

YggFinance

By Yggdrasil Creations:

Blake Hudson

Alan Holman

Austin Kerr

Table of Contents

- Introduction
- Technology
- Design
 - User Interface
 - Services
- Building & Deployment
- Known Bugs
- Future Work



Introduction - What is YggFinance?

- Blah, Blah-Blah-Blah, Blah-Blah, Blah... blah.

Technology



- Microservices Architecture
 - Docker
 - Docker Compose
- Base Docker Images
 - Node:14-alpine
 - Nginx:alpine
- Version Management
 - GitHub [Source Code]
 - DockerHub [CIR for Releases]
- Coded in JavaScript (using Node.js)
- NPM dependencies:
 - Express (w/multer)
 - CSV-Parser
 - React
 - Material UI (w/ table-edit)
 - Create-React-App Tool dependencies



express

React



Technology (cont.)



- LocalStorage Client Side Data Persistence
- HTTP Communication
 - Mainly JSON
 - One Request with Multipart Form Data
- LocalTunnel Proxy Tunneling
- Lots of Config Files
- Some Bash Scripts
- Development Environments
 - OS: Windows 10 & Linux
 - IDE: VSCode
 - Communication: Discord
- Documentation
 - Google Docs / Slides
 - app.diagrams.net
 - Markdown





Design

- Blah, Blah-Blah-Blah, Blah-Blah, Blah... blah.
- Yea, just use this to transition into the actual design parts

