

Implement s3 file manager using any python web framework(flask/django/...etc).
functions :

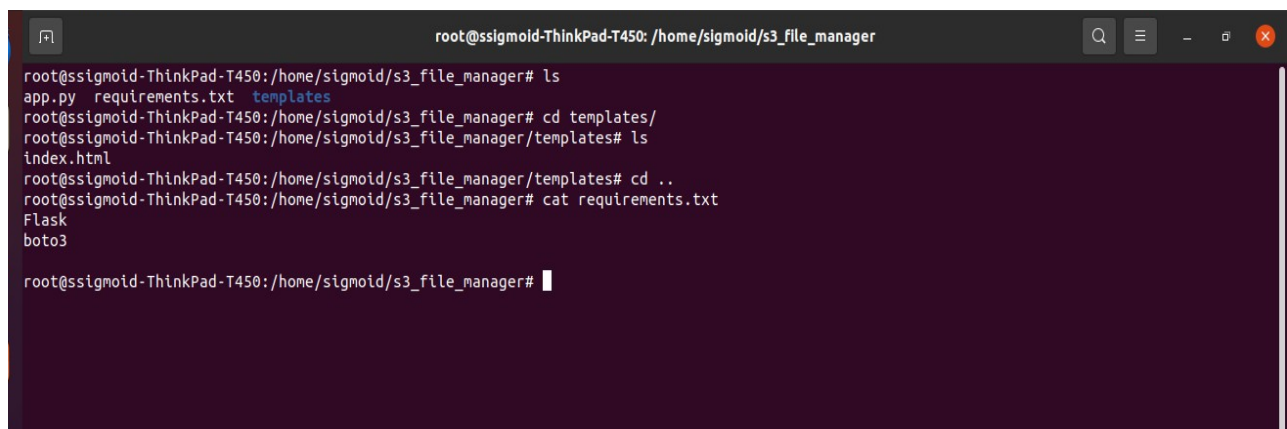
1. List content of s3.
2. Create/Delete folder + bucket .
3. Upload files to s3 + delete file from s3.
4. Copy/Move file withing s3.

Note:

1. Make sure your code is readable
2. Make sure your app is working properly
3. Need basic UI from which we can access app

Created a directory for project and set up the basic file structure

```
s3_file_manager/
├── app.py
├── templates/
│   └── index.html
└── requirements.txt
```



```
root@ssigmoid-ThinkPad-T450: /home/sigmoid/s3_file_manager
root@ssigmoid-ThinkPad-T450:/home/sigmoid/s3_file_manager# ls
app.py  requirements.txt  templates
root@ssigmoid-ThinkPad-T450:/home/sigmoid/s3_file_manager# cd templates/
root@ssigmoid-ThinkPad-T450:/home/sigmoid/s3_file_manager/templates# ls
index.html
root@ssigmoid-ThinkPad-T450:/home/sigmoid/s3_file_manager/templates# cd ..
root@ssigmoid-ThinkPad-T450:/home/sigmoid/s3_file_manager# cat requirements.txt
Flask
boto3
root@ssigmoid-ThinkPad-T450:/home/sigmoid/s3_file_manager#
```

app.py

```
from flask import Flask, request, redirect, url_for, render_template
import boto3
from botocore.exceptions import NoCredentialsError
import os
```

```
app = Flask(__name__)
```

```
# Configure AWS credentials and S3 client
```

```
AWS_ACCESS_KEY_ID = 'AKIA6IY35U7L5LOBYXGN'
```

```
AWS_SECRET_ACCESS_KEY = 'hBVovcd8zEy4vdkxFTRQosf0g/lP0OCujN6smfIu'
```

```
s3 = boto3.client(
```

```
    's3',
```

```
    aws_access_key_id=AWS_ACCESS_KEY_ID,
```

```
    aws_secret_access_key=AWS_SECRET_ACCESS_KEY
```

```

)

@app.route('/')
def index():
    try:
        # List all buckets
        buckets = s3.list_buckets().get('Buckets', [])
        bucket_names = [bucket['Name'] for bucket in buckets]
        return render_template('index.html', bucket_names=bucket_names)
    except NoCredentialsError:
        return "Credentials not available"

@app.route('/bucket/<bucket_name>')
def bucket_contents(bucket_name):
    try:
        # List objects in the specified bucket
        objects = s3.list_objects_v2(Bucket=bucket_name).get('Contents', [])
        files = [{'Key': obj['Key']} for obj in objects]
        return render_template('index.html', bucket_name=bucket_name, files=files)
    except NoCredentialsError:
        return "Credentials not available"

@app.route('/create_bucket', methods=['POST'])
def create_bucket():
    bucket_name = request.form['bucket_name']
    s3.create_bucket(Bucket=bucket_name)
    return redirect(url_for('index'))

@app.route('/delete_bucket', methods=['POST'])
def delete_bucket():
    bucket_name = request.form['bucket_name']
    s3.delete_bucket(Bucket=bucket_name)
    return redirect(url_for('index'))

if __name__ == '__main__':
    app.run(debug=True)

```

index.html

```

<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>S3 File Manager</title>
    <style>
        body {
            font-family: Arial, sans-serif;
            margin: 20px;
        }
        form {

