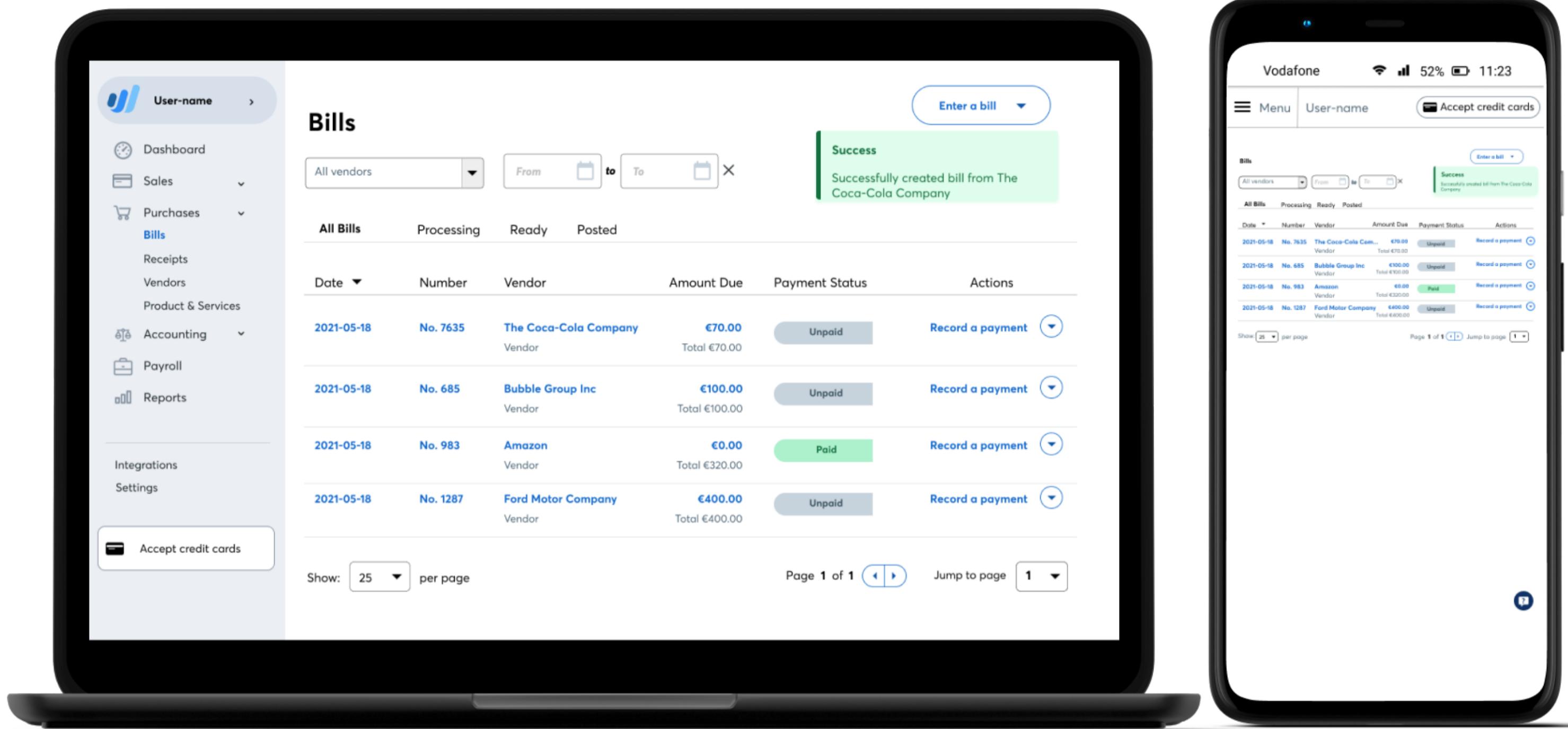


Wave Accounting – Bill upload feature

An unsolicited Design



Wave HQ Inc

Headquartered in the Leslieville neighborhood in Toronto, Canada. [Wave HQ Inc < https://www.waveapps.com/ > . < https://www.waveapps.com/ >](https://www.waveapps.com/) is a company that provides financial services and software for small businesses. It offers cloud-based integrated software for invoicing, accounting, payroll, payments, and personal finance.

After using wave accounting for over 3 years now, having been frustrated by the inability of the app to support bill upload feature. I decided to try and find a solution for this problem.

Features designed :

- Bill upload feature
- Redesign of the all bills screen
- Redesigned the information architecture based on the new feature

My roles in the project:

- Planned and executed user research to establish the viability of the feature.
- Redesigned the sitemap, wireframes, high-fidelity designs and clickable prototypes
- Planned and executed usability testing to facilitate reiteration of the designs and inform decision making.
- Design the backend accounting entries for the whole process.

Duration:

Two weeks

User-name >

- Dashboard
- Sales
- Purchases
- Accounting
- Payroll
- Reports

Integrations
Settings

Accept credit cards

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Explore Zoho Books and unlock your offer

Dashboard

Overdue invoices & bills

Overdue Bills

- GoDaddy, €1.00
- GoDaddy, €1200
- GoDaddy, €400.00

Cash Flow

Cash coming in and out of your business.

