# **File Storage System Documentation**

## **1. Introduction**

This document outlines the functionality and behavior of the file storage system implemented using Amazon Web Services (AWS), specifically the Simple Storage Service (S3). The system provides a mechanism for organizing, storing, and managing user-uploaded files in a structured and secure manner.

The key functionality detailed in this document is the **file renaming process**, which enables users to rename files in their designated storage space without directly downloading or re-uploading them. Other functionalities that are defined in the api documentation include archiving a file, deleting files, checking files deletion time, etc.

## **2. System Overview**

Each user in the system is allocated a virtual folder within a centralized S3 bucket (foodtruck-userfiles). All files associated with a user are stored under a directory structure that follows this format:

php-template

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**<username>/<filename>**

This approach ensures that each user’s files are isolated and easily accessible using predictable S3 key patterns.

Files are also archived after a certain period of time that are defined for in the rules section of the S3 buckets.

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## **3. File Renaming Process**

### **Purpose**

The rename function allows users to change the name of an existing file stored under their user directory without altering the contents of the file.

### **Workflow**

The renaming process involves three core steps:

1. **Verification** – The system first checks whether the file to be renamed exists.
2. **Duplication** – A new file is created with the desired name by copying the original file to a new key.
3. **Deletion** – The original file is removed to complete the rename operation.

This process is executed through an AWS Lambda function, ensuring serverless scalability and speed.

## **4. Required Input Parameters**

To successfully perform file operations, the following information must be provided:

* **Username**: Identifies the user’s directory in the S3 bucket.
* **File Name**: The current name of the file to be renamed.