

 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:**

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* 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) |