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Project Goal: Create website source code based off design requirements and integrate with Progressive Web App (PWA). This project will allow end-users to engage with Peblblst capabilities across web and mobile platforms.

About Peblblst

- Peblblst is a web platform where everyday people can share, save, and manage product and service recommendations. It is a consumer engagement and social network platform targeted at advancing meaningful and intentional product consumption
- It was founded by Samantha Billings
- The manifesto of Peblblst is "Consume with Intention" and the platform is designed to reflect that
- URL: <https://www.peblblst.com/>

Solution Overview

- Website created using Amazon Web Services (AWS) designed for displaying user profile alongside the upcoming events to get recommendations from friends
- Developed the frontend design for the website using React framework
- Followed the ERD diagrams to create a MySQL and AWS RDS database that stores all the data of the application
- The development of multiple AWS Lambda Functions to create an API for handling frontend to backend requests
- Conducted API testing using Postman ensuring efficient functionality of AWS Lambda Functions used for the website.
- Development of Lambda Functions to ensure encryption of personal user data.



Examples of Industry Standard tools utilized for the project:

User Interface

Account Management

Core Components

Friend Management

Pebble Management

Event Management

Future Goals:

- Continue adding Lambda functions to complete the functionality of the website
- Improve the recommendation features of the website for pebbles, events, and friends
- Create a streamlined approach from various social media platforms to ingest and classify life events such as birthdays and anniversaries
- Create a repeatable, multi-site scraping service that gathers and stores delivery estimates based on recipient zip code and desired product
- Create streamlined functionality to add products as pebbles from various online sources including websites and email

Data Pipeline

- Data flows between the backend and frontend of the website through AWS Gateway
- To add, delete, or update data, the frontend of the website sends API Gateway requests to the backend
- The backend takes this data, and using AWS Lambda functions, the requests are handled, and the databases are updated accordingly
- The backend then returns a message to the frontend to confirm proper activity or send an error
- Postman is used to test Lambda functions through the sending of testing data through the AWS Gateway

Data Storage

- Most data is stored in a MySQL database that is hosted on AWS RDS
- This includes:
 - User Profiles
 - Pebbles
 - Events
 - Friends
- Querying is done through AWS Lambda Functions written in Python using the SQLAlchemy library for SQL queries
- File data is stored in AWS S3 with paths stored in the MySQL database
- This includes:
 - Profile Pictures
 - Pebble Pictures
- Uploading and downloading files is done through AWS Lambda Functions written in Python using the Boto3 library, the software development kit (SDK) for AWS

