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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 Experiement : 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

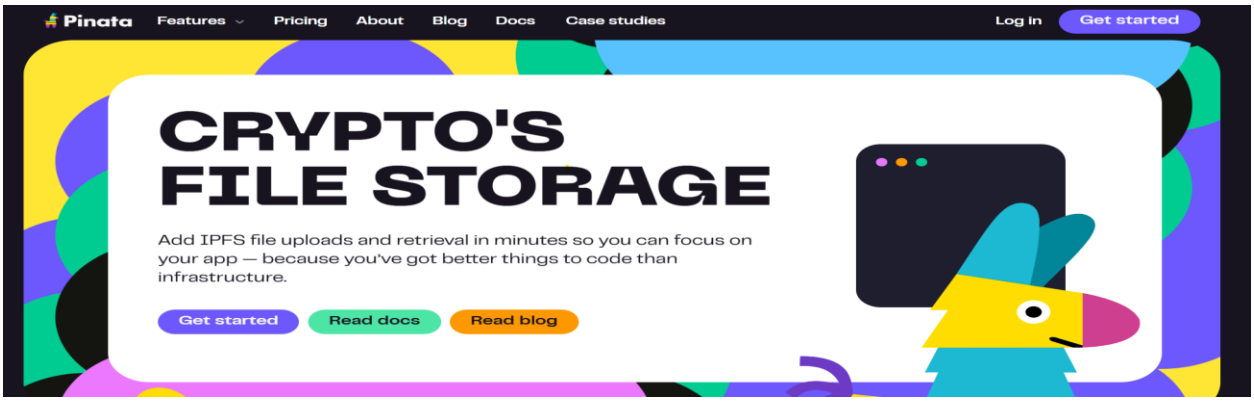
Apparatus/Software Used:

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

Testing Phase:

