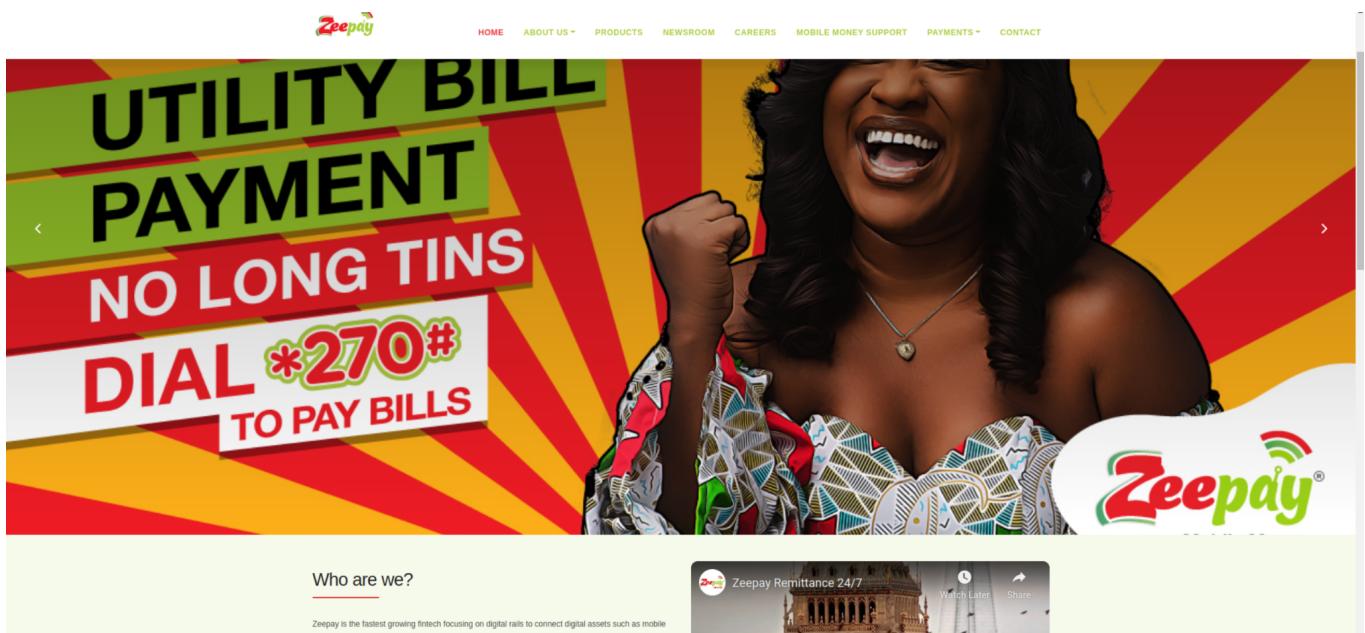
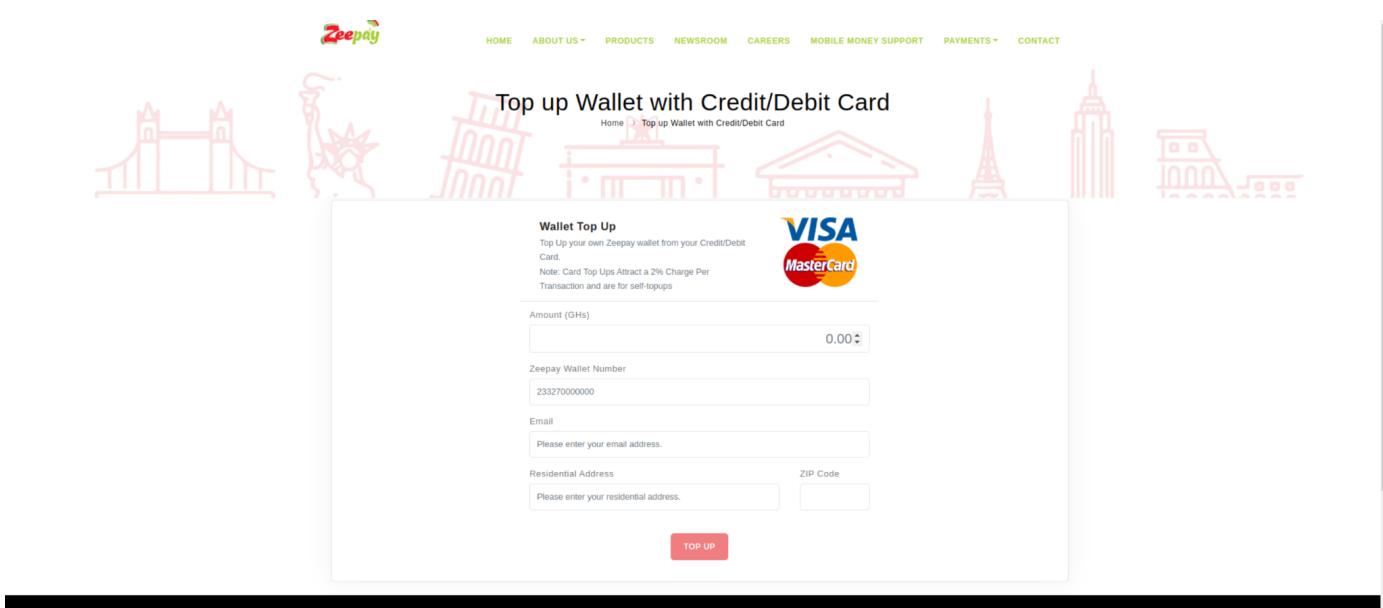