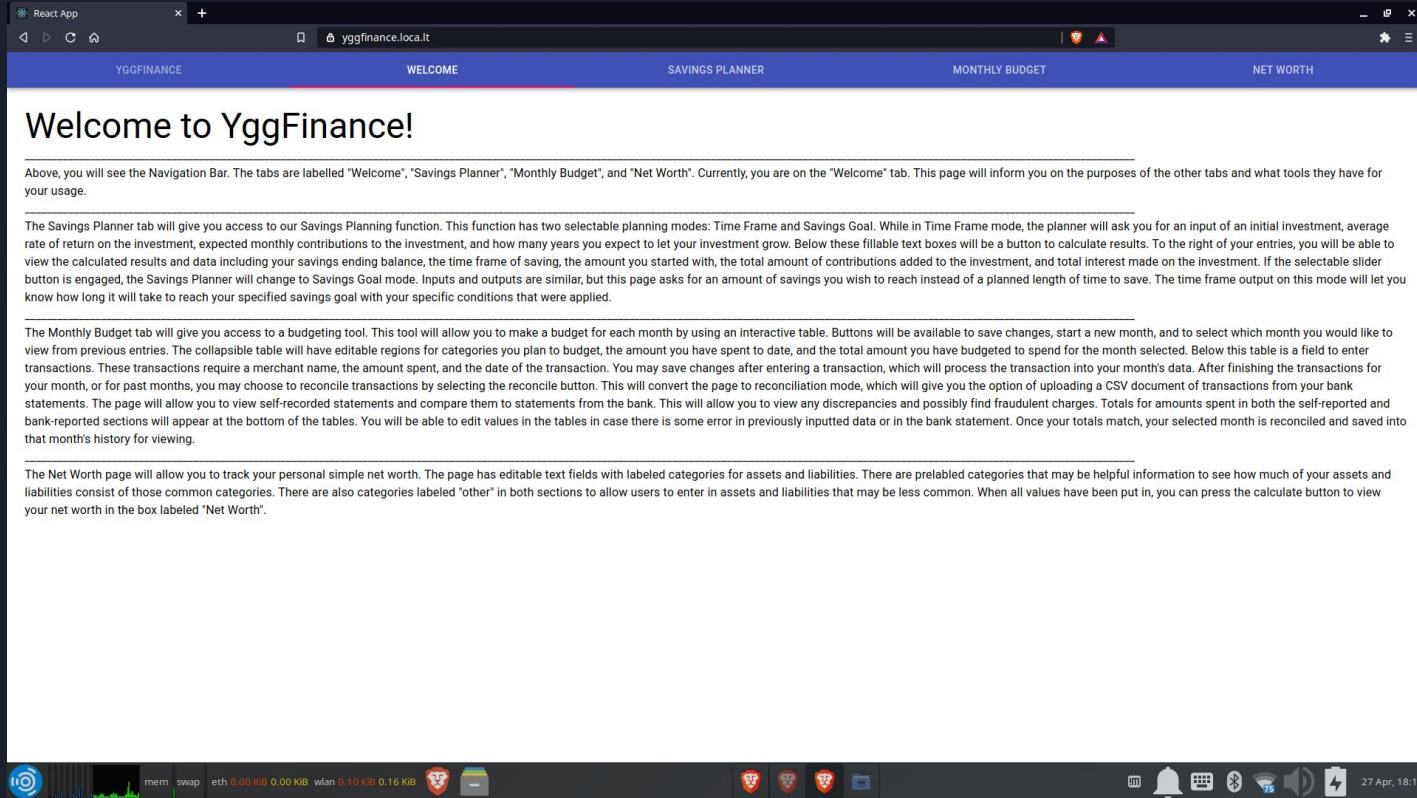


Design - User Interface

- Blah Blah Blah
- Anything about the User Interface you want to quickly mention before getting to the pages

Welcome Page

Design - User Interface



The screenshot shows a web browser window titled "React App" with the URL "yggfinance.loca.lt". The page has a dark blue header with tabs labeled "YGGFINANCE", "WELCOME", "SAVINGS PLANNER", "MONTHLY BUDGET", and "NET WORTH". The "WELCOME" tab is active. The main content area displays the heading "Welcome to YggFinance!" and a paragraph of text explaining the purpose of the other tabs.

Above, you will see the Navigation Bar. The tabs are labelled "Welcome", "Savings Planner", "Monthly Budget", and "Net Worth". Currently, you are on the "Welcome" tab. This page will inform you on the purposes of the other tabs and what tools they have for your usage.

The Savings Planner tab will give you access to our Savings Planning function. This function has two selectable planning modes: Time Frame and Savings Goal. While in Time Frame mode, the planner will ask you for an input of an initial investment, average rate of return on the investment, expected monthly contributions to the investment, and how many years you expect to let your investment grow. Below these fillable text boxes will be a button to calculate results. To the right of your entries, you will be able to view the calculated results and data including your savings ending balance, the time frame of saving, the amount you started with, the total amount of contributions added to the investment, and total interest made on the investment. If the selectable slider button is engaged, the Savings Planner will change to Savings Goal mode. Inputs and outputs are similar, but this page asks for an amount of savings you wish to reach instead of a planned length of time to save. The time frame output on this mode will let you know how long it will take to reach your specified savings goal with your specific conditions that were applied.

