# Creating UI and Connecting it to S3 Bucket

## User Story:

As a client, I should be able to upload and retrieve data using UI so that the team can analyze and give processed data for making good business decisions.

## Overview:

Our client needs an easy-to-use UI to upload and retrieve their data, so that our team can analyze the data and provide processed data for making good business decisions. We need a solution to design a user interface that allows the client to upload and retrieve their data.

## Solution:

We will use the following steps to create a user interface for uploading and retrieving data:

1. Design a user interface that allows the client to upload their data to the S3 bucket.
2. We are connecting S3 bucket with the UI using IAM access key and secret access key.
3. When the client clicks the upload button, the file will get uploaded, the data will be stored directly in the S3 bucket.
4. Using the same user interface, the client should be able to retrieve the processed file from S3 bucket.

# Flowchart:

Upload

IAM Access Key

Secret Access Key

S3 Bucket

User Interface

Client Data

Retrieve
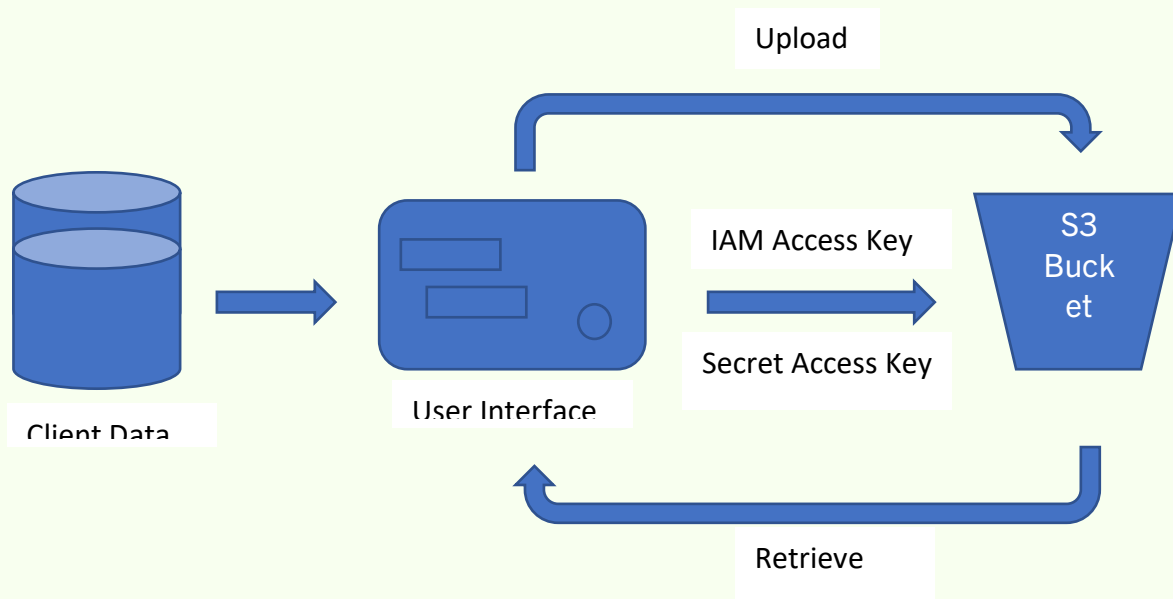
# Design:

1. We will design a user interface that allows the client to upload their data to the S3 bucket using the Upload button.
2. Once the upload process is complete, the data will be stored directly in the S3 bucket.
3. We will also design functionality on the same user interface that allows the client to retrieve the processed file.

# Security:

We will ensure the security of the system by implementing the following measures:

1. Implement secure access controls to restrict access to the S3 bucket and prevent unauthorized access.
2. Use encryption to protect the IAM access key and secret access key.

## Scalability:

The system will be designed to be scalable to meet the client's requirements for uploading and retrieving their data. We will choose a storage class that meets the client's requirements for durability, availability, and performance, and configure the S3 bucket with lifecycle policies to automatically move data between storage classes based on its age and usage.

## Monitoring:

We will monitor the system using AWS CloudWatch metrics, which provide real-time monitoring of system metrics such as number of requests, latency, and errors. We will also monitor the S3 bucket access logs to record all requests made to the S3 bucket and monitor the logs for any suspicious activity.