order) This is sensitive if the current Customer has an unfilled order pending.