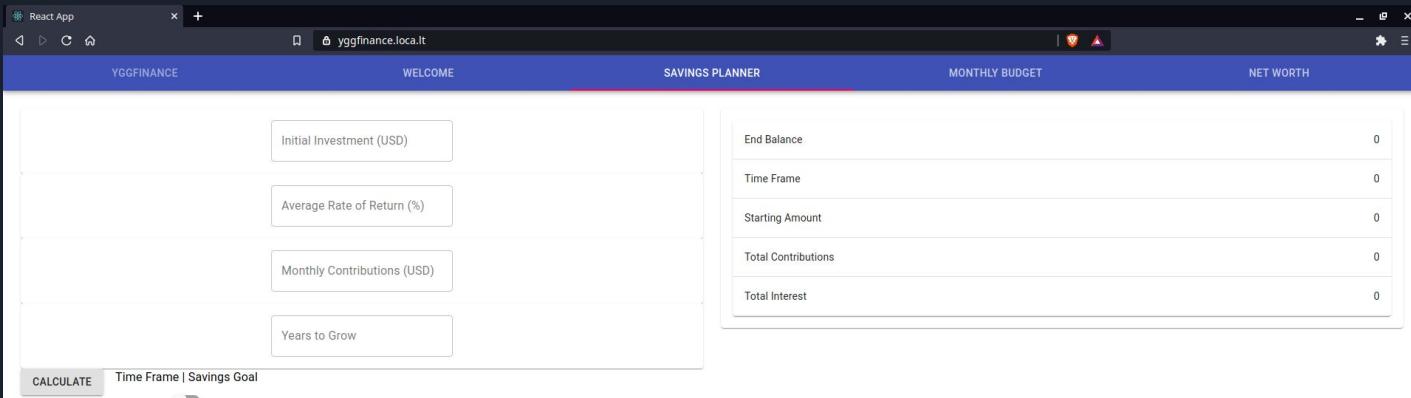
The Monthly Budget tab will give you access to a budgeting tool. This tool will allow you to make a budget for each month by using an interactive table. Buttons will be available to save changes, start a new month, and to select which month you would like to view from previous entries. The collapsible table will have editable regions for categories you plan to budget, the amount you have spent to date, and the total amount you have budgeted to spend for the month selected. Below this table is a field to enter transactions. These transactions require a merchant name, the amount spent, and the date of the transaction. You may save changes after entering a transaction, which will process the transaction into your month's data. After finishing the transactions for your month, or for past months, you may choose to reconcile transactions by selecting the reconcile button. This will convert the page to reconciliation mode, which will give you the option of uploading a CSV document of transactions from your bank statements. The page will allow you to view self-recorded statements and compare them to statements from the bank. This will allow you to view any discrepancies and possibly find fraudulent charges. Totals for amounts spent in both the self-reported and bank-reported sections will appear at the bottom of the tables. You will be able to edit values in the tables in case there is some error in previously inputted data or in the bank statement. Once your totals match, your selected month is reconciled and saved into that month's history for viewing.

The Net Worth page will allow you to track your personal simple net worth. The page has editable text fields with labeled categories for assets and liabilities. There are prelabelled categories that may be helpful information to see how much of your assets and liabilities consist of those common categories. There are also categories labeled "other" in both sections to allow users to enter in assets and liabilities that may be less common. When all values have been put in, you can press the calculate button to view your net worth in the box labeled "Net Worth".

At the bottom of the screen, there is a taskbar showing system icons for battery, signal, volume, and notifications, along with a terminal window showing system resource usage (mem, swap, eth, wlan) and a file manager window.

Savings Planner Page

Design - User Interface



Savings Planner Page

```
+ savingsPlannerData: object(See Appendix 3.1.2 for format)

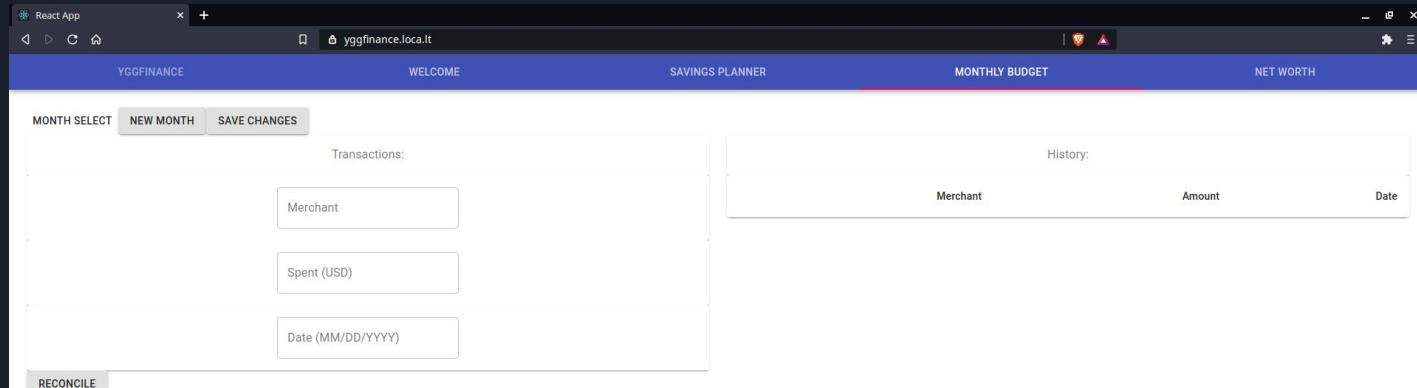
+ onPageLoad()
+ refreshPage()
+ saveChanges()
+ saveToLocalStorage()
+ switchPlanningMode()
+ calculateTimeFrame()
+ calculateSavingsGoal()
```