Inflow Outflow Net Change

Last 12 Months Last 24 Months

Things You Can Do

- Add a customer
- Add a vendor
- Customize your invoices
- Invite a guest collaborator

Create a new

View Report

€1250

€1000

€750

€500

€250

€0

€-250

€-500

May 20 Jun 20 Jul 20 Aug 20 Sep 20 Oct 20 Nov 20 Dec 20 Jan 21 Feb 21 Mar 21 Apr 21

User-name >

- Dashboard
- Sales
- Purchases
- Bills
- Receipts
- Vendors
- Product & Services
- Accounting
- Payroll
- Reports

Integrations
Settings

Accept credit cards

Bills

All invoices from vendors

File Home Share View

Search All invoices...

Quick access

- Desktop
- Downloads
- Documents
- Pictures
- Google Drive
- Google Drive (beleagency@gmail.com)

5 items 1 item selected 25.1 KB

Name

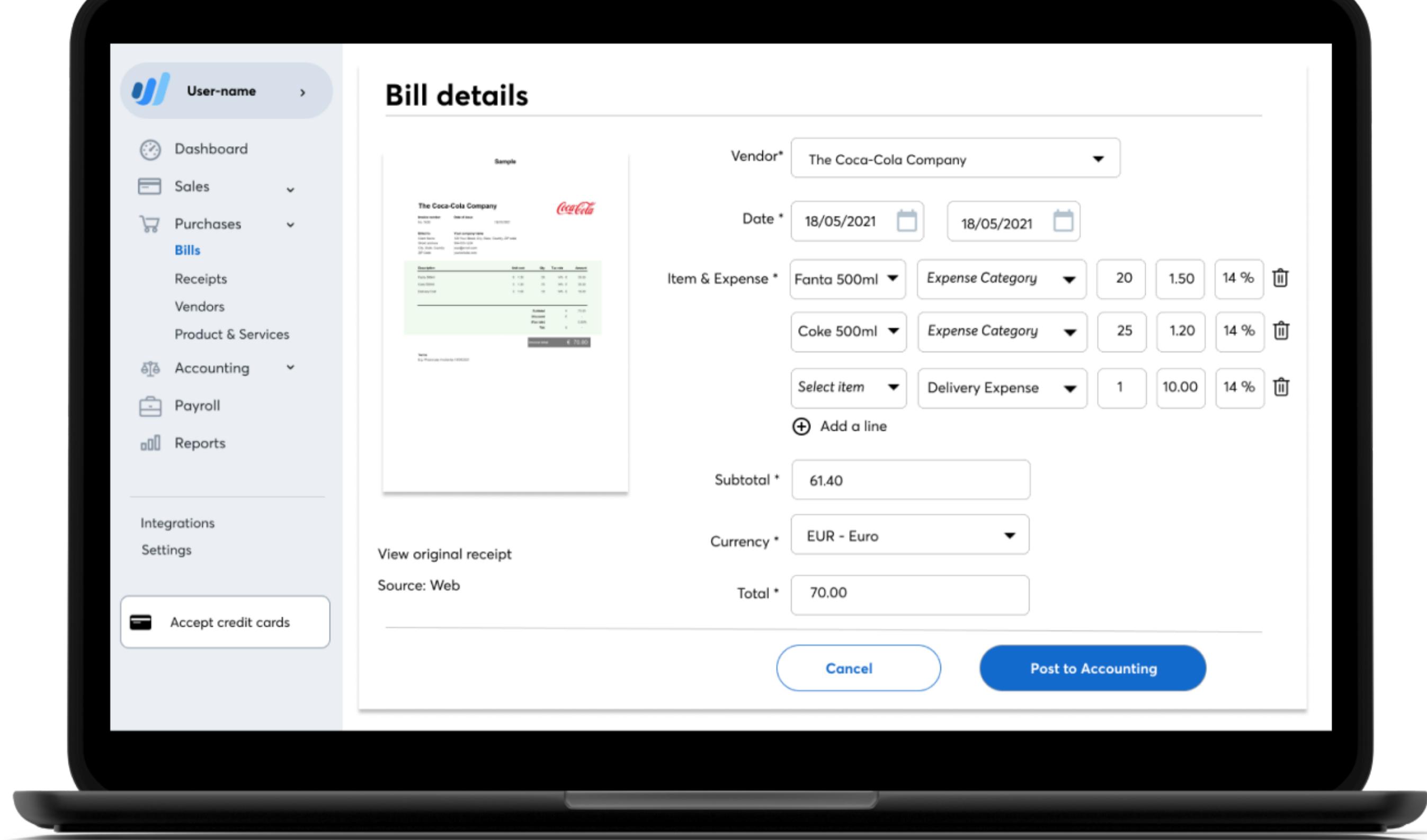
- April 2021 invoice from CocaCola
- April 2021 invoice from GoDaddy
- Invoice
- May 2021 invoice from CocaCola
- May 2021 invoice from GoDaddy