Most Recent Projects (Work)

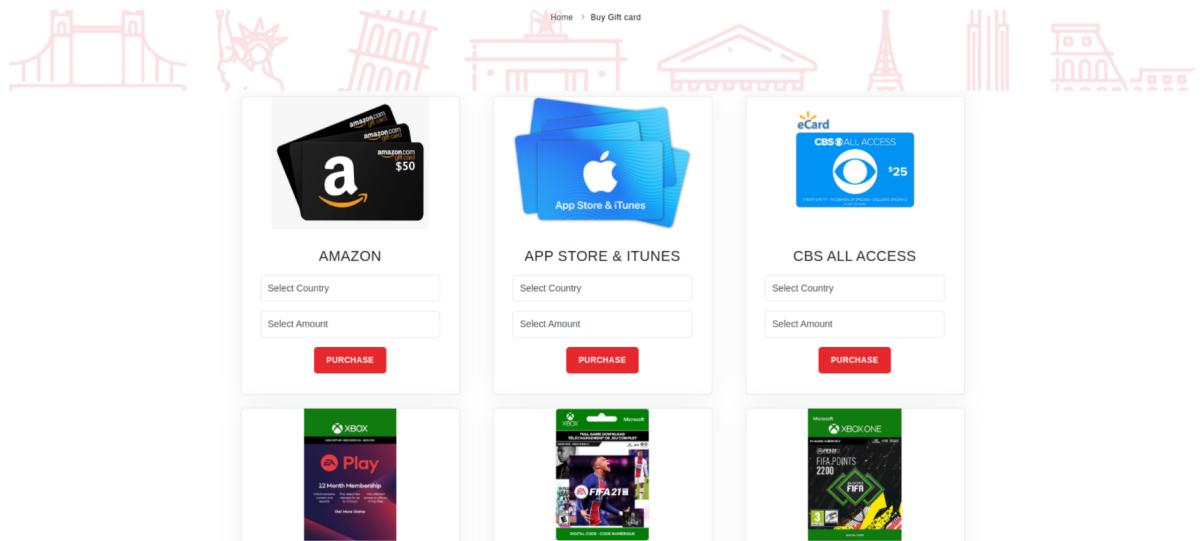
- **Multi Country Payment Gateway Processor.** Consists of multiple Integrations of systems across the globe from companies such as Ria, MoneyGram, Terrapay, Remitly, Software Group, Verifone, VISA, Mastercard, MTN, Airtel, Vodafone, Twilio, Infobip, Apple Pay, Ecobank, Enterprise, Zamtel and others. Platform supports termination of remittance and payments processing by partner clients globally. Dashboard is built with Vue3 and supports analytical tools, API key management, user management, transactions monitoring among others. Backend is built in PHP Laravel leveraging event sourcing and CQRS patterns with storage ends in Redis, MySQL, and Meilisearch for fast transaction queries. The backend is a microservices architecture deployed on Amazon Web Services. The API is structured to be simple; to allow clients to send or take payments with a simplified API. API follows the OpenAPI (Swagger) and OAuth standards.
<https://instntmny.com/docs/>
- **Zeepay Website**
Website built with VueJS frontend and PHP backend with in-built page analytics. The website also supports performing financial transactions such as buying gift cards and topping up mobile wallets using VISA or MasterCard. All integrations and payment processing are built internally leveraging PHP, MySQL, Cloud native solutions and other performant enhancement tools. <https://myzeepay.com>