27 Apr, 18:16

Monthly Budget Page

Design - User Interface



Monthly Budget Page

+ monthlyBudgetData: object(See Appendix 3.2.2 for format)

+ onPageLoad()

+ refreshPage()

+ saveChanges()

+ addNewMonth()

+ confirmChanges()

+ switchVisiblePaper()

+ chooseFile()

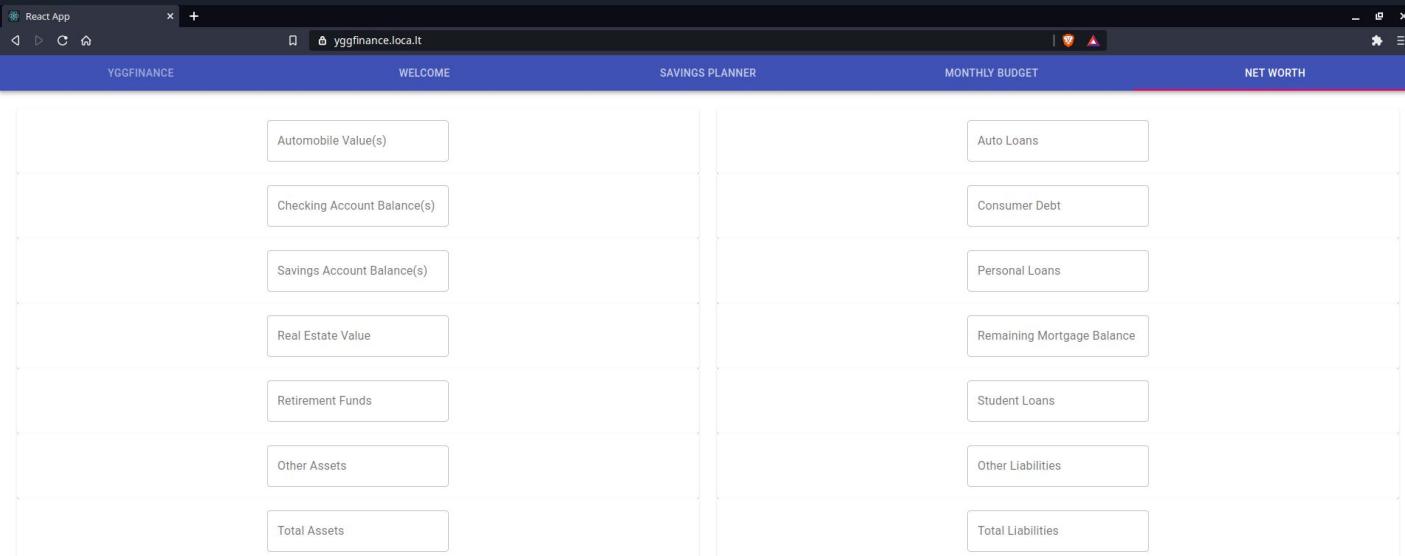
+ uploadCSV()



27 Apr, 18:18

Net Worth Page

Design - User Interface



Net Worth Page

+ netWorthData: object(See Appendix 3.3.2 for format)

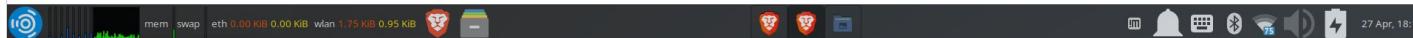
+ onPageLoad()

+ refreshPage()

+ saveChanges()

+ saveToLocalStorage()

+ calculateNetWorth()



27 Apr, 18:19



Design - User Interface (LocalStorage)

So... if we get around to it, will include a diagram of how we're storing the data in localStorage