Enter a bill

Show: 25 per page

Page 1 of 1

Jump to page 1



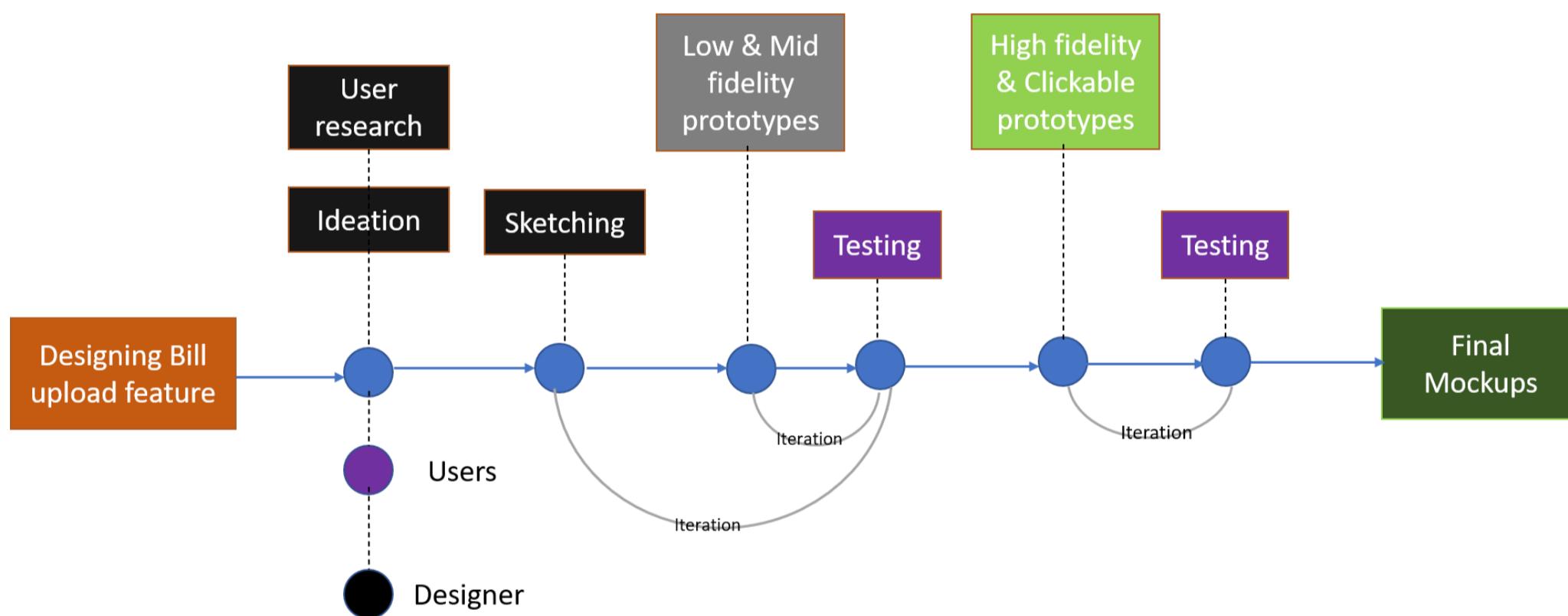
Using the CAR (Challenge, Action, Results) model, I began the process.

1. Challenge

The challenge was to design the bill upload feature that would enable a user to upload and save bill details and finally post them to accounting.

2. Action

Work Process



I broke this down into two steps; i.e. User research, Feature design.

a) User research

I talked to seven accountants and went to [Wave Community forum < https://community.waveapps.com/discussion/3576/how-to-create-a-bill/p1>](https://community.waveapps.com/discussion/3576/how-to-create-a-bill/p1) to find out what other users are saying. Below are excerpts from the community forum page. From my research, I zeroed in on three fundamental user pain points below:

I see that the ability to attach the electronic vendor invoice to a bill has been asked for now for years but still does not exist. I am considering moving several companies that I manage over from Quickbooks Online and we use this feature to be able to refer to and view the original invoices from our vendors. We can use a separate scanning / filing system but I would prefer not to. Do you see this as a feature that will be coming soon?

May 20, 2021

[Flag](#) [Quote](#) [Vote Down](#) [Vote Up](#) [Awesome](#)

 Member Posts: 1

Hey [REDACTED] and [REDACTED]! Unfortunately, at present, it is not possible to do either of these things within Wave. Invoices and bills live separately within the Wave ecosystem, as do Receipts and Bills. I'm sorry for the inconvenience here!

March 4, 2020

[Flag](#) [Quote](#) [Vote Down](#) [Vote Up](#) [Awesome](#)

 Member Posts: 1

I upload receipts- great. how do i ensure they are bills so they end up in the p and l?

March 3, 2020

[Flag](#) [Quote](#) [Vote Down](#) [Vote Up](#) [Awesome](#)

 Member Posts: 1

How do I attach/upload an invoice to a bill?

February 17, 2020

[Flag](#) [Quote](#) [Vote Down](#) [Vote Up](#) [Awesome](#)

 Administrator Posts: 1,145 admin

Hey [REDACTED]. At the moment I'm afraid there isn't a way to necessarily add a hard copy of the bill, but what you can do is upload a receipt for a bill, if this is something that interests you. This help centre article should give you a bit of guidance on how to do this:
<https://support.waveapps.com/hc/en-us/articles/208622116-How-to-upload-a-receipt>

July 22, 2019

[Flag](#) [Quote](#) [Vote Down](#) [Vote Up](#) [Awesome](#)

 Member Posts: 2

Is there anyway of attaching a copy of a bill? I have this feature in my current accounting software so don't have to keep a hard copy of the bill.

