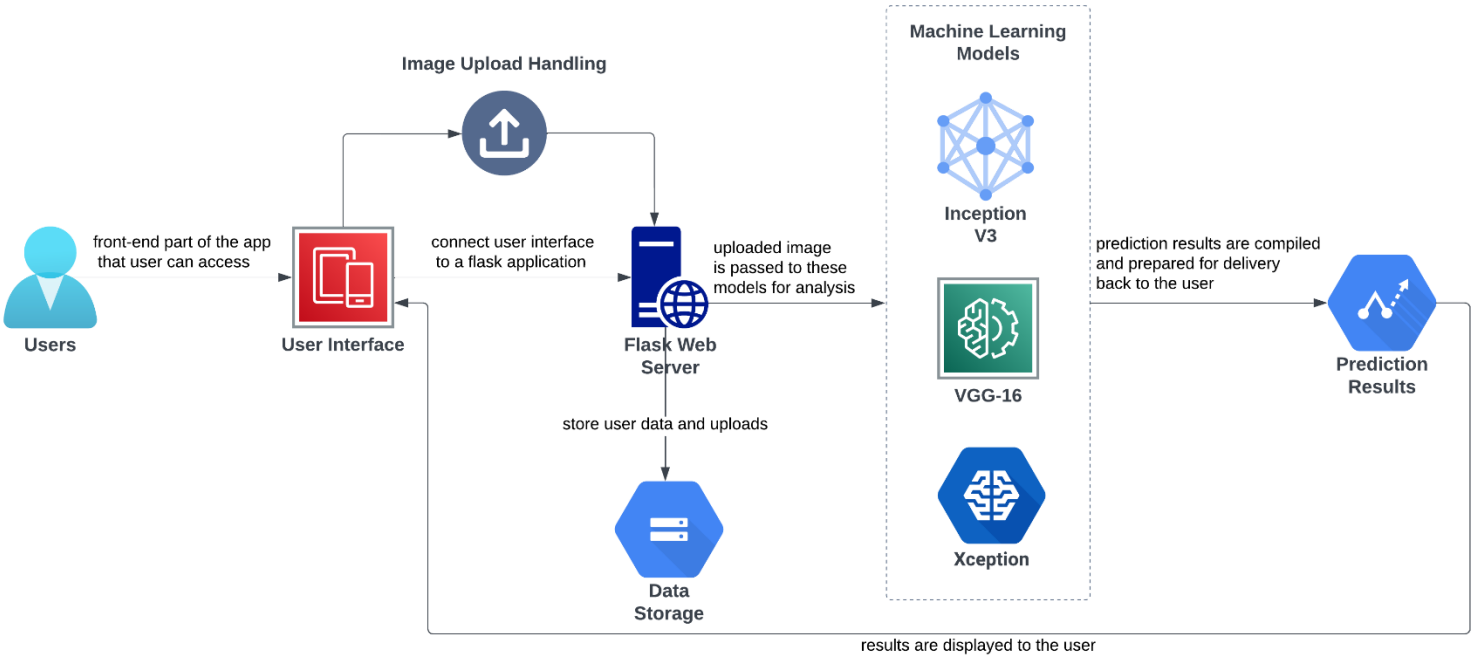
Project Design Phase-I
Solution Architecture

Date	13 November 2023
Team ID	Team-593124
Project Name	Deep Learning Model for Eye Disease Prediction
Maximum Marks	4 Marks

Solution Architecture:

Solution architecture is a complex process – with many sub-processes – that bridges the gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.



Architecture and data flow of the Deep Learning Model

This diagram provides an overview of the key components in the Eye Disease Prediction system:

❖ **User Interface:** This is where users interact with the system by uploading retina images through a web-based platform.

❖ **Image Upload Handling:** The process through which user-uploaded retina images are received, validated, and prepared for analysis.

❖ **Data Storage:** Temporarily holds uploaded retina images and may store user data, ensuring privacy and data security, in line with compliance standards.

❖ **Machine Learning Models:** Utilizes advanced algorithms such as Inception V3, VGG-16, and Xception to analyze retina images and predict potential eye diseases.

❖ **Prediction Results:** The system compiles the analysis from the machine learning models and presents the prediction results back to the user through the User Interface.

❖ **Flask Web Server:** Acts as the middleware that orchestrates the flow of data between the User Interface and Machine Learning Models, managing requests and serving responses.