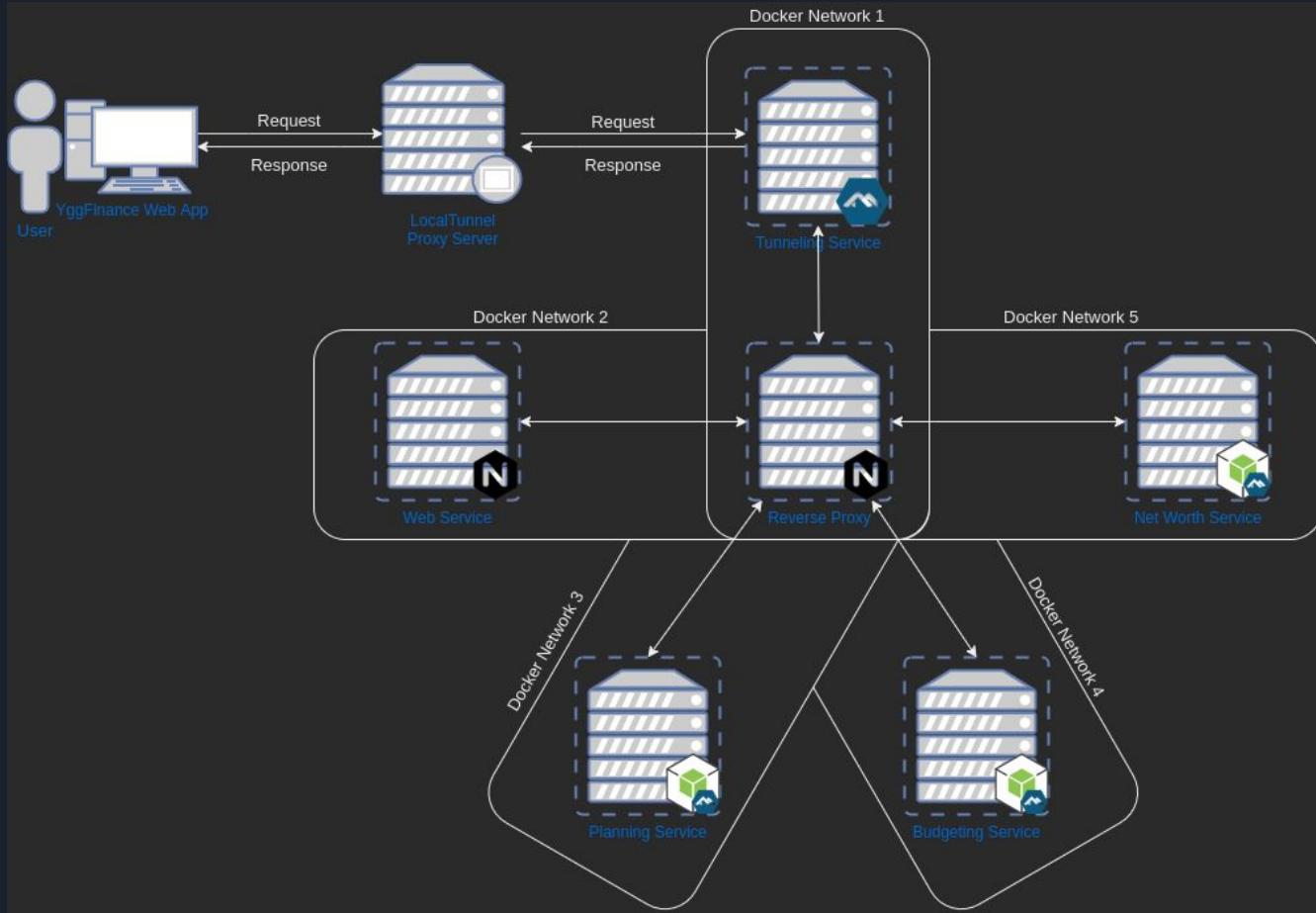


Design - Services

- Blah Blah Blah
- Anything about the Services you want to quickly mention before getting to the diagrams

Design - Services (Topography)

- Mention something about this real quick
- Meh, fine if you just go over it a bit tbh





Design - Services

Tunneling
Service



Design - Services

Reverse Proxy
Service



Design - Services

Planning
Service



Design - Services

Budgeting
Service



Design - Services



A decorative graphic in the top-left corner, consisting of two overlapping triangles: a blue one pointing down and a green one pointing up and to the right.

