**Project Overview**

**Goal**:

Develop a web application that utilizes cutting-edge AI technology to revolutionize the home design experience. By seamlessly integrating models from Clarifai, our application empowers users to effortlessly generate intricate 3D home structures with just a few clicks. Through the advanced capabilities of Clarifai's AI, our system analyzes home images, extracting essential features and architectural elements with unparalleled precision.

**Key Components**

1. **AI Integration**:
   * Use ChatGPT-4 Vision for image analysis.
   * Implement ChatGPT-4 Turbo for interactive user questioning.
   * Leverage DALL-E for generating home designs and schematics.
   * Create and deploy as a Clarifai module
2. **Feature Set**:
   * Image upload and analysis to estimate room dimensions.
   * User questionnaire to determine a person’s needs and preferences.
   * Automated generation of home designs.
3. **Possible Team Roles**

* Qasim focuses on front-end development.
* Osama oversees system integration and Clarify Module integration.
* Zartashia helps in the voice-over and demo of the app.
* Person B supports backend development
* Ayesha specializes in documentation and presentation

1. **Key Technical Challenges**

* Accurate room size estimation from images.
* Seamless integration of multiple AI technologies.
* Development of customization logic for home design generation.

1. **Project Phases**

* **Setup and Planning**: Define scope, set development environment, and plan milestones.
* **Development**: Implement user interface, integrate AI services, and develop core features.
* **Testing and Refinement**: Test the application, refine it based on feedback, and ensure technical accuracy.
* **Finalization**: Prepare documentation, and presentation materials, and finalize the app for demonstration.