

SKILL 7

[CS601] – Cryptography and Blockchain

Date – 05/04/2023 | *By* Aishwarya Suryakant Waghmare, PRN – 2001106059

Title/Aim of the practical :

Revolutionizing Productivity and Earnings : Leveraging Web 3.0 to Develop Play-to-Earn Apps in Healthcare, Education, Transportation, Work, and Communication Domains.

Apparatus/Tools/ Resources used :

- Lecture Notes
- E-Resources
- E-Book
- Laptop
- Remix IDE

Steps performed in the activity :

- ✓ Web 3.0, also known as the decentralized web, offers a world of new opportunities for developing innovative applications that can revolutionize productivity and earnings.
- ✓ By leveraging blockchain technology, smart contracts, and decentralized storage, developers can create play-to-earn apps in healthcare, education, transportation, work, and communication domains.
- ✓ One of the most promising areas for play-to-earn apps is healthcare. With the use of decentralized health records, smart contracts can automate the payment process for medical services, allowing patients to earn tokens for engaging in healthy behaviours, such as regular exercise or adherence to medication regimens.
- ✓ In addition, healthcare providers could earn tokens for achieving positive patient outcomes or participating in clinical research.
- ✓ In the education domain, play-to-earn apps could incentivize students to complete coursework and achieve high grades by rewarding them with tokens that can be used to pay for college tuition or other educational expenses.
- ✓ These apps could also reward teachers and other educators for creating engaging and effective learning experiences.
- ✓ In transportation, play-to-earn apps could reward drivers for providing safe and efficient rides, and passengers for using sustainable transportation options.
- ✓ These apps could also incentivize the use of public transportation, reducing traffic congestion and carbon emissions.
- ✓ In the work domain, play-to-earn apps could reward employees for achieving productivity goals or for developing innovative solutions to business problems.
- ✓ Employers could also use these apps to incentivize employees to participate in training programs or to collaborate more effectively with colleagues.
- ✓ Finally, in the communication domain, play-to-earn apps could incentivize users to provide helpful feedback or to engage in constructive dialogue.
- ✓ These apps could also reward content creators for producing high-quality content that attracts a large audience.

- ✓ Developing play-to-earn apps in healthcare, education, transportation, work, and communication domains leveraging web 3.0 requires careful planning and consideration of the unique challenges and opportunities in each domain.
- ✓ Here are some steps that can be taken to develop successful play-to-earn apps in these domains :
- ✓ Identify the target audience :
- ✓ Before developing a play-to-earn app, it is essential to identify the target audience and understand their needs, preferences, and motivations.
- ✓ This will help to design an app that is engaging, effective, and relevant to the target audience.
 - Determine the incentives and rewards :
 - To incentivize users to engage in positive behaviours, such as exercising regularly or completing coursework, play-to-earn apps must offer compelling incentives and rewards.
 - These could include tokens that can be exchanged for real-world goods and services, access to exclusive content or experiences, or recognition and social status within the app's community.
 - Choose the appropriate blockchain platform :
 - Web 3.0 offers a variety of blockchain platforms that can be used to develop play-to-earn apps.
 - Choosing the appropriate platform depends on the specific requirements of the app, such as scalability, security, and transaction speed.
 - Design the user interface and experience :
 - The user interface and experience are critical factors in the success of a play-to-earn app.
 - The app should be intuitive, easy to use, and visually appealing, with clear instructions on how to earn and redeem rewards.
 - Develop smart contracts :
 - Smart contracts are self-executing contracts that automate the payment process and ensure that rewards are distributed fairly and transparently.
 - Developing smart contracts requires expertise in blockchain programming and contract law.
 - Test and launch the app :
 - Before, launching the app, it should be thoroughly tested to ensure that it is secure, reliable, and user-friendly.
 - The launch should be accompanied by a marketing campaign that targets the app's intended audience and highlights its unique features and benefits.

Healthcare

- ✓ In the Internet's latest avatar, Web 3.0, everything functions around individuals instead of centralized companies, because it is built using open-source software by a public community of contributors.
- ✓ The most common Web 3.0 initiatives use blockchain-based tokens to allow a like-minded community to take an equal part in a digital platform's ownership, access, and governance.
- ✓ In short, Web 3.0 is a big step forward in community-building that could improve how we deliver and pay for healthcare.
- ✓ At the heart of Web 3.0 lies a system of distributed ledgers, commonly known as blockchain. Here, data is never stored in one place or managed by one entity.
- ✓ On the contrary, it is spread across distributed ledgers, making information "unfudgeable."

- ✓ Any user action, for instance, a transaction or a change of information source, updates the blockchain, preserving the history and verifying the activity across the distributed ledgers.
- ✓ The base healthcare application for Web 3.0 is remaking electronic health records (EHRs), a keystone of Web 1.0 healthcare technology.
- ✓ Transferring EHRs from siloed, centralized software to interoperable, patient-owned, immutable records could solve a lot of problems.
- ✓ Anyone wishing to change or use your healthcare data without your permission faces an impossible task because of your medical data's distributed nature.
- ✓ Web 3.0's decentralized business model revolves around handing over to users the ownership of their data and putting the community first.
- ✓ This means that the next Uber will be owned by riders and drivers; content creators will own the next social networks; and artists will own the next music streaming services.
- ✓ And certainly not too far behind these innovations, the next healthcare platform will be owned by patients.
- ✓ Sectors that have managed to reach new record-highs in healthcare funding include:
 - Artificial Intelligence
 - Telemedicine
 - Mental health
 - Digital therapeutics
 - Omics
- ✓ Overall, developing play-to-earn apps in healthcare, education, transportation, work, and communication domains leveraging web 3.0 requires a multidisciplinary approach that combines expertise in blockchain technology, user experience design, and domain-specific knowledge.
- ✓ By carefully considering the unique challenges and opportunities in each domain, developers can create innovative apps that drive positive behaviour change and improve outcomes for users.
- ✓ Overall, leveraging web 3.0 to develop play-to-earn apps has the potential to revolutionize productivity and earnings across a wide range of domains.
- ✓ By providing users with incentives to engage in positive behaviours, these apps could help drive innovation and improve outcomes in healthcare, education, transportation, work, and communication.

Parameters achieved/ Conclusion :

Therefore, understood and implemented and developed