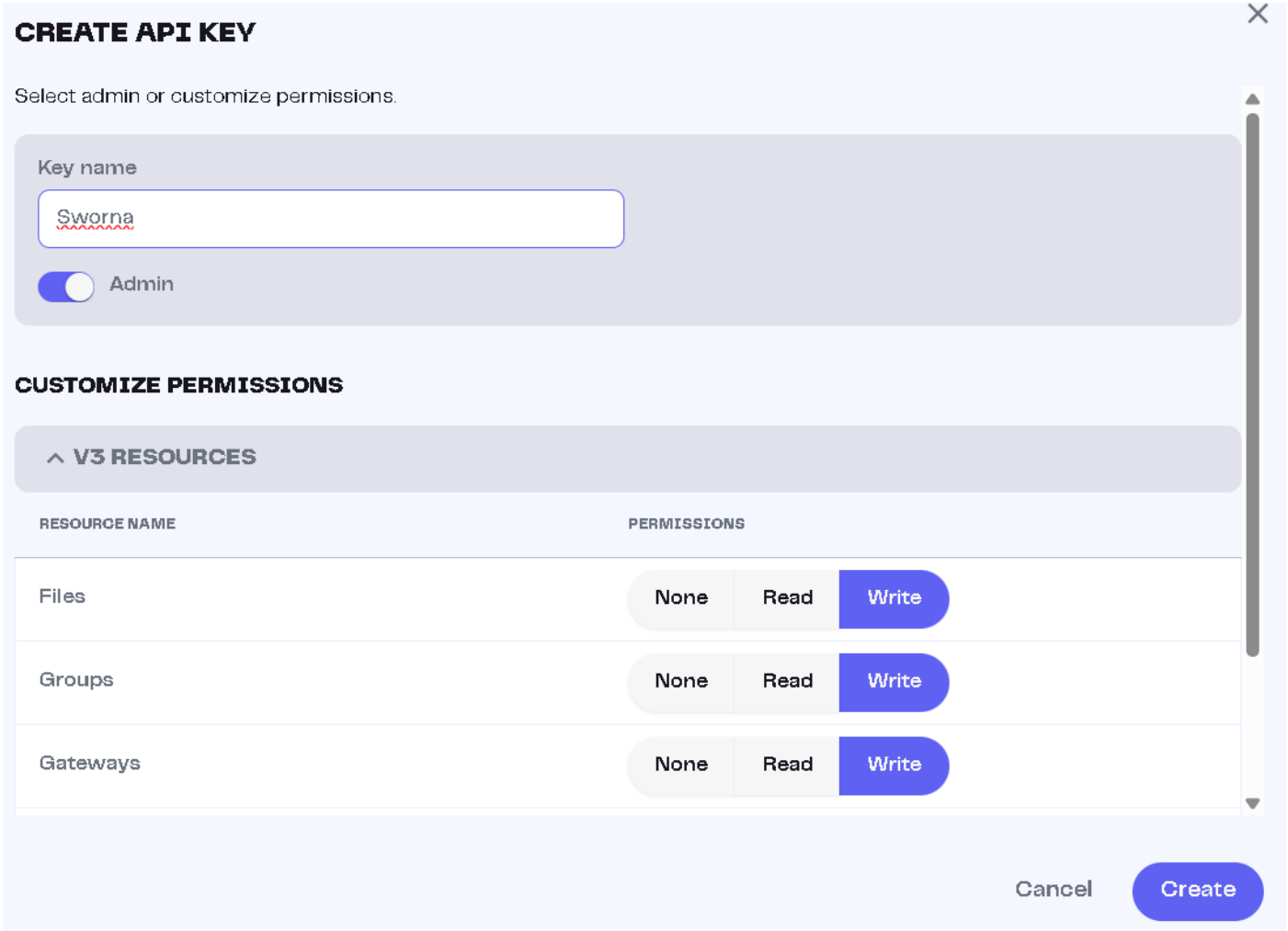
Step 1 : Open Pinata Website

- Visit piñata.cloud
- Login or sign up with your e-mail



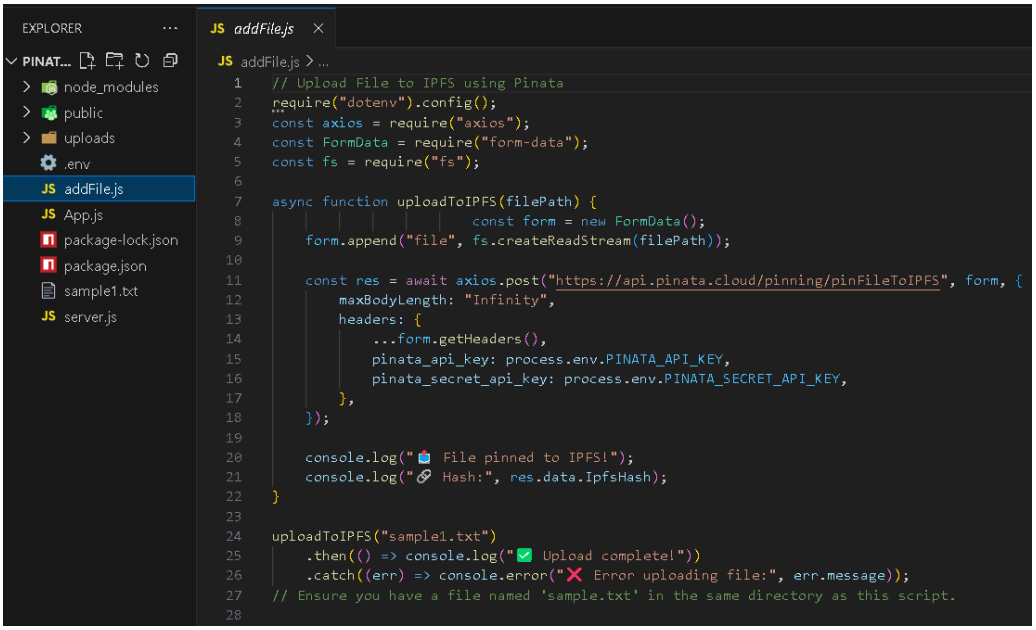
Step2: Create api key

- 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_SECRT_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\abina\ss\OneDrive\Desktop\web development\PINATA IPFS> node addfile.js
[dotenv@17.2.1] injecting env (2) from .env -- tip: ⚙ suppress all logs with { quiet: true }
File pinned to IPFS!
Hash: QmbFMke1KXqnYyBBWxB74N4c5SBnJMVAiMNRcGu6x1AwQH
Upload complete!
```

```
PS C:\Users\abina\ss\OneDrive\Desktop\web development\PINATA IPFS> npm start

> fff@1.0.0 start
> node server.js

[dotenv@17.2.1] injecting env (2) from .env -- tip: 🔐 prevent committing .env to code: https://dotenvx.com/precommit
Server running at http://localhost:3000
```

https://gateway.pinata.cloud/ipfs/Qma7oZEcYE4bXqMB6if8W9WveAssiWh2qWRoHif46UtBBm

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		
Total	**50**		

Signature of the Student:

Name :

Regn. No. :

Signature of the Faculty:

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