July 19, 2019

[Flag](#) [Quote](#) [Vote Down](#) [Vote Up](#) [Awesome](#)

I read through the comments below and was quite surprised that the administrators seem not to understand that bill is nothing else than the invoice that we receive from our vendors. And just like receipts allow us to view scan/picture of the source document for this particular transaction, we would like to be able to have a source document/source invoice attached to the bill.

Now the question could be: why receipts module is not sufficient? The answers sits in the difference between accrual and cashflow accounting. Receipts and their related bank transactions share the same date - the cost is made on the day of the transaction, so your "accrual" and cashflow have the same date.

With the bills we can register cost under different date that the payment is done, which is a common situation in most of our little organizations - we do receive invoices from vendors (what you call BILLS) and we need to register them in the system. It would be ideal if the current receipts function could allow us to choose if we want to post receipt to the transaction or link it to the bill.

With that: One more voice of support to everyone here below: PLEASE enable possibility to upload BILLS into the system (my preference: allow us to use the same function with receipts, especially the email to function) or at least add attachment to the bill.

April 11, 2020

[Flag](#) [Quote](#) [Vote Down](#) [3 Vote Up](#) [Awesome](#)

 Administrator Posts: 2,869 admin

Hi [REDACTED]. You cannot currently attach anything to Bills in Wave. I'd love to hear your use case and why you're looking to attach Invoices to Bills though so I can pass the feedback along.

Let me know!

September 11, 2019

[Flag](#) [Quote](#) [Vote Down](#) [Vote Up](#) [Awesome](#)

 Member Posts: 1

How do I attach invoices when creating bills?

September 10, 2019

[Flag](#) [Quote](#) [Vote Down](#) [Vote Up](#) [Awesome](#)

 avb3 Member Posts: 1

I want to second [REDACTED] for have the ability to attach a hard copy of a bill. Please put it on the to-do list.

August 3, 2019

[View full report](#)

<<https://nyaorobenjamin776778591.files.wordpress.com/2021/05/group-63.png>>

[Download](#)

Summary User Pain points

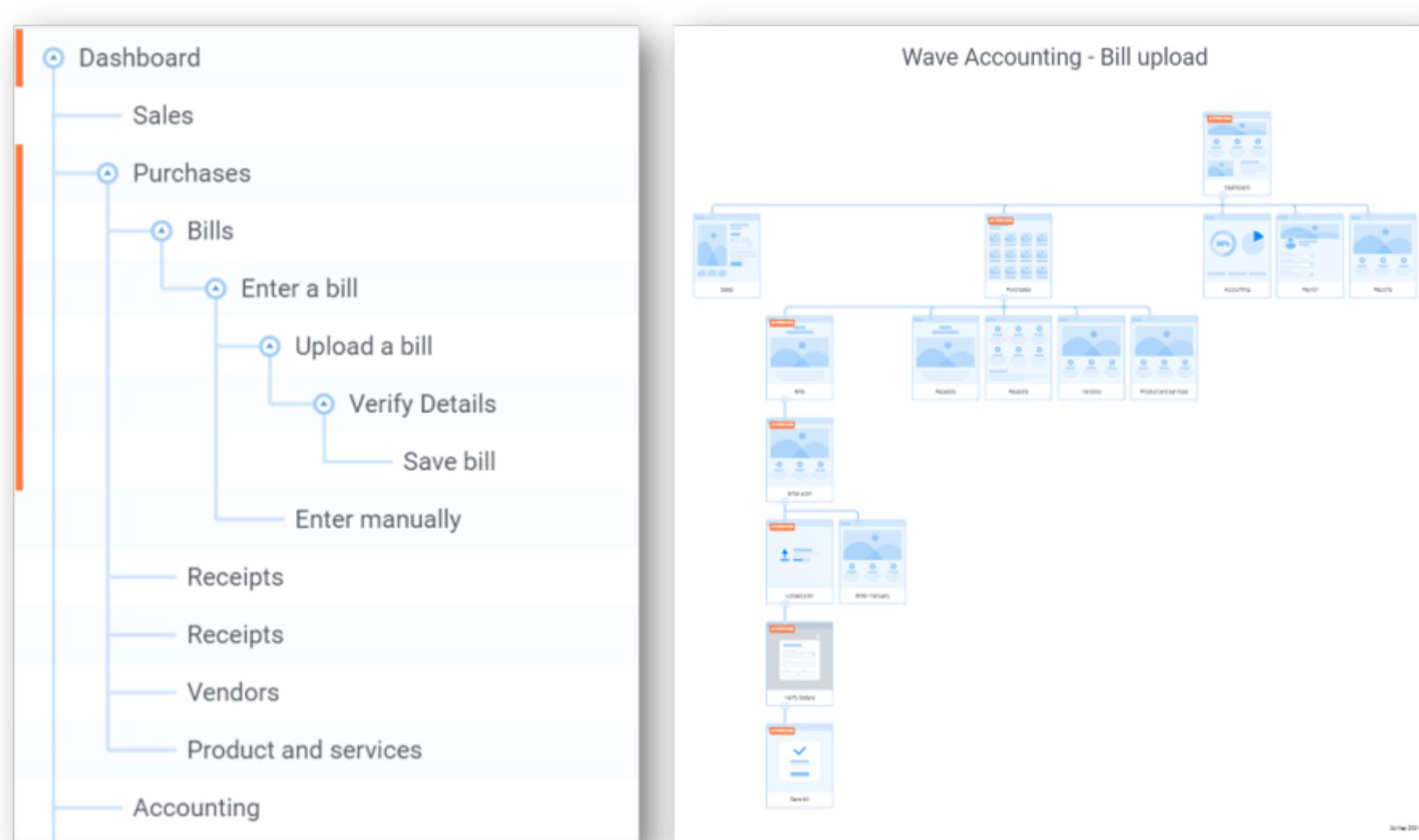
- i) Users spend a lot of time creating bills especially if there are too many goods or services rendered in one invoice.
- ii) For accuracy, some users print all bills including those received electronically so that they can enter the details as they tick each item off.
- iii) Users are forced to keep hard copy documents for audit at the end of the year. Physical files normally take quite a bit of space when they are too many and when they are lost then the user has no backup especially if the invoice was a physical copy.