The landing page for Zeepay's utility bill payment service. It features a large banner on the left with the text "UTILITY BILL PAYMENT NO LONG TINS DIAL *270# TO PAY BILLS". To the right is a vibrant illustration of a woman with her fist raised in a celebratory or powerful gesture. The Zeepay logo is in the bottom right corner of the banner area. Below the banner, there's a section titled "Who are we?" with a brief description and a "Top up Wallet with Credit/Debit Card" button. The overall design is colorful and dynamic.



The screenshot shows a "Top up Wallet with Credit/Debit Card" form. At the top, it says "Top up Wallet with Credit/Debit Card". Below that is a "Wallet Top Up" section with instructions: "Top Up your own Zeepay wallet from your Credit/Debit Card. Note: Card Top Ups Attract a 2% Charge Per Transaction and are for self-topups". There are fields for "Amount (Ghs)" (set to 0.00), "Zeepay Wallet Number" (233270000000), "Email" (placeholder: "Please enter your email address."), "Residential Address" (placeholder: "Please enter your residential address."), and "ZIP Code" (empty field). To the right of the form are icons for VISA and MasterCard. At the bottom is a red "TOP UP" button.



- **USSD/WhatsApp Mobile Money Application**

Application for mobile money wallets in Ghana, Barbados, Zambia, Côte D'ivoire, UK to allow customers to sign up for wallets, perform transactions, buy airtime, gift cards, insurance products and perform other account management functions. Application is purely backend with a PHP interface layer between the USSD/WhatsApp clients. Beneath the PHP layer is a core distributed system built as NodeJS microservices for scalability to support 1 million+ active users and about

Send Money



10000 transactions a second.

Withdraw Cash

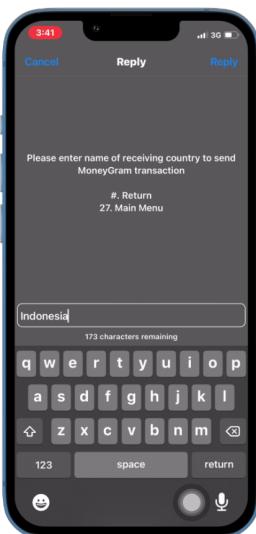


- **MoneyGram Directed Receives and Directed Send**

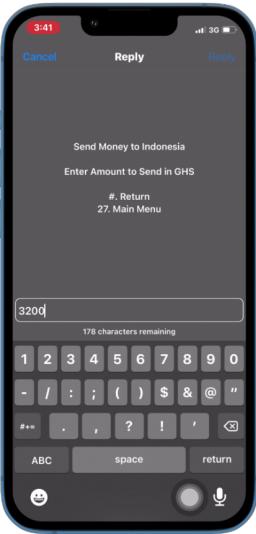
Product built on top of the mobile money infrastructure to allow users to send money and receive remittances into wallets through MoneyGram on any type of phone and without the need for internet services. The goal is to remove the need for visiting banks especially in rural areas.

