Code Conversion : System Migration from PHP to Python

Challenges

Challenges: Our current business platform, which is the backbone of our operations, is built on an aging PHP framework. While it has served us well in the past, it's now holding us back from achieving our strategic goals and growth potential.

Here's how this aging technology impacts our business:

- **Sluggish Performance & Scalability:** Our platform struggles to keep up with the growing number of users and transactions, leading to slow loading times and even occasional crashes. This frustrates customers, discourages engagement, and potentially drives them away to competitors.
- **Increasingly Costly Maintenance**: Maintaining, fixing issues or implementing a new solution in the outdated codebase is becoming a resource drain. Valuable development time and budget are wasted on patching old code instead of building new features that add value to our customers.
- **Security Concerns:** Using an outdated technology stack increases our vulnerability to cyberattacks and data breaches. This poses a serious risk to our business operations, our reputation, and most importantly, our customers' trust.
- **This system migration to the latest tech stake :** Python is not just about updating technology; it's about future-proofing our business.

Solution

Business Benefit Outcome:
By moving to a modern and robust Python-based platform, we will be able to:

- **Deliver a Seamless Customer Experience:** Faster loading times, improved stability, and greater responsiveness will enhance customer satisfaction, encouraging engagement and driving conversions.
- **Reduce Operating Costs:** A more maintainable codebase will free up developer resources, allowing us to focus on innovation and feature development instead of constantly fixing legacy code.
- **Strengthen Security:** We'll mitigate security risks, protect sensitive data, and ensure compliance with industry standards, building trust with our customers and stakeholders. In essence, this migration will transform our technology from a bottleneck to a business enabler, positioning us for sustained growth and success in the years to come

Target Audience

All applications and tools belong from legacy domains such as PHP.

- Software/Hardware
- Frontend React
- Backend
- Python (Fastapi/Flask REST Framework)
- Langchain for sequential/custom channing of prompts
- Cloud Services
- Cloud GCP
- Cloud AI system Vertex AI LLM
- Gemini series (Gemini-1.5-flash-001, Gemini-1.5-pro-001)
- Bison series (chat-bison-32K, chat-bison-32@002)
- DB Cloudsql(Postgres) for storing repo attributes and it's meta execution
- Others Pygithub, Langchain and python associated modules

Application flow chart