b) Feature Design

I further broke this part into two, first the information architecture and second wireframing and prototyping.

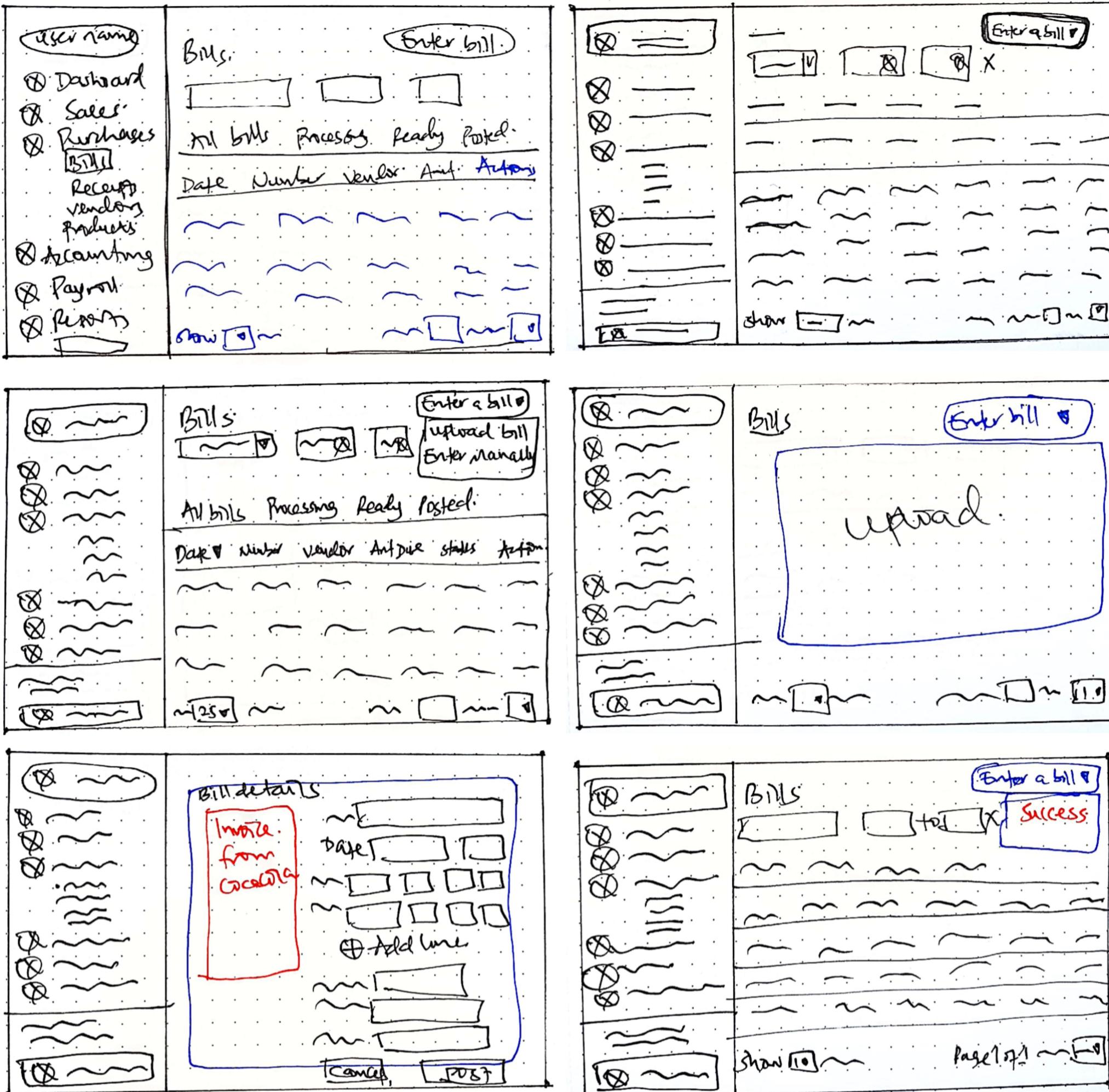
a) Information Architecture - Sitemap

My main goal with designing the sitemap was to set a smooth path for the user from the time they land on the dashboard to when they actually save their bill and successfully post it to accounting. I basically tried to replicate the already existing sitemap. Here is what I came up with.



