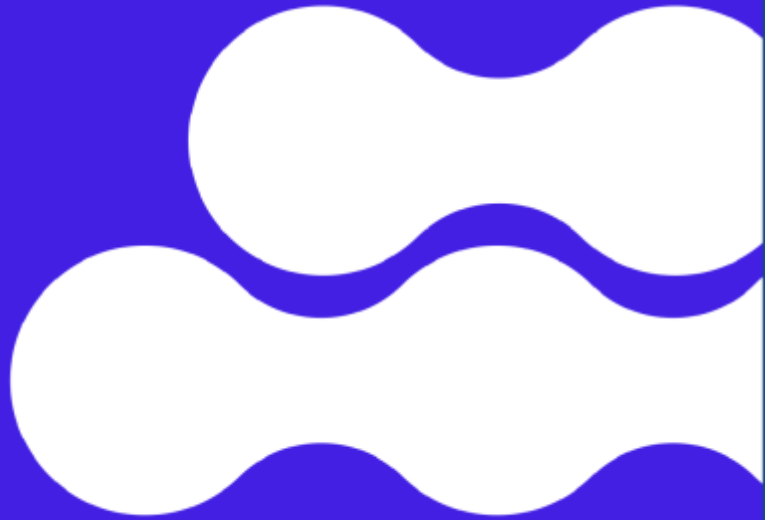
Intel® GenAI Hackathon

Team Name : Malaai

Problem Statement :

Interactive storytelling : Build AI-powered tools for writing interactive stories, where users can influence the plot and characters through prompts.



Problem Statement

Nowadays students face problem due to **low attention span** which is less than a gold fish(9 sec & humas have 8 sec).

Also, It is **very hard to spread awareness** about topics which are considered “**taboo**” in our society such as **periods**, **superstations**, **sex education**, etc.

As per studies conducted in US by **NCBI**, suggested that approx. **65%** of the population are **visual learners**, So learning from textual content leads to

- Difficulty in Conceptualization
- Reduced Retention
- Limited Engagement
- Difficulty in Problem-Solving
- Limited Creativity and Expression
- Increased Cognitive Load

Unique Idea Brief (Solution)

Our idea is to build Gen AI powered platform, which will **convert boring textual content or taboo topics** to visually appealing **comics/manga**.

User can **specify plot** & **characters** of the storyline **or just enter a topic** and it will generate a comic book as per their **comic style** i.e. **Marvel**, **DC**, **Disney Princess**, **Anime** etc.

Our platform will utilize **image-to-image transformations** using **Stable Diffusion** or Gen AI models.

We will optimize the pipeline to **generate a comic under 30 secs** using **Multithreading** & **Caching database** (Redis).

