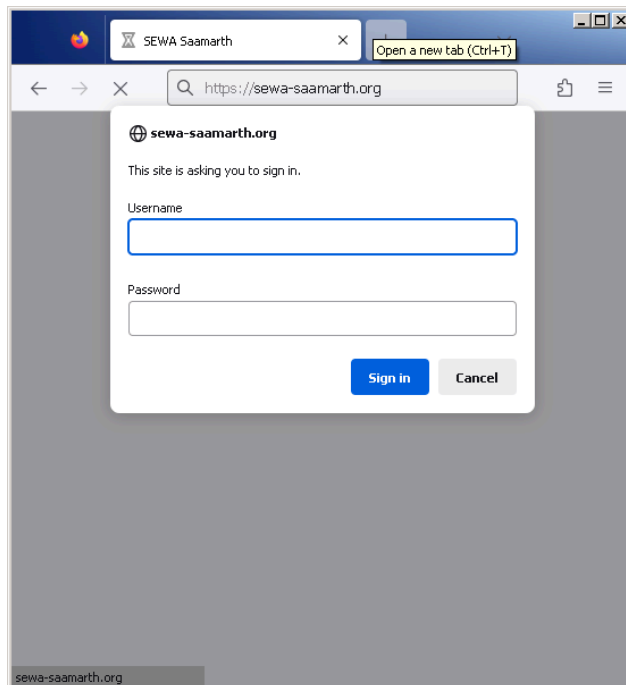


SEWA Saamarth Test Plan / Functionality Overview

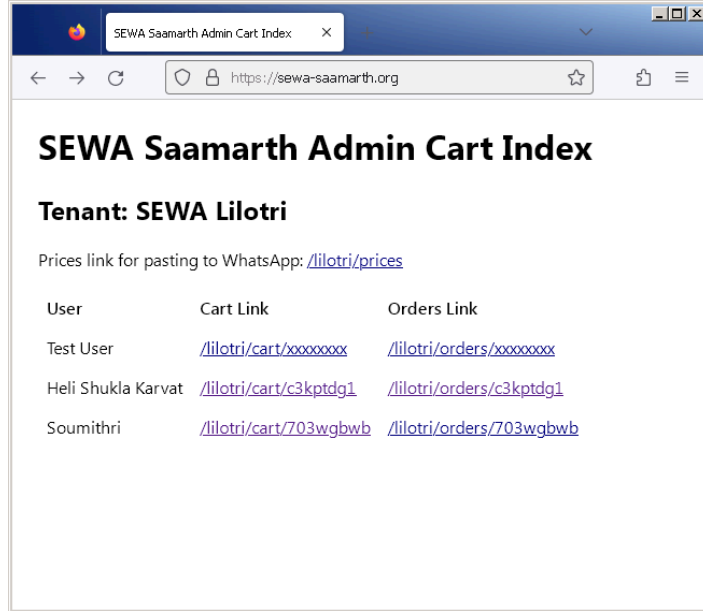
The spreadsheet-facing and web-facing parts of the app planned in the SEWA Saaamarth Design plan as of 31st January 2024 have an early pilot deployment at <https://sewa-saamarth.org> from where some cycles of co-design can now begin. This document outlines the implemented functionality and also provides a testing plan by which the app's function can be validated.

The design is for a multi-tenant system where each cooperative or other grouping can commission their own order system by provisioning a spreadsheet and registering it with the site. Right now there is just one tenant named "lilotri" controlled by the spreadsheet at [SEWA Lilotri Farm2table Working Sheet](#) .

The base URL <https://sewa-saamarth.org/> functions as an administrator view of the shopping cart links for all registered users in all tenants - since this information is sensitive, this page is password protected.