b) wireframing and prototyping

I decided to test the depth of the waters by first sketching out some paper wireframes as below;

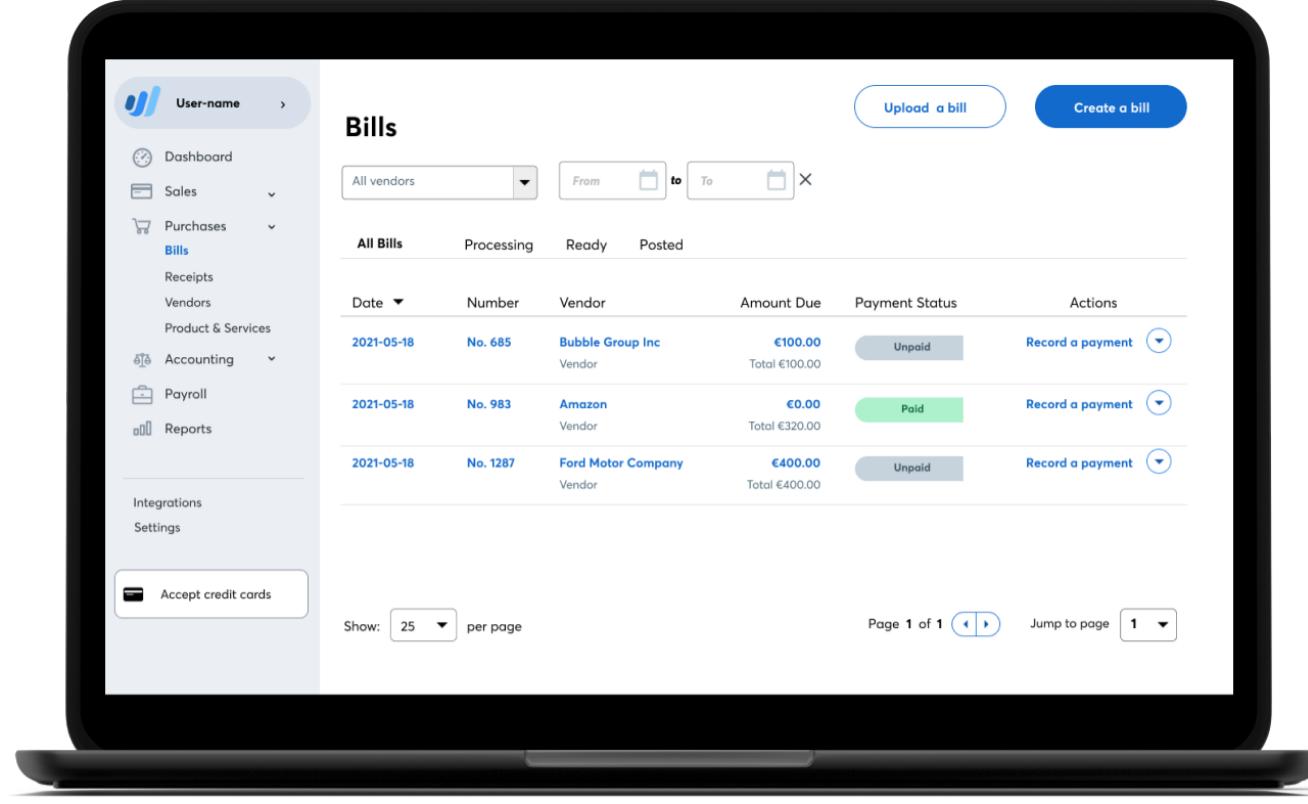


Next, I turned the paper prototypes into mid-fidelity prototypes with the help of Figma as below:

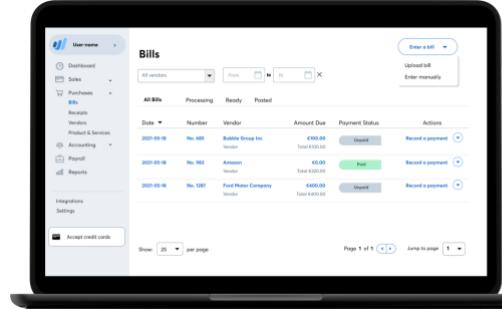
Next, I set out to work on the high fidelity prototypes. I used inspiration from the app's already existing receipt upload feature to design the bill upload feature. My main aim for doing this was to keep the development team at Wave in mind since they had already worked on the receipt upload feature. I used my knowledge of accounting to assess how the accounting entries would be done.

Usability Testing

Given that, the app already has a feature that functions almost the same as my proposal. I decided to do preference testing on two screens below.



Screen A



Screen B

Using usability hub, I shared the link in various accounting facebook groups and got the results as below.