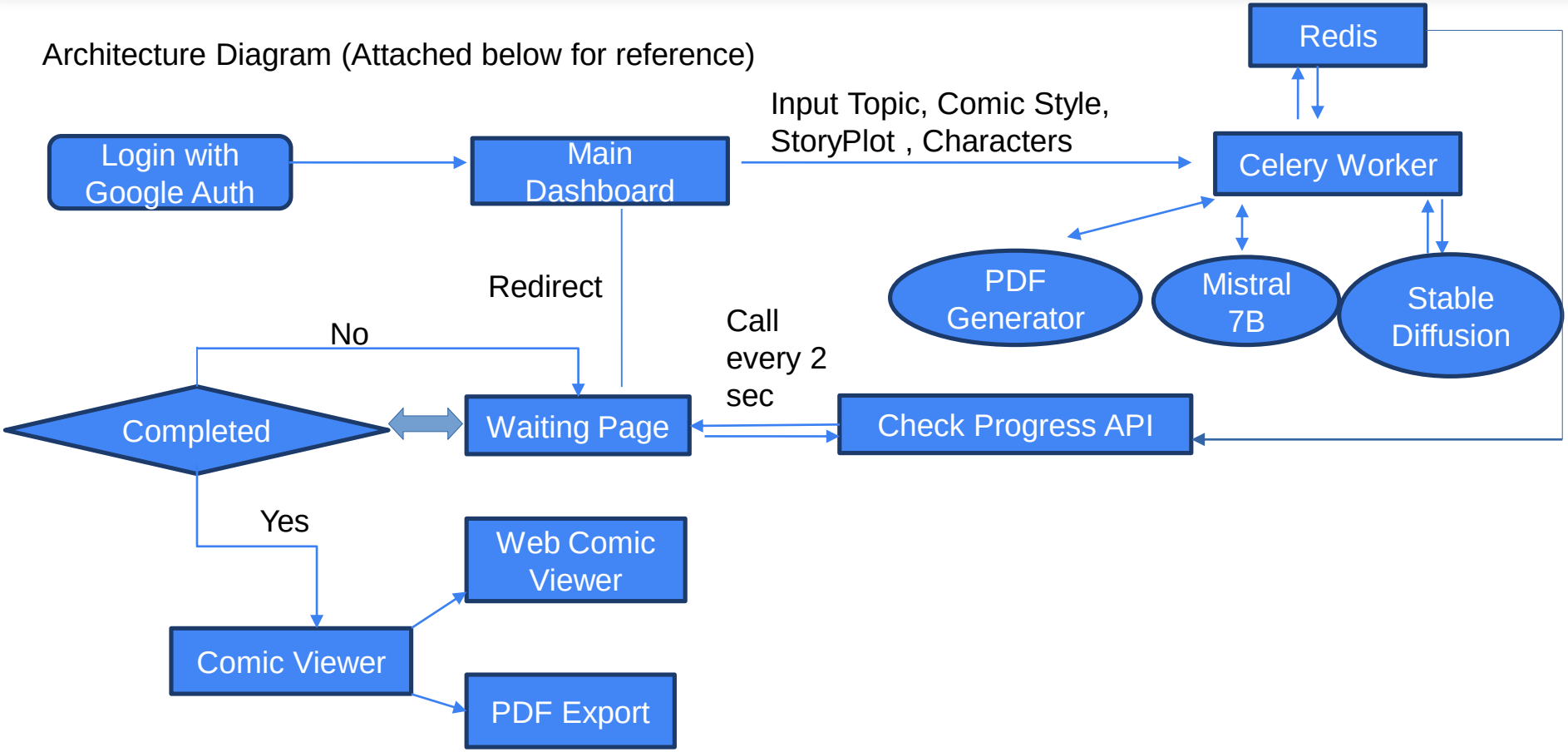
Features Offered

- Generate in your favourite comic style i.e. Marvel, DC, etc
- Ability to set custom characters and story plot
- Generate Shareable comic link or share comic pdf
- Enhances user experience with realistic animations simulating page turning and book opening/closing, creating an immersive digital reading environment.
- Ability to create vernacular(Hindi/English/Tamil/etc) comics

Process flow

- User will login with google auth & will get redirected to main dashboard.
- User will enter Topic(required),Comic style(optional), Story plot(optional) & Characters(optional).
- After hitting enter, web application will run a celery worker for generating a comic.
- User will be redirected to waiting page where he will get info about the progress.
- Once comic is generated, user will be redirected to comic viewer.
- Comic viewer will have options to download the comic in pdf format or share the web comic viewer link.