Net Worth
Service

Building

- Requires Docker & Docker Compose
- Optionally requires Bash for release script

In the **src** Directory...

Building: **docker-compose build**

Releasing: **bash make-release.sh ***

```
src > docker-compose.yml
1  version: "3.8"
2
3  services:
4    tunneling-service:
5      image: shuruni/yggfinance_tunneling-service
6      build: ./tunnelingService
7      container_name: tunneling-service
8      environment:
9        LT_SUBDOMAIN: ygg-dev
10       networks:
11         - reverse-proxy-network
12
13  reverse-proxy:
14    image: shuruni/yggfinance_reverse-proxy
15    build: ./reverseProxy
16    container_name: reverse-proxy
17    networks:
18      - reverse-proxy-network
19      - webapp-network
20      - budgeting-network
21      - networth-network
22      - planning-network
23
24  webapp:
25    image: shuruni/yggfinance_webapp
26    build: ./webApp
27    container_name: webapp
28    networks:
29
30  budgetin
31  cont
32  netw
src > make-release.sh
1  #!/bin/bash
2
3  imag
4  buil
5  cont
6  netw
7
8  # Login to DockerHub.
9  # As should be obvious, only Shuruni (aka: Alan Holman) can do this.
10 # if you want to publish somewhere else, please retag the images for your repo
11 docker login -u shuruni
12
13 # Push all built images
14 docker-compose push
```

* requires authentication or configuration (see report for details)

Deployment

- Deployable Anywhere running Docker & Docker Compose

In the **release** Directory...

Running: **docker-compose up -d**

Monitoring: **docker-compose logs -f**

Tearing Down: **docker-compose down**

```
shuruni@InconspicuousArmageddon:~/Documents/GitHub/Shuruni/YggFinance/release$ sudo docker-compose up -d
Creating webapp    ... done
Creating reverse-proxy  ... done
Creating planning-service ... done
Creating budgeting-service ... done
Creating tunneling-service ... done
Creating networkt-service ... done
shuruni@InconspicuousArmageddon:~/Documents/GitHub/Shuruni/YggFinance/release$ sudo docker-compose logs -f
Attaching to budgeting-service, networkt-service, tunneling-service, planning-service, reverse-proxy, webapp
networkt-service | Running on http://0.0.0.0:8080
planning-service | Running on http://0.0.0.0:8080
budgeting-service | Running on http://0.0.0.0:8080
reverse-proxy | /docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
reverse-proxy | /docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
reverse-proxy | /docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
reverse-proxy | 10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
reverse-proxy | /docker-entrypoint.sh: Launching /docker-entrypoint.d/20-tune-worker-processes.sh
reverse-proxy | /docker-entrypoint.sh: Configuration complete; ready for start up
webapp           | /docker-entrypoint.sh: /docker-entrypoint.d/ is not empty, will attempt to perform configuration
webapp           | /docker-entrypoint.sh: Looking for shell scripts in /docker-entrypoint.d/
webapp           | /docker-entrypoint.sh: Launching /docker-entrypoint.d/10-listen-on-ipv6-by-default.sh
webapp           | 10-listen-on-ipv6-by-default.sh: info: Getting the checksum of /etc/nginx/conf.d/default.conf
webapp           | 10-listen-on-ipv6-by-default.sh: info: Enabled listen on IPv6 in /etc/nginx/conf.d/default.conf
webapp           | /docker-entrypoint.sh: Launching /docker-entrypoint.d/20-envsubst-on-templates.sh
webapp           | /docker-entrypoint.sh: Launching /docker-entrypoint.d/30-tune-worker-processes.sh
webapp           | /docker-entrypoint.sh: Configuration complete; ready for start up
tunneling-service | Running localtunnel startup bash script...
tunneling-service | your url is: https://yggfinance.localt
```



Known Bugs

01 We suck a programming

02 See <https://en.wikipedia.org/wiki/Bug>

03 Yea, this is filler text



Future Work

- Blah Blah Blah
- Something about new features blah blah

Demo Time!