Design	Percentage	Participants
Screen B	31%	5
Screen A	69%	11

Note: Screen A is performing better, and the difference is 95.0% likely to be statistically significant. This means that you can be confident that it is actually better, and not performing better due to random chance.

Most respondents preferred screen A that places the action buttons side to side but in the end I decided to go with screen B which is similar to the Wave app screens. However, I would advise Wave HQ to feel free to use screen A as preferred by most of the users.

[View full results here](#)

<<https://nyaorobenjamin776778591.files.wordpress.com/2021/05/group-67-1.png>>

[Download](#)

3. Results

i) The dashboard

Just like it is right now in the Wave app designs, this is the landing page and the user can then navigate to any part of the app from here. So in this case the user will click Bills under purchases icon the normal way to navigate to bill creation screen.

ii) Bill Creation

I redesigned the bill creation screen as follows:

- I replaced the **create bill** button with **Enter bill** button and provided two options in a dropdown menu for uploading a bill or entering it manually. When a user selects enter manually, then the current design as is in the app takes precedence. When a user selects upload bill then the app opens the upload feature that enables the user to navigate to files storage location on their computer to select and upload bill.
- Created sort categories to enable a user to view bills as they need based on upload status. They can see all bills, those that are still processing, those that are ready to post to accounting and those that have been posted to accounting. A user would just need to click on a bill to open it.

See the screens below;

iii) Verify details

Once the user has selected the bill to upload, just like the app scans the details on receipts, it should scan the details on the bill. The app should then read through the bill and pick all the relevant fields such as Vendor Name, Invoice Date, Invoice due date, item or expense category, the amounts and the taxes. If the app does not pick the details as is the case in this example, then the user has the option of correcting and adding fields manually. This way at least we will have solved the pain point number (c) above.

Control should be put at this point such that when a user selects item then the expense category greys off and when they select expense category the select item box on the same line greys off. If a bill is clear enough, then the app should be able to pick all the relevant details as below.

If the user is satisfied with the details below then they save by posting to accounting.

iv) Successfully saved

As soon as the user clicks post to accounting, a success message pops up and then the app navigates to all bills screen so that the user can view and open the bill as they so wish.

The relevant accounting entries

I wanted to be as comprehensive as possible and hence took an example of a trading company that trades in beverages. I picked the Coca Cola Company as a supplier of beverages for this case. In the invoice, there are two items i.e. **Fanta 500ml** and **Coke 500ml** and the **delivery fee charged**. The next assumption was that these goods have been delivered on credit with thirty days credit period. So here are the corresponding accounting entries;

- Add the quantity of Fanta 500ml purchased to Fanta 500ml inventory bin card/ledger in this case 20.
- Add the quantity of Coke 500ml purchased to Coke inventory bin card/ledger in this case 25.
- With the total delivery expense of EUR. 10, **Debit** the relevant delivery expense account with EUR. 8.77, **Debit** the value-added tax account with EUR. 1.23 and **Credit** the vendor called the Coca Cola Company.
- With the total cost of purchase of Fanta and Coke items in this case EUR. 60. **Debit** the relevant Cost of goods account signifying purchase with EUR. 52.63, **Debit** the value-added tax account with EUR. 7.36 and **Credit** the vendor called the Coca Cola Company.

See below more details;

Relevant Accounting entries - Excerpts

Details	Add	Subtract
Add the quantity of Fanta 500ml purchased to Fanta inventory card in this case 20.	20	
Add the quantity of Coke 500ml purchased to Coke inventory card in this case 25.	20	

Inventory Update

With the total delivery expense of EUR. 10, **Debit** the relevant delivery expense account with EUR. 8.77, **Debit** the value-added tax account with EUR. 1.23 and **Credit** the vendor called the Coca Cola Company.

	Debit	Credit
Delivery Expense	8.77	
Value Added TAX	1.23	
Accounts Payable - The cocacola company		10.00
	10.00	10.00

General Ledger Update

With the total cost of purchase of Fanta and Coke items in this case EUR. 60. Debit the relevant Cost of goods account signifying purchase with EUR. 52.63, Debit the value-added tax account with EUR. 7.37 and Credit the vendor called the Coca Cola Company.

	Debit	Credit
Cost of Goods Purchased Account	52.63	
Value Added TAX	7.37	
Accounts Payable - The cocacola company		60.00
	60.00	60.00

Final Mockups

User-name >

- Dashboard
- Sales
- Purchases
- Accounting
- Payroll
- Reports

Integrations
Settings

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[Explore Zoho Books and unlock your offer](#)

Dashboard

Overdue invoices & bills

Overdue Bills	Amount
GoDaddy	€1.00
GoDaddy	€1200
GoDaddy	€400.00

Cash Flow

Cash coming in and out of your business.