```

```

        margin-bottom: 20px;
    }
    h2 {
        margin-top: 20px;
    }
    .form-group {
        margin-bottom: 10px;
    }
    input[type="text"], input[type="file"] {
        padding: 8px;
        font-size: 16px;
    }
    button {
        padding: 8px 16px;
        font-size: 16px;
        cursor: pointer;
    }
    ul {
        list-style-type: none;
        padding-left: 0;
    }
    li {
        margin-bottom: 10px;
    }
</style>
</head>
<body>
    <h1>S3 File Manager</h1>

    <!-- Create Bucket Form -->
    <h2>Create Bucket</h2>
    <form action="{{ url_for('create_bucket') }}" method="post">
        <div class="form-group">
            <input type="text" name="bucket_name" placeholder="Bucket Name" required>
        </div>
        <button type="submit">Create Bucket</button>
    </form>

    <!-- Delete Bucket Form -->
    <h2>Delete Bucket</h2>
    <form action="{{ url_for('delete_bucket') }}" method="post">
        <div class="form-group">
            <input type="text" name="bucket_name" placeholder="Bucket Name" required>
        </div>
        <button type="submit">Delete Bucket</button>
    </form>

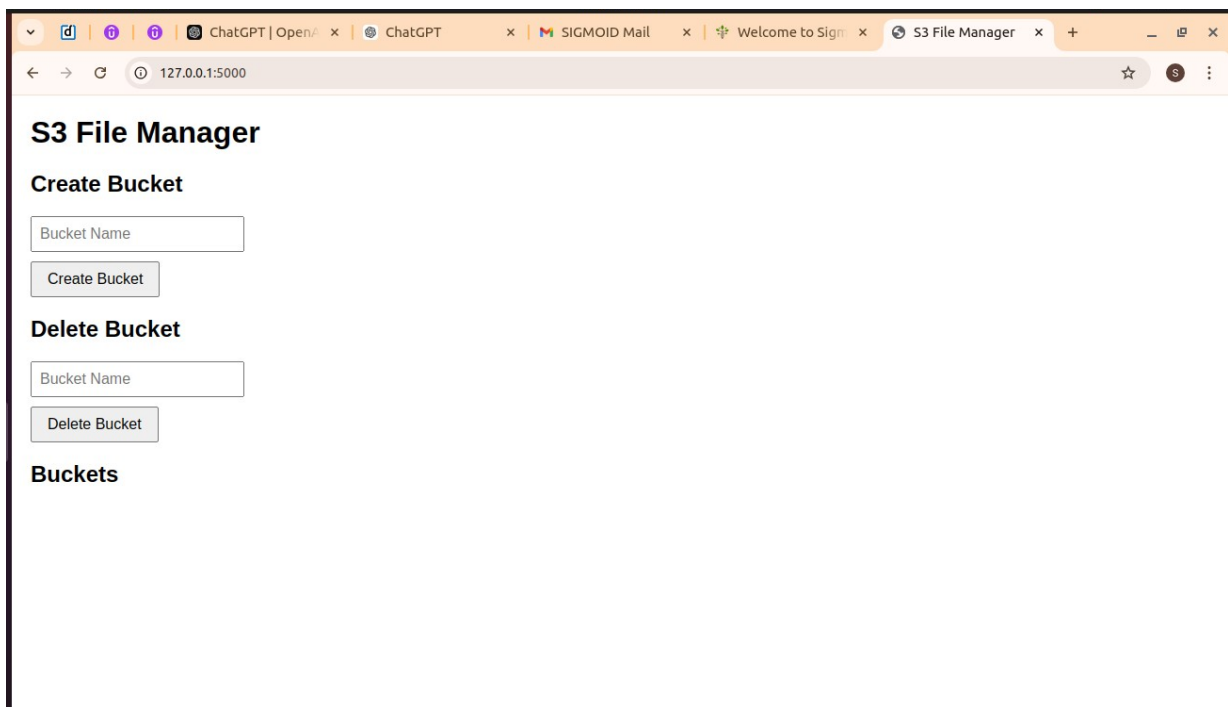
    <!-- List Buckets -->
    <h2>Buckets</h2>
    <ul>
        {% for bucket in bucket_names %}
        <li><a href="{{ url_for('bucket_contents', bucket_name=bucket) }}">{{ bucket }}</a></li>

```

```
{% endfor %}  
</ul>
```

```
</body>  
</html>
```

```
Terminal Sep 11 16:56  
root@ssigmoid-ThinkPad-T450: /home/sgmoid/s3_file_manager  
root@ssigmoid-ThinkPad-T450:/home/sgmoid/s3_file_manager# python3 app.py  
* Serving Flask app 'app'  
* Debug mode: on  
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.  
* Running on http://127.0.0.1:5000  
Press CTRL+C to quit  
* Restarting with stat  
* Debugger is active!  
* Debugger PIN: 679-789-571
```



Create Bucket

S3 File Manager

Create Bucket

tas268

Create Bucket

Delete Bucket

Bucket Name

Delete Bucket

Buckets

S3 File Manager

Create Bucket

Bucket Name

Create Bucket

Delete Bucket

Bucket Name

Delete Bucket

Buckets

tas268

Delete Bucket

S3 File Manager

Create Bucket

Bucket Name

Create Bucket

Delete Bucket

tas268

Delete Bucket

Buckets

tas268

After deleting Bucket

