

Criterion D: Product design—Overall structure

Overall structure for Personal Budget Webpage:

ITEMS NEEDED

TO BE INCLUDED:

1. How to use the product
2. Summary of highest and lowest
3. Input new transaction
4. Table with latest transactions
5. Table with weekly summary

INFORMATION FOR NEW TRANSACTIONS:

1. Date
2. Amount
3. Location

INFORMATION FOR WEEKLY SUMMARY:

1. Total Spending for each day of the week

Personal Budget Logo (IMAGE)		TITLE BAR
Introduction How to use Product (TEXT)		
HIGHEST SPENDING: (TEXT)		
LOWEST SPENDING: (TEXT)		
(TEXT) → INPUT TRANSACTION:		
Amount: <input type="text"/>		
(TEXT TABLE)	(TEXT TABLE)	
NEW TRANSACTIONS:	WEEKLY SUMMARY:	
<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	
<input type="text"/>	<input type="text"/>	

Files Needed to Run Website:

- Python File
- Index/Main HTML File
- SQL Database
- Start page

↕ Same styling thanks ↕
to cascading style sheets

Data for tables to be stored in SQL Database

Overall structure of Website

Explanation of Product Folder:

- Interface.py
- Static
 - style.css
 - logo image
- Templates
 - main page.html

Interface PYTHON FILE

- Holds authenticity Algorithm
- Holds Query's for database
- Data requests
- Controls routing of website/webpage
- Query functions to execute

Login/home page.html

- Holds logo
- Same color scheme as Main page
- Doesn't require authentication

Website Processes:

Cascading style Sheets

Background-color: Green
Table ~~background~~ Properties:
background-color: white
opacity: medium
font-family: Arial
Text-color: red

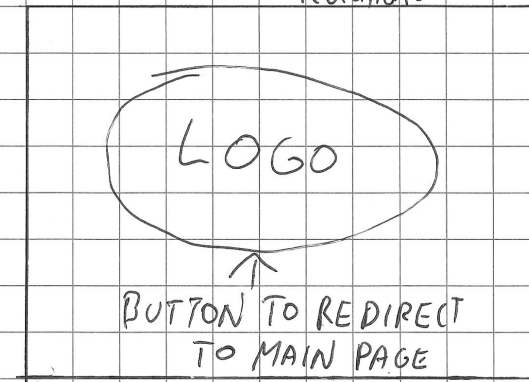
Text Fields properties:
Background: Grey

Button:
Color: Green
Shape: Circular

* Final Website
Design will depend
on Client consultation

Main Page.html

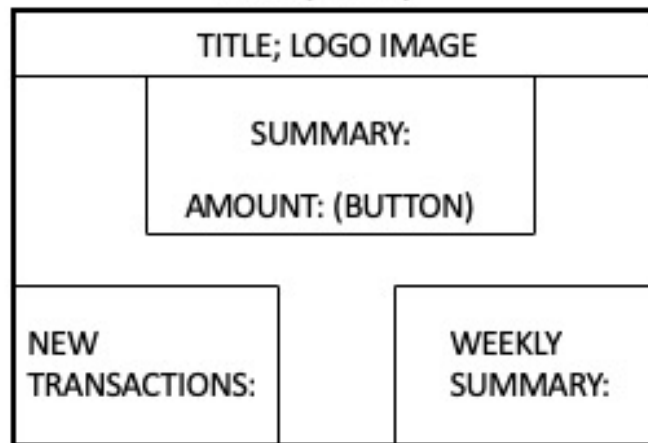
- Holds Transaction Table
- Holds Weekly Summary
- Holds title bar
- Holds Summary of
highest and lowest
- Holds text fields
- Data validation
- IF statements
- Also Weekly summary
calculations



