



**Centurion**  
UNIVERSITY  
*Shaping Lives...  
Empowering Communities...*

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

### Coding Phase : Pseudo Code/Flow Chart/Algorithm

- 🕒 Start
- 🕒 Create a `.env` file with API credentials.
- 🕒 Import required modules.
- 🕒 Define an asynchronous `uploadToIPFS()` function.
- 🕒 Inside the function:
  - Read the file using `fs.createReadStream`.
  - Append to `FormData`.
  - Post to Pinata endpoint.
- 🕒 Handle response:
  - Display IPFS hash and gateway link.
- 🕒 Handle errors.
- 🕒 End

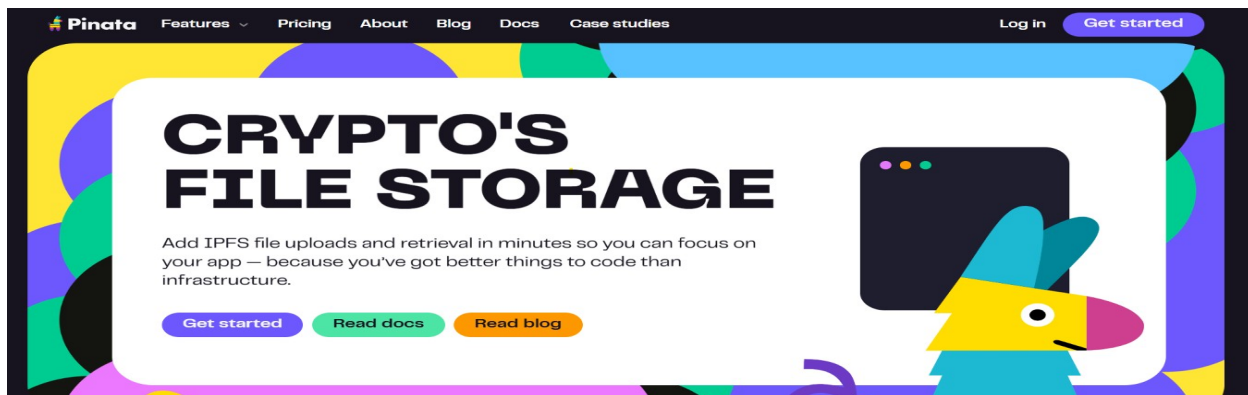
### Apparatus/Software Used:

- Node.js
- Axios
- Dotenv
- Form-data
- Pinata

## Testing Phase:

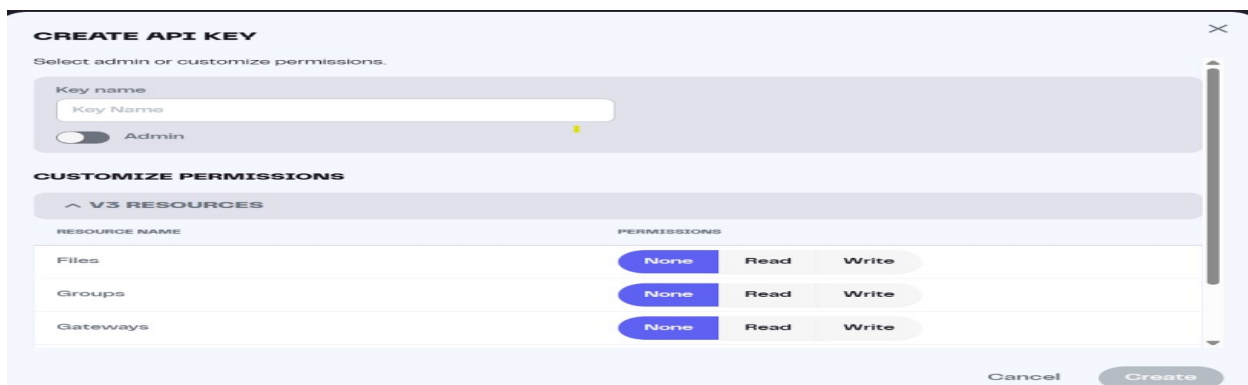
### Step 1 : Open Pinata Website

- Visit [pinata.cloud](https://pinata.cloud)
- Login or sign up with your g mail



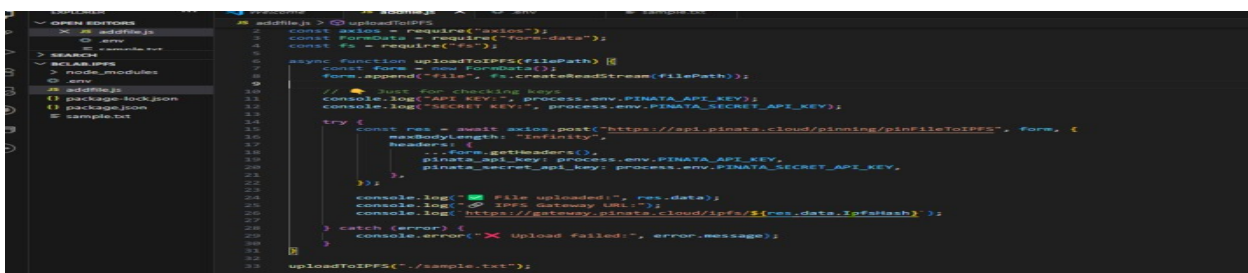
### Step2: Create api key

- Click api keys options
- Click new key
- Enter key name and click on admin option and click create



### Step3 : Open vs code

- Open vs code with a folder .
- Create a file name is addfile.js
- Write the code
- Create a other file .env and write the your  
-PINATA\_API\_KEY  
-PINATA\_SECRET\_API\_KEY  
-PINATA\_JWT\_TOKEN



## Implementation Phase: Final Output (no error)

1.Open terminal

•Write code

- Npm init -y

- npm install axios dotenv form-data

- node addfile.js

2.Out put

```
{  
  
  IpfsHash: 'QmPzxMqJYPUJarnkEBrzsv9CbPabUMxTv8w7hhEeWuWRvS',  
  
  PinSize: 31,  
  
  Timestamp: '2025-07-31T17:40:45.189Z',  
  
  ID: 'f5b06438-2dd7-4dd0-ac96-194919100a97',  
  
  Name: 'sample.txt',  
  
  NumberOfFiles: 1,  
  
  MimeType: 'text/plain',  
  
  GroupId: null,  
  
  Keyvalues: null  
  
}
```

```
PS C:\Users\swadh\Downloads\bclab.ipfs> node addfile.js  
[dotenv@17.2.1] injecting env (3) from .env -- tip: ⚙ write to custom object with { processEnv: myObj  
10984  
✔ File uploaded: {  
  IpfsHash: 'QmPzxMqJYPUJarnkEBrzsv9CbPabUMxTv8w7hhEeWuWRvS',  
  PinSize: 31,  
  Timestamp: '2025-07-31T17:40:45.189Z',  
  ID: 'f5b06438-2dd7-4dd0-ac96-194919100a97',  
  Name: 'sample.txt',  
  NumberOfFiles: 1,  
  MimeType: 'text/plain',  
  GroupId: null,  
  Keyvalues: null  
}  
10984  
✔ File uploaded: {
```

## Observations

- File was uploaded successfully to IPFS using **Pinata's Web UI**
- A unique **CID** was assigned to the file
- Anyone with the **gateway link** can access the file
- No coding or local node was required — just browser + internet
- Very useful for storing and sharing decentralized files

## 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		
<b>Total</b>	<b>50</b>		

**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.*