Application is built using PHP, Redis, MySQL and MoneyGram core APIs to build a personalized experience that dynamically presents different screens based on the user and what information is required to perform a transaction. Background jobs run to facilitate receipt generation and notifications

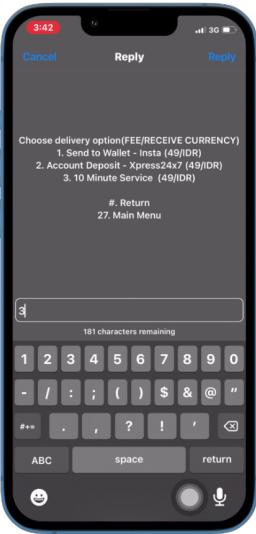




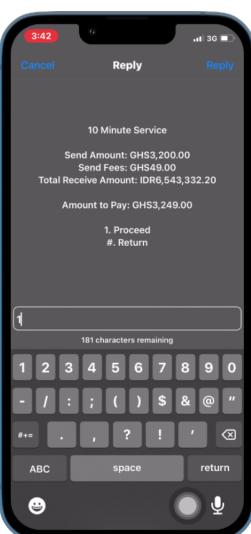
Enter destination country



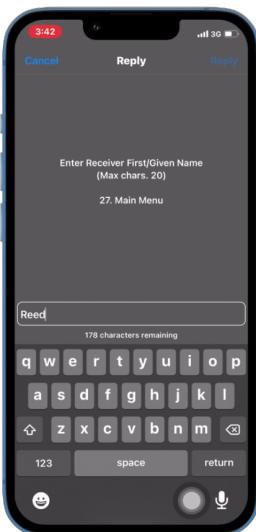
Enter amount



Select how receiver gets funds



Confirm fee with selected option



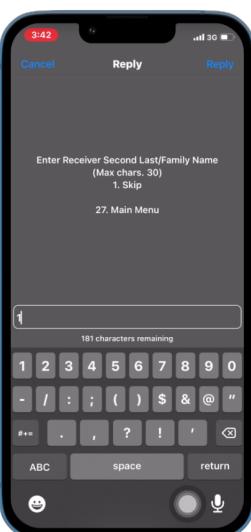
Enter receiver's first name



Enter receiver's middle name



Enter receiver's last name



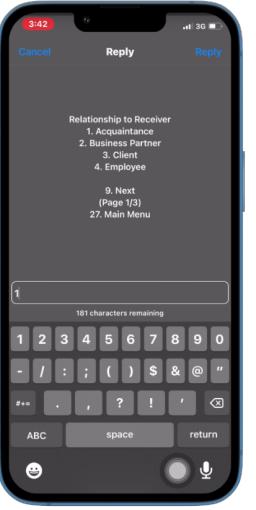
Enter receiver's second last name



Select purpose of transaction



Select source of funds



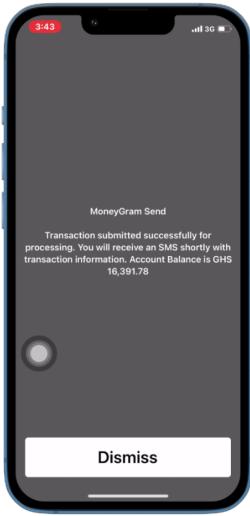
Select relationship to receiver



Select MG intended use of services



Confirm transaction details and send



Confirmation screen

- Zeeflow - Ticketing system**

Fully functional ticketing system application built with Laravel, VueJs and MySQL stack for making tickets, resolving tickets and assigning tickets. Supports third party integrations such as Zendesk and Twilio.