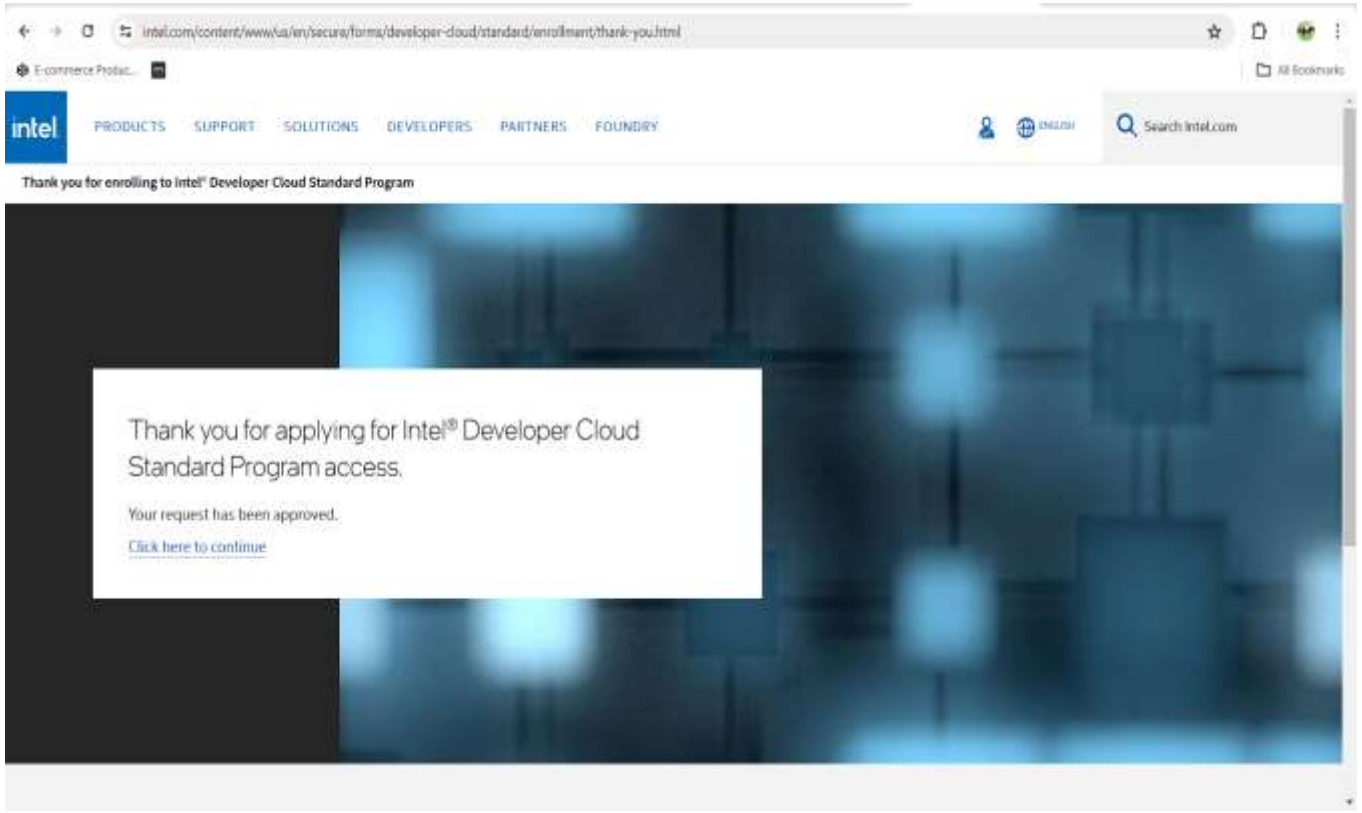
Architecture Diagram (Attached below for reference)



Technologies used (Mark down oneAPI AI Analytics libraries used)

- Flask
- Celery
- Redis
- Image Generation- https://huggingface.co/collections/Intel/stable-diffusion-65e0914ce1349d31319a9ef0
- Text Generation- https://huggingface.co/collections/Intel/mistral-65e090a8817eff4d91da58b0
- MongoDB

Intel® Developer Cloud Account (Screenshot)



Use case of Intel® Developer Cloud (IDC)

- The platform utilizes Intel's Image Generation API(Intel Stable Diffusion) to transform the textual content into visually captivating comic panels
- The web application triggers the Intel Text Generation API (Intel Mistral7B) to generate story script based on inputs.


oneAPI
Thank you so much!
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