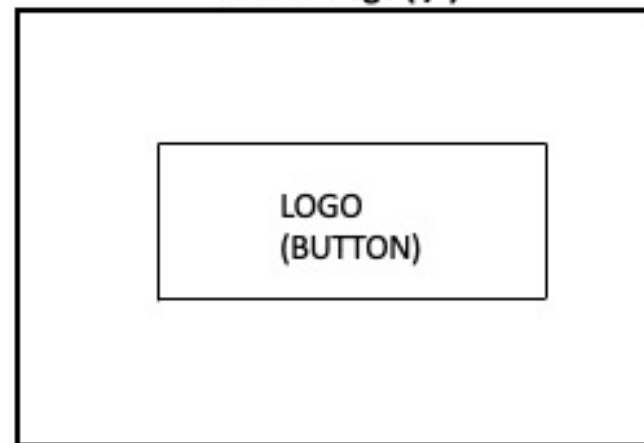
First page users will SP → App Route (/) No Authenticity

Internal structure

Index (Home)



Launch Page ('/')



List of resources and techniques

Resources	Details
Flask	Flask is what allows to manage a website with python. It allows to create redirected based on URL's but also request data from HTML files.
Functools	Functools allows to create authentication for webpages within python
Psycopg2	A tool that allows to connect to POSTGRESQL database in order to send and receive data.
Datetime	Allows to get the date and time from the system running the python program
Os	Allows to access elements that are stored in the os of the server. For example, the username and password.
Urllib	Allows to request and send data using SQL queries.
SSL	Allows to make a connection with the database using a secure socket layer for added encryption

Techniques	Details
Manipulation of Graphics	Using a simple circle outline and turning it into the logo for the website.
JavaScript to improve showcase of text	Allows to pop-up instructions when needed by pressing text.
HTML to customize page	Customize the way to showcase information gathered from the database.
Cascading Style Sheets	Customize the page by sections. Also allow for elements such as text all look the same.

Credential Authentication	Login Credentials to ensure that only Alex and his mom can access the website.
POSTGRESQL Database	SQL database with correct data type to ensure that data has to meet the requirements.
Data Validation	Data validation to ensure that data is correctly added to the database and to prevent SQL Injection.
SQL Query	Adding and fetching data to a database using an SQL statement
Hyperlink	Hyperlink to be taken to the main page.
Icon for Website	Icon added to stand out when website is bookmarked or saved on phone.
Methods in HTML	Methods to differentiate requests sent to the database
Python Server	Python script that acts as a server for the website
Covering sensitive information	Covering sensitive information such as credentials and database URL from source code.
Gathering Information from HTML and reading it Python	Gathering User input from HTML form and reading it in Python before adding to database.

Test plan

Test item	Test data	Part of system tested	Expected outcome	Actual outcome	Comments	Ref in product
Cover page testing – REQUIRED ELEMENT FOR CRITERION G						
Web pages load from the cover page in three different locations	File naming to ensure home page is called Index.htm	Links on cover page are relative	Loads as required from 3 different locations			
Product testing						
Hyperlink between pages.	Links between pages	Hyperlinks	Links function as planned			
Login only with correct credentials	Attempt to login with incorrect credentials	Authentication	Error “Credentials invalid”			
Customized Style Sheet	Webpages	Content of CSS file and Link to stylesheets	All components of file appear on webpages			
Inputting Transaction	Attempt to input transaction by adding value to both textboxes.	Inputting data into the database	New Transactions, Weekly Spending and Database update with new value			
Highest and Lowest Transaction	Highest and Lowest Transaction appear correctly.	Highest and Lowest money spent.	Highest and Lowest value appear.			

Data Validation	Enter Different data type into textboxes	Textbox validation	Shows error, to input correct data type			
Data from Database	All Data from the database shows up on new transactions	Reading data from SQL Database, through query	All information from the database appears within the tables.			
Delete Transaction	Attempt to delete a transaction, by inputting the amount and location.	Deleting data from the database	Row should be removed from both tables and within the database.			
JavaScript	Press on the JavaScript text	JavaScript integration	JavaScript pop up should appear on with instructions			
Date Formatting	View if the formatted date appears correctly.	Datetime in Python	Date should show up as; Weekday, day/month			
Organization	Data appears Descending from date	Showcasing Data from Database	Data on New transactions table appears descending based on the date			
Sensitive data	Check Inspect Elements to ensure data isn't exposed	Security	Data such as Database URL and credentials don't appear.			

Agreement of client

I confirm that the requirement specification meets my needs and the designs above are appropriate for the creation of the product.



(Client)