New Ticket

Service Group: Engineering Team

Ticket Category: Software Change Request

Ticket Category Description: For change requests

Ticket Priority: Medium

Title: Bug Fix for Application

Description:

Sample: Application Name
Date:

Copy (Optional)

Choose Files: No file chosen

Raise Ticket

Add Ticket Category

Category Name: Software Change Request

Service Group: Engineering Team

Category Description: For change requests

Category Pretext (Optional):

Sample: Application Name
Date:

Close Add

Add Service Group

Name: Engineering Team

Description: For engineering requests

Users: Delmwin Baeka

Create Service Group

● Zeerides

Application built for ride sharing platforms to assign wallets to vehicles for receiving payments

from bank accounts and mobile money wallets during rides and for managing driver payments and automatic scheduled sweeps of funds into the account pool. Dashboard is built in VueJS

The screenshot shows two views of the Zeeagent application. The top view is the 'Dashboard' showing a summary of transactions and vehicle wallets. The bottom view is a 'Vehicle Account Details' page for a vehicle with reference number 0001, showing its current balance and a list of transactions.

Dashboard Summary:

- Total Transactions: 4
- Total Amount in OVA: GHc0.00
- Cash In: GHc800.00 (Day Amount), GHc800.00 (Year Amount)

Vehicle Account Details (Bottom View):

- Reference Number: 0001
- License Number: 1236655554
- Vehicle Transactions: 1
- Current Vehicle Balance: GHc300.00

Transactions Table (Bottom View):

ID	Description	Vehicle Reference	From Account	Amount (GHc)	Time	Action
222222	0001		055777777 paolo	400.00	February 23rd 2021, 9:40:00 pm	
123	0002		067555006 luca	100.00	February 23rd 2021, 10:19:25 pm	
12344444	0003		0557341180 nic	100.00	February 23rd 2021, 9:40:17 pm	
15799	0004		0557341180 nic	200.00	February 23rd 2021, 10:20:34 pm	

Annotations:

- A red arrow points from the 'Edit' button in the vehicle account details to the transaction table below.
- A blue box highlights the 'Edit' button in the transaction table.
- A blue box highlights the text 'to filter by date and by keywords'.

- **Zeeagent**

Agency banking platform built in Laravel for performing cash to wallet transactions and remittance withdrawals at banks. Application is used by banks in Ghana, Zimbabwe, and Zambia

Projects (Personal)

Project Tides (VMware) – Elastic Platform on Idle Cloud Resources

Open-source project to donate private enterprise cloud resources (<https://github.com/ji-it/CloudTides>)

Project paper here: https://bit.ly/project_tides

Developed a tool using ReactJS frontend, Django/Golang backend and k8s to monitor vSphere cloud resources usage and dynamically donate resources to public volunteer computing through BOINC.

Currently supporting development with the VMware team to extend tools for Folding@Home towards finding COVID-19 solutions.

GeekOS x86 Kernel

Tiny operating system kernel for x86 PCs running on Qemu.

Extended operating system using Assembly code and C to implement forking, virtual memory, file systems, synchronization.

<https://github.com/dbaeka/geekos>

Tethi: Task Manager Program in ARM Assembly and C

Custom timer-based task manager for ARM Cortex-M Processor

Programmed the STM32L476 Discovery board to run GPIO, ADC, DAC, SPI, I2C and timer control functions in a custom task manager environment.

Movie Data Visualization Tool in ReactJS

Web-based tool for visualizing movie data with filter interaction control

Demo: <https://dbaeka.github.io>

Built a fast rendering visualization tool for movies using ReactJS.

The screenshot shows a dark-themed website for a movie data visualization tool. At the top, there's a blue header bar with the title "A4+ Movie Interaction Tool" on the left and "Home Write-Up" on the right. Below the header, there's a large dark section containing several paragraphs of text and some small images. The text is organized into sections like "Overview of Development Process", "Processing Data", "Web Page Development", and "Visualisation Development". The "Processing Data" section includes a small image of a bar chart. The "Web Page Development" section includes a small image of a scatter plot. The "Visualisation Development" section includes a small image of a bubble chart. The overall layout is clean and professional, with a focus on the technical details of the project.



UMD Latency Research Website Tool (Flask)

Tool for analyzing how users respond to latency when doing visual search with panning and zooming.
[\(<https://github.com/dbaeka/UMD-Latency-Research>\)](https://github.com/dbaeka/UMD-Latency-Research)

Designed visual tracking tool in Python which is scalable and synthesizes user interactions for latency analysis.