Let's Take a look at it now!

<https://yggfinance.loca.lt>

The Welcome page will give you access to our Savings Planning function. This function has two selectable planning modes: Time Frame and Savings Goal. While in Time Frame mode, the planner will ask you for an input of an initial investment amount, the rate of return, monthly contribution, and the time frame you would like to save to. The monthly budget calculator will then calculate the results. To the right of your entries, you will be able to view the calculated results and data including your savings ending balance, the time frame of saving, the amount you started with, the total amount contributed to the investment, and total interest made on the investment. If the selectable older button is engaged, the Savings Planner will change to Savings Goal mode. Inputs and outputs are similar, but this page asks for an amount of savings you wish to reach instead of a planned length of time to save. The time frame output on this mode will let you know how long it will take to reach your specified savings goal with your specific conditions that were applied.

The Monthly Budget tab will give you access to a budgeting tool. This tool will allow you to make a budget for each month by using an interactive table. Buttons will be available to move changes, start a new month, and to select which month you would like to view from previous entries. The collapsible table will have editable regions for categories you plan to budget, the amount you have spent to date, and the total amount you have budgeted to spend for the month selected. Below this table is a field to enter transactions. These transactions require a merchant name, the amount spent, and the date of the transaction. You may save transactions or edit existing ones by clicking the edit button. This will open up a modal window that will give you the option of uploading a CSV document of transactions from your bank statements. The page will allow you to view self-reported and bank-reported sections and compare them to statements from the bank. You can also upload a CSV file to reconcile discrepancies and possibly find fraudulent charges. Totals for amounts spent in both the self-reported and bank-reported sections will appear at the bottom of the table. You will be able to edit values in the error in previously inputted data or in the bank statement. Once your totals match, your selected month is reconciled and will match this month's history for viewing.

The Net Worth page will allow you to track your personal simple net worth. The page has editable text fields with labeled categories for assets and liabilities. There are preselected categories that may be helpful such as checking account, savings account, and investment account. There are also categories labeled "other" in both sections to allow users to enter in assets and liabilities that may be less common. If you press the calculate button to view your net worth in the last-labeled "Net Worth".

Thank you!

Questions?

The image displays three screenshots of the YggFinance web application, showing different sections of the platform.

- Welcome Tab:** Shows the "Welcome" tab of the application. It features a large "Welcome to YggFinance!" heading and a detailed explanatory text about the "Savings Planner" function. The text describes how the planner asks for an input of an initial investment amount, regular monthly contributions, and the time frame to calculate results. It also mentions the "Savings Goal" mode where users can specify a target amount and the time frame to reach it.
- Savings Planner Tab:** Shows the "SAVINGS PLANNER" tab. It contains a "Time Frame" section with fields for "Initial Investment", "Monthly Contribution", and "Time Frame". Below this is a "Savings Goal" section with fields for "Target Amount" and "Time Frame". A note at the bottom states: "The Savings Planner tab will change to Savings Goal mode. Inputs and outputs are similar, but this page asks for an amount of savings you wish to reach instead of a planned length of time to save. The time frame output on this mode will let you know how long it will take to reach your specified savings goal with your specific conditions that were applied."
- Net Worth Tab:** Shows the "NET WORTH" tab. It contains a "Personal Simple Net Worth" section with fields for "Assets" and "Liabilities". A note at the bottom states: "The Net Worth page will allow you to track your personal simple net worth. The page has editable text fields with labeled categories for assets and liabilities. There are preselected categories that may be helpful such as checking account, savings account, and credit card. There are also categories labeled 'other' in both sections to allow users to enter in assets and liabilities that may be less common. If you press the calculate button to view your net worth in the last labeled 'Net Worth'."