[View Report](#)

■ Inflow ■ Outflow —○— Net Change

Last 12 Months Last 24 Months

Things You Can Do

- Add a customer
- Add a vendor
- Customize your invoices
- Invite a guest collaborator

Create a new

User-name >

- Dashboard
- Sales
- Purchases
- Bills
- Receipts
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Things You Can Do

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- Invite a guest collaborator

Create a new

The screenshot shows a laptop screen with a dark-themed user interface. On the left is a sidebar with navigation links: Dashboard, Sales, Purchases, Bills (selected), Receipts, Vendors, Product & Services, Accounting, Payroll, Reports, Integrations, and Settings. A button for 'Accept credit cards' is also present. The main content area is titled 'Bills' and displays a table of bills. The table has columns for Date, Number, Vendor, Amount Due, Payment Status, and Actions. Three bills are listed:

Date	Number	Vendor	Amount Due	Payment Status	Actions
2021-05-18	No. 685	Bubble Group Inc Vendor	€100.00 Total €100.00	Unpaid	Record a payment
2021-05-18	No. 983	Amazon Vendor	€0.00 Total €320.00	Paid	Record a payment
2021-05-18	No. 1287	Ford Motor Company Vendor	€400.00 Total €400.00	Unpaid	Record a payment

Below the table are buttons for 'Show: 25 per page', 'Page 1 of 1', 'Jump to page 1', and a search bar. There are also buttons for 'Enter a bill', 'Upload bill', and 'Enter manually'.

This screenshot shows a laptop screen with a dark-themed user interface. The sidebar is identical to the one in the top screenshot. The main content area is titled 'Bills' and features a 'File Explorer' window titled 'All invoices from vendors'. The window shows a list of files in a tree view:

- Desktop
- Downloads
- Documents
- Pictures
- Google Drive
- Google Drive (beleagency@gmail.com)

A specific file, 'May 2021 invoice from CocaCola', is selected and highlighted with a blue border. The file details show it was created on 21/05/2021 and is 25.1 KB in size. Below the file list are buttons for 'Show: 25 per page', 'Page 1 of 1', 'Jump to page 1', and a search bar. There are also buttons for 'Enter a bill', 'Upload bill', and 'Enter manually'.

Bills

All vendors

All Bills Processing Ready Posted

Date	Number	Vendor	Amount Due	Payment Status	Actions
2021-05-18	No. 7635	The Coca-Cola Company Vendor	€70.00 Total €70.00	Unpaid	View or edit details

Show: 25 per page Page 1 of 1 Jump to page 1

Accept credit cards

Bill details

Sample

The Coca-Cola Company

Description	Unit Price	Qty	Total Price	Amount
Fanta 500ml	1.50	20	30.00	14 %
Coke 500ml	1.20	25	30.00	14 %
Select item	Delivery Expense	1	10.00	14 %

Vendor* The Coca-Cola Company

Date * 18/05/2021 18/05/2021

Item & Expense * Fanta 500ml Expense Category 20 1.50 14 %

Coke 500ml Expense Category 25 1.20 14 %

Select item Delivery Expense 1 10.00 14 %

Subtotal * 61.40

Currency * EUR - Euro

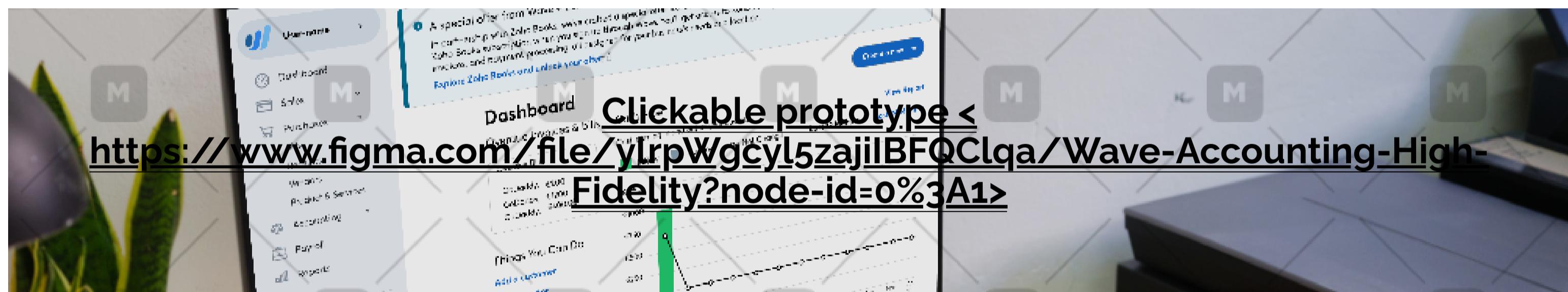
Total * 70.00

[View original receipt](#)

Source: Web

Accept credit cards

Clickable Prototype



Reflection of my work

Something that began when I was unable to upload an invoice into an accounting app ended up being an exciting activity that saw me to take off my accounting hat, roll my sleeves and put on my design hat to find a possible design solution for users of Wave accounting software. Although I understand that there are several considerations that Wave HQ would have to make before thinking of taking this into account, it was a great learning opportunity for me to stretch my problem-solving ability by combining my design and accounting skills to come up with a design that could be implemented to solve an actual problem.

Once again [here is a link to my live prototype. Please feel free to check it out. < https://www.figma.com/file/yIrpWgcyl5zajilBFQClqa/Wave-Accounting-High-Fidelity?node-id=0%3A1>](https://www.figma.com/file/yIrpWgcyl5zajilBFQClqa/Wave-Accounting-High-Fidelity?node-id=0%3A1)

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