



School: Campus:
Academic Year: Subject Name: Subject Code:
Semester: Program: Branch: Specialization:
Date:

Applied and Action Learning

(Learning by Doing and Discovery)

Name of the Experiment : Store with IPFS – Decentralized File Upload

Objective/Aim:

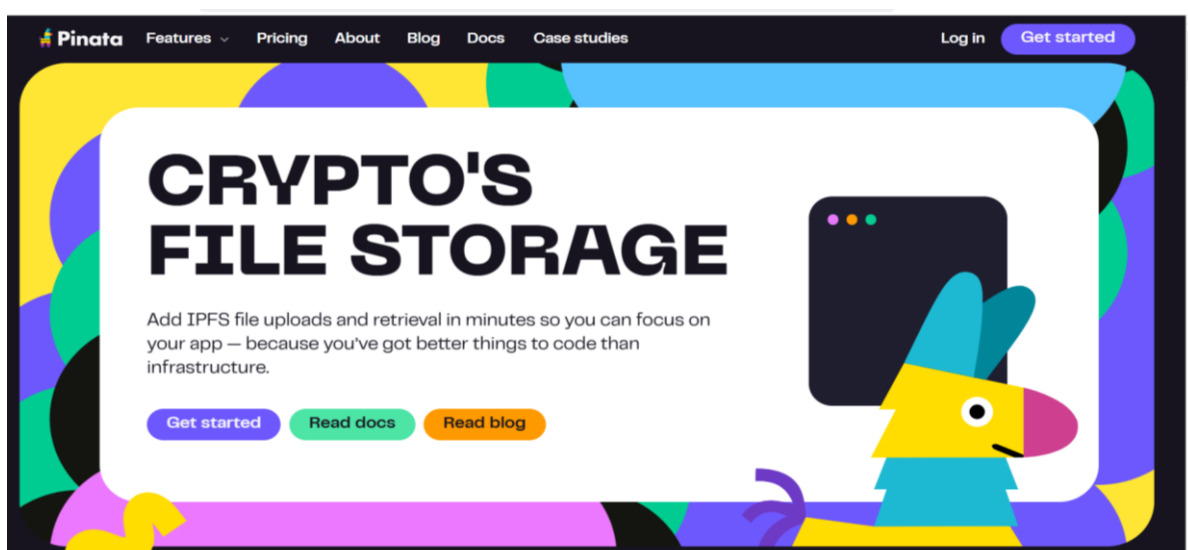
1. Upload a file to a decentralized storage network (IPFS).
2. Get the file's CID and access it via a public gateway URL.
3. Understand pinning, gateways, and basic privacy considerations.

Apparatus/Software Used:

- Brave
- Pinata
- VS code

Procedure:

1. Open Brave and search Pinata website and open it then Login to pinata.



Procedure:

2. After login go to the API section and click on new to generate an API key.
3. After generating the API key copy the key and paste it for later user.

CREATE API KEY

Select admin or customize permissions.

Key name

☐ Admin

CUSTOMIZE PERMISSIONS

^ V3 RESOURCES

RESOURCE NAME	PERMISSIONS
Files	<div>None</div> <div>Read</div> <div>Write</div>
Groups	<div>None</div> <div>Read</div> <div>Write</div>
Repositories	<div>None</div> <div>Read</div> <div>Write</div>

Cancel Create

API KEY INFORMATION

This info will only be shown once. Make sure you store it somewhere safe.

API Key
511206df8a778d4641b5

API Secret

JWT (secret access token)

Done Copy All

4. Now create a folder and open it on VS code then in the App.js folder write the code for frontend and create another file named as .env ,in this file paste the API key.

```

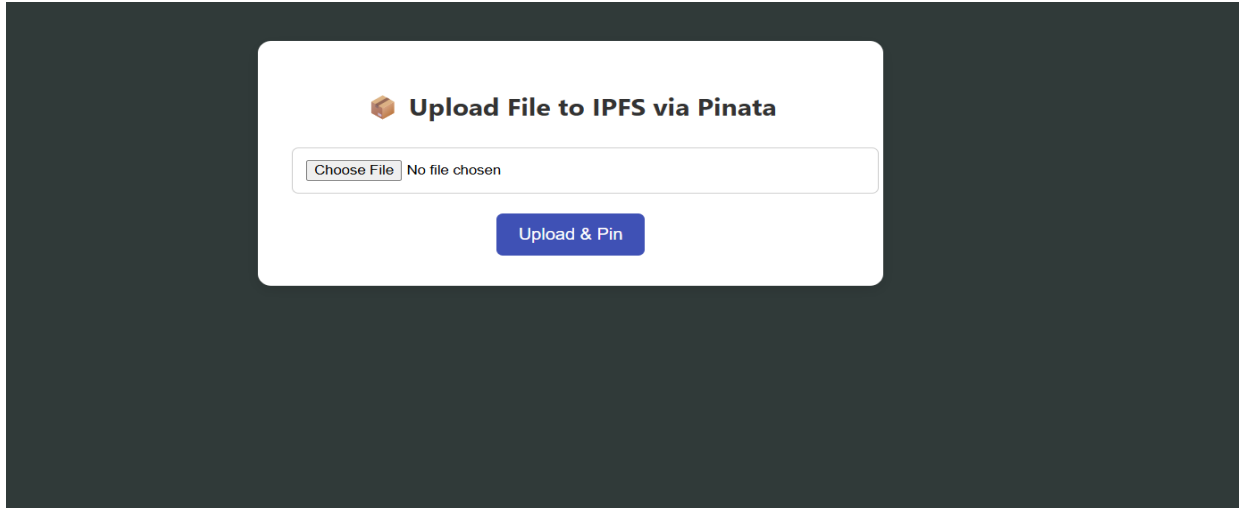
JS App.js
src > JS App.js > ...
1  import React, { useState } from "react";
2  import axios from "axios";
3  import "../App.css"; // Import the CSS file
4
5  function App() {
6    const [file, setFile] = useState(null);
7    const [ipfsHash, setIpfsHash] = useState("");
8    const [uploading, setUploading] = useState(false);
9
10   const PINATA_JWT = "Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJ1c2V5SW5mb3JlYXRpb24iOnsiaWQiOiI2MmRlZTIzNS02ZjdjLTlRbHYtYmU1ZS1lOTJ9";
11
12   const handleFileChange = (e) => {
13     setFile(e.target.files[0]);
14     setIpfsHash("");
15   };
16
17   const handleUpload = async () => {
18     if (!file) return alert("Please select a file first!");
19
20     const formData = new FormData();
21     formData.append("file", file);
22
23     try {
24       setUploading(true);
25
26       const response = await axios.post(
27         "https://api.pinata.cloud/pinning/pinFileToIPFS",
28         formData,
29         {
30           headers: {
31             Authorization: PINATA_JWT.

```

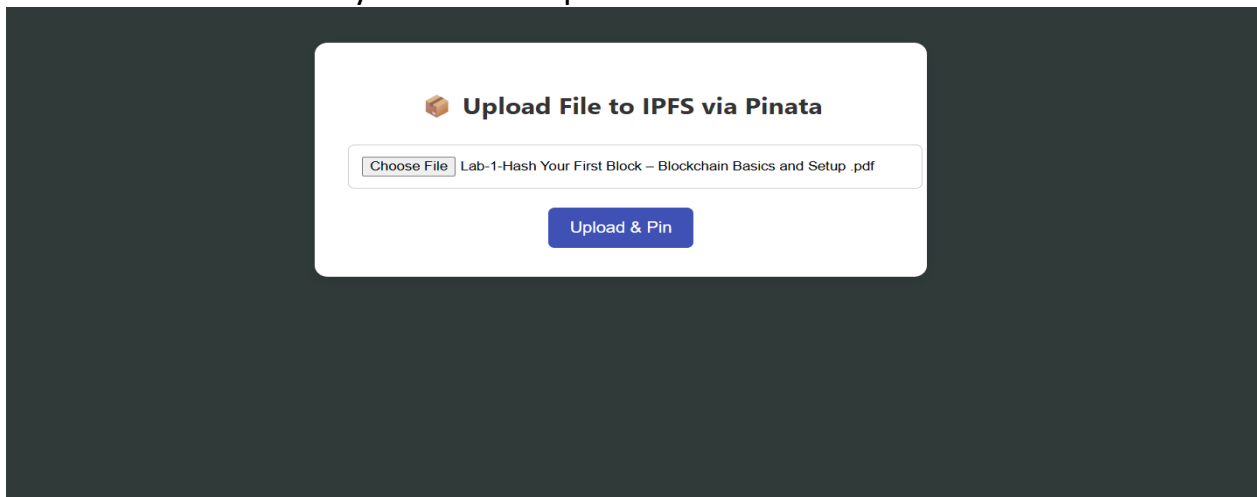
webpack compiled successfully

Procedure:

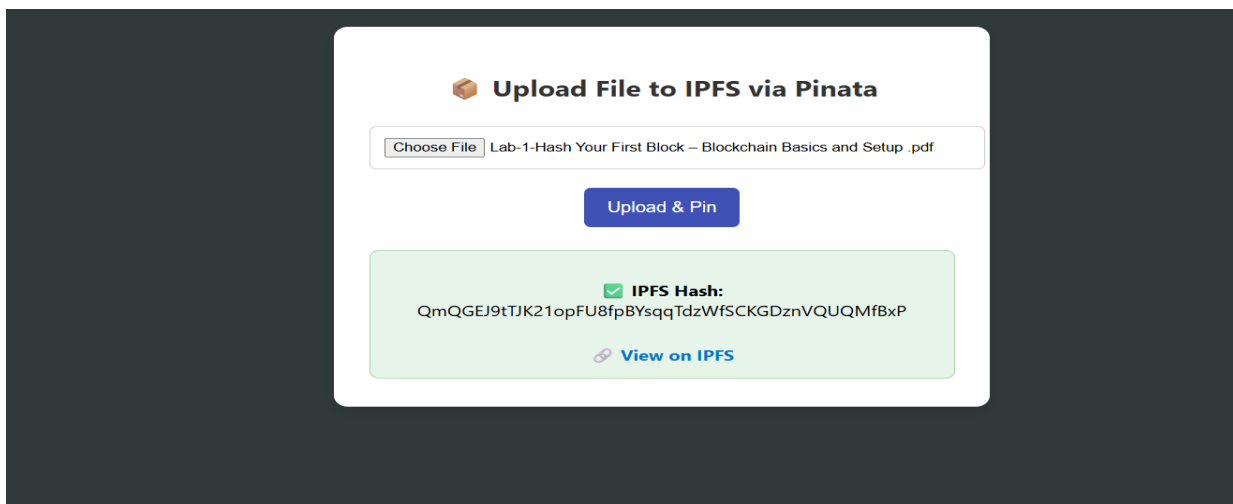
5. Now go to the terminal and write “npm start” to run the code. After running the code the output will be show like this.



6. Now choose the file you want to upload .



7. After choosing the file click on the “Uplode & Pin” button .



Observation :

Applied and Action Learning

In the *Store with IPFS – Decentralized File Upload* lab, I was able to successfully select a file from my system, upload it to the IPFS network, and receive a unique IPFS hash.

ASSESSMENT

Rubrics	Full Mark	Marks Obtained	Remarks
Concept	10		
Planning and Execution/ Practical Simulation/ Programming	10		
Result and Interpretation	10		
Record of Applied and Action Learning	10		
Viva	10		
Total	50		

Signature of the Student:

Name :

Regn. No. :

Signature of the Faculty:

Page No.

* As applicable according to the experiment.
Two sheets per experiment (10-20) to be used.