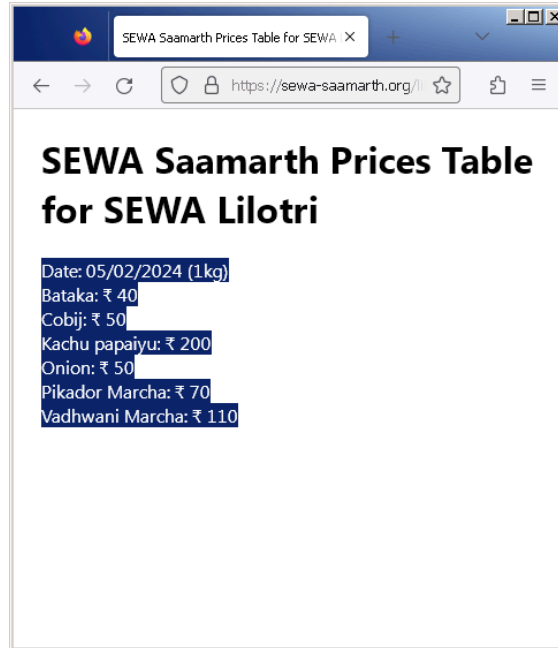
After logging in, a basic view listing shopping cart links by tenant appears:



These links will be distributed by the WhatsApp bot (initially by hand) and are personalised to each user. Since they don't permit any strongly sensitive action to be performed (only to submit an order for the day and feedback on it), for ease of access they are not protected in any way. When the links are distributed the user should be warned that they are private to them and not to share them. If a link ends up being compromised it can easily be withdrawn and a new one issued to the user by editing the "userId" column in the "Users" tab of the working sheet.

Textual Prices List Page

A helpful link for the admin of each tenant is at the head of the block, "Prices link for pasting to WhatsApp". This links to a simple text view as follows, listing all goods which are currently on sale - this can be cut and pasted directly into the WhatsApp group chat at the start of the day:




After visiting their cart, if orders are being taken that day and the time is not before the cutoff (defaulting to 8pm IST) a [cart view](#) will be seen e.g. at <https://sewa-saamarth.org/lilotri/cart/c3kptdg1>

Test:

Go to the working sheet, ensure that there is a price row with today's date, and edit the "Order cutoff" time to after the current time,

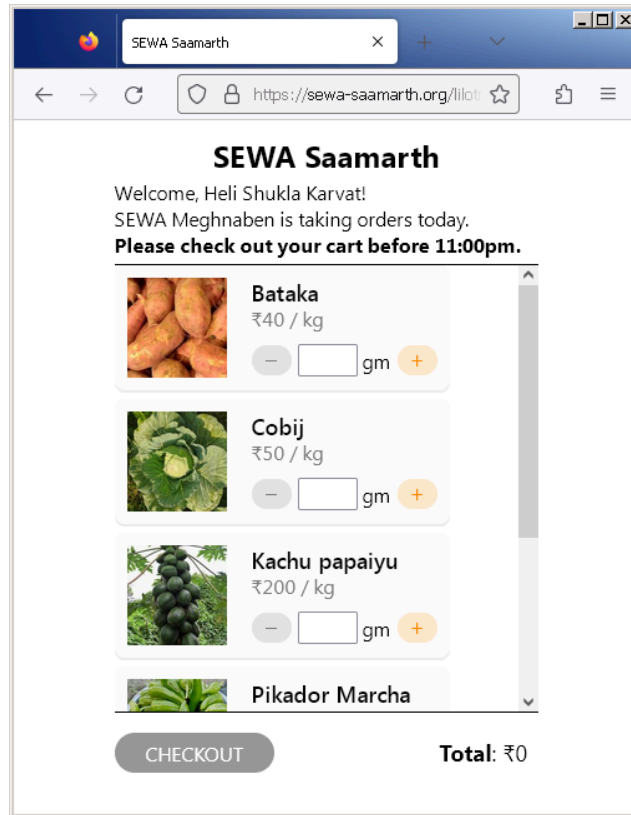
Cutoff time cell

The screenshot shows a Google Sheet with the following data:

	A	B	C	D	
1	Gujarati (Display Name)			Bataka	Oni
2	Code			bataka	onir
3	Image				
4	English			Sweet potato	Oni
5	Category			Vegetable	Veç
6	Price Measure			kg	kg
7	Other Measures			1000g=kg	10C
8					
9					
10					
11			Order cutoff		
12	Today's prices (Rs)	31/01/24	23:00		40
13		14/12/23	20:00		35
14					
15					

and check that the cart view appears:

Active Cart View:



Test:

Select several items by adding quantities using the +/- buttons and select CHECKOUT - you should then be taken to an "orders" page e.g. at <https://sewa-saamarth.org/lilotri/orders/c3kptdg1> showing the most recently placed order and any earlier orders from the same user:

SEWA Saamarth orders for Heli Shukla | X

https://sewa-saamarth.org/lilotr/orders/c3kptd

SEWA Saamarth orders for Heli Shukla Karvat

Thank you for today's order. Please pay the total of ₹25.00 with SEWA's UPI code:






UPI
UNIFIED PAYMENTS INTERFACE

National Relief Fund
Account No: 007010100273206
IFSC: UTIB0000007
SCAN & PAY

Please rate how easy you found it to place your order today, and note any problems or comments in the box below:

★★★★★

SUBMIT FEEDBACK

Item	Item Price	Quantity	Price
 Bataka	₹40 / kg	50gm	₹2
 Cobij	₹50 / kg	50gm	₹3
 Kachu papaiyu	₹200 / kg	50gm	₹10
 Vadhwani Marcha	₹110 / kg	50gm	₹6
 Pikador Marcha	₹70 / kg	50gm	₹4

Past Orders:

Test:

Select a star rating for the order and some feedback text, press SUBMIT FEEDBACK - the text should change to acknowledge this as follows:

SEWA Saamarth orders for Heli Shukla Karvat

Thank you for today's order. Please pay the total of ₹25.00 with SEWA's UPI code:

UPI UNIFIED PAYMENTS INTERFACE

QR Code

National Relief Fund
Account No: 907810100273286
IFSC: UTBI0009097

SCAN & PAY

Please rate how easy you found it to place your order today, and note any problems or comments in the box below:

★★★★☆ Couldn't find bhinda

SUBMIT FEEDBACK

Thank you for submitting your feedback!

Item	Item Price	Quantity	Price
Bataka	₹40 / kg	50gm	₹2
Cobjij	₹50 / kg	50gm	₹3
Kachu papaiyu	₹200 / kg	50gm	₹10
Vadhwani Marcha	₹110 / kg	50gm	₹6
Pikador Marcha	₹70 / kg	50gm	₹4

Test:

Check that a corresponding row has appeared in the working sheet, and tick the PAID column for it.

SEWA Lilotri Farm2table Working Sheet

File Edit View Insert Format Data Tools Extensions Help

100% 123 Default... 10

F6 TRUE

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Order Number	Date	Name	User ID	Value	Paid	Rating	Feedback	bataka	onion	tameta	bhinda	cobij
2	1	18/12/23	Heli Shukla Karvat	c3kptdg1	₹292.00	<input checked="" type="checkbox"/>	4					500gm@65	
3	2	25/1/24	Soumithri	703wgbwb	₹40.00	<input checked="" type="checkbox"/>	5			1000gm@40			
4	3	30/01/24	Soumithri	703wgbwb	₹153.00	<input type="checkbox"/>	5	Very good order					250gm@50/kg
5	4	31/01/24	Soumithri	703wgbwb	₹30.00	<input type="checkbox"/>	4	Couldn't find bhinda	300gm@40/kg				
6	5	31/01/24	Heli Shukla Karvat	c3kptdg1	₹25.00	<input checked="" type="checkbox"/>	3	Couldn't find bhinda	50gm@40/kg				50gm@50/kg
7													






Refresh the page, it should now show that the order has been paid and continue to give the option to amend feedback:

SEWA Saamarth orders for Heli Shukla Karvat

Thank you for today's order. Your payment has been received. Please rate how easy you found it to place your order today, and note any problems or comments in the box below:






★★★★☆

SUBMIT FEEDBACK

Item	Item Price	Quantity	Price
 Bataka	₹40 / kg	50gm	₹2
 Cobij	₹50 / kg	50gm	₹3
 Kachu papaiyu	₹200 / kg	50gm	₹10
 Vadhwani Marcha	₹110 / kg	50gm	₹6
 Pikador Marcha	₹70 / kg	50gm	₹4

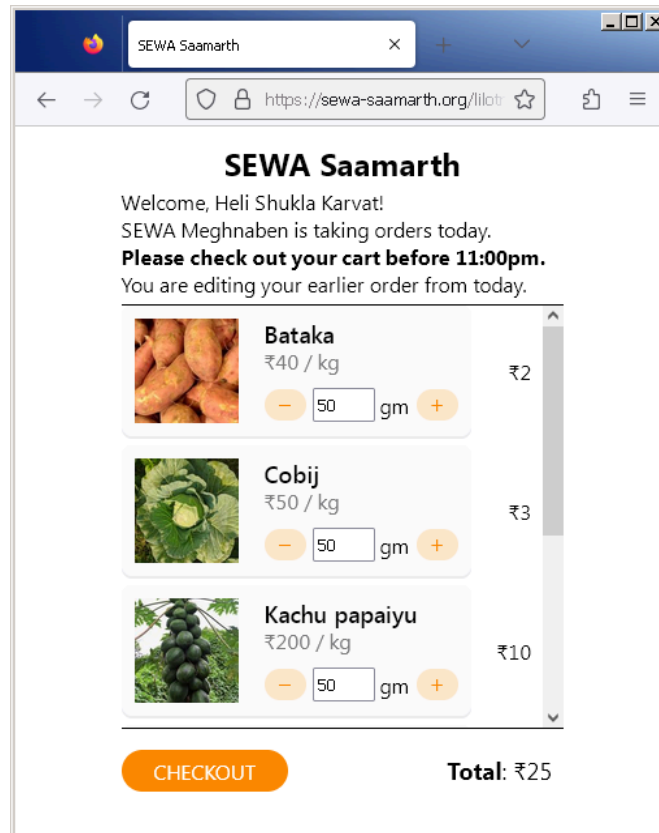
Past Orders:

Order placed	Total	Order #
18/12/23	₹292.00	#1

Item	Item Price	Quantity	Price
 Onion	₹40 / kg	1000gm	₹40
 Bhinda	₹65 / kg	500gm	₹33
 Flower	₹50 / kg	250	₹13
 Karela	₹120 / kg	350	₹42
 Beet	₹50 / kg	500	₹25

Test:

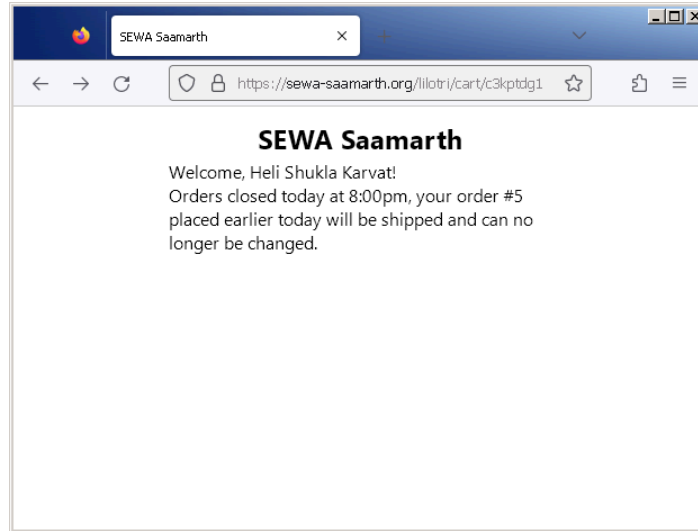
Press the back button to return to the cart page and reload it. It should show the cart showing the order just placed, together with the notice, “You are editing your earlier order from today.”:



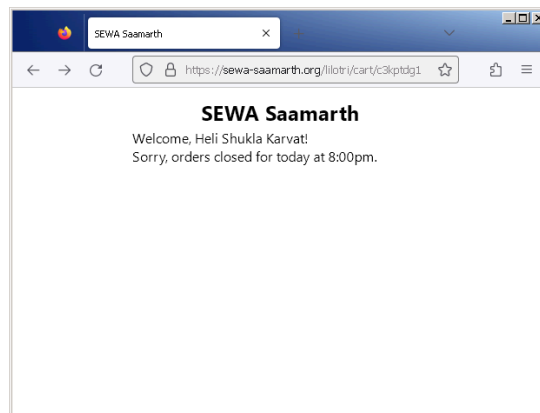
Adjust some quantities and check out again, and verify that the amended order appears in the orders page and the working sheet.

Test:

Now amend the [cutoff time](#) for today's entry in the **Prices** sheet in the working sheet to a time earlier than current one and go back to a cart view. It should not show the cart, and show one of two messages. If the user has placed an order that day, the message “your order # will be shipped and can no longer be changed”:




If the user has not placed an order, instead the message, "Sorry, orders closed for today"

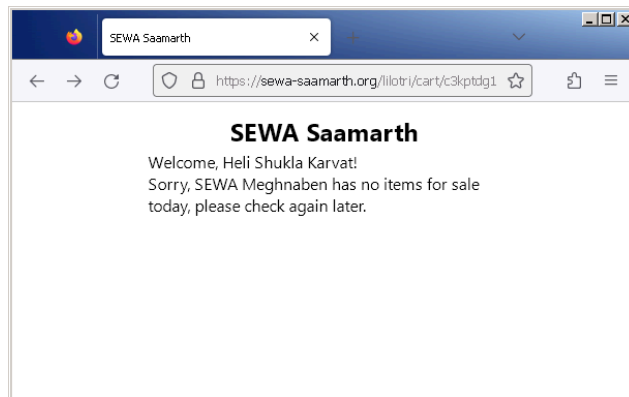


Test:

Edit the date in a price row in the Prices spreadsheet so it is in the past or future:

	A	B	C	D	E	
1	Gujarati (Display Name)			Bataka	Onion	Tamr
2	Code			bataka	onion	tame
3	Image					
4	English			Sweet potato	Onion	Tomr
5	Category			Vegetable	Vegetable	Vege
6	Price Measure			kg	kg	kg
7	Other Measures			1000g=kg	1000g=kg	1000
8						
9						
10						
11			Order cutoff			
12	Today's prices (Rs)	31/01/24	20:00	40		
13		14/12/23	20:00	35	70	

Then revisit a cart page, you should see a “no items for sale today” message:



Implementation and infrastructure notes:

The server is currently hosted in an Amazon EC2 instance in their US cloud as the most cost-effective of several options considered. The standard running costs of the instance are \$38 a year which could be reduced to \$22 by ordering a year in advance. The other cost of the hosting is registration of the sewa-saamarth.org domain name at \$15/year. As many sites

(tenants) as required can be hosted from the single server by provisioning further Google Sheets. The Google Sheets themselves can be kept private to each cooperative or group by using the standard access controls within Google Drive.

The current implementation is somewhat slow since it makes a complete fetch of the Google Sheet on every request which takes between 500ms-1s. This could be speeded up by adding more complex logic on the server to watch for when the sheet is updated.

The use of Google Sheets as the back end for the system has upsides and downsides. As well as the performance issue, there is the risk that the sheet gets scrambled so that the app can't read it - it is somewhat forgiving but not very, and in particular the columns in the "orders" pages must remain in their order. On the upside is that past versions of the spreadsheet can be recovered from Google's version history if it gets damaged, but on the downside is that this version history is often not very fine-grained and it will tend to lump together a group of changes that are made within a few hours of each other so there is some risk that data can be lost in a complex sequence of updates. The biggest upside is that all of the data is available for direct inspection and maintenance by the merchant rather than being locked away in an inaccessible backend. This system will not scale to very large numbers of orders and users but might be a good match for SEWA's "cellular" structure where each coop might have a few dozen members and a few dozen orders each week, which can each be allocated to their own spreadsheet.