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 : Web2 vs Web3- Debate and Redesign

Objective/Aim:

To understand the key differences between Web2 and Web3, discuss their pros and cons, and explore how existing Web2 applications can be redesigned for Web3.

Apparatus/Software Used:

- Laptop
- WPS Office
- Google for research

Theory/Concept:

The internet has evolved over time:

Web1 (Read-Only) – Static websites with basic information, little to no interaction.

Web2 (Read & Write) – Interactive websites, social media, e-commerce, cloud services. Data is controlled by centralized companies.

Web3 (Read, Write & Own) – Decentralized internet using blockchain. Users own their data, interact directly via smart contracts, and use cryptocurrencies for payments.

Key Differences:

- Ownership: Web2 - centralized; Web3 - decentralized.
- Complexity: Web3 has a steep learning curve compared to Web2.
- Data Privacy: Higher in Web3.
- Security: Web3 uses blockchain for enhanced security.
- Censorship Resistance: Web3 is resistant to censorship.

Procedure:

- First, I went through the basic concepts of Web2 and Web3 to clearly understand how they work.
- Then, I prepared a simple PowerPoint comparing their features, pros, and cons in an easy-to-read format.
- I looked into how decentralization changes the way data is owned and secured.
- I put my findings into a side-by-side comparison table for better clarity.
- ·Finally, I discussed real-life situations where Web3 could solve the problems we face in Web2 today.

Observation Table:

Feature	Web2	Web3
Definition	Current version of the internet (Read + Write)	Next-gen internet (Read + Write + Own)
Control	Centralized, controlled by companies	Decentralized, controlled by users
Data Ownership	Companies own and control user data	Users own and control their data
Examples	Facebook, YouTube, Instagram, Google	Ethereum, IPFS, Filecoin, decentralized apps
Privacy	Lower privacy; data sold for ads	Higher privacy; data secured by blockchain
Accessibility	Easy to use, user-friendly	Requires understanding of blockchain concepts
Security	Prone to data breaches and hacking	Enhanced security using cryptography and blockchain
Censorship	Can be censored by companies or governments	Censorship-resistant due to decentralization
Scalability	Highly scalable with centralized servers	Faces scalability challenges currently
Transparency	Limited transparency; hidden algorithms	Transparent and open through blockchain
Monetization	Ad-based revenue; user data monetized	User can earn directly (crypto, tokens)
Environmental Impact	Low (in usage phase)	Higher in PoW systems (due to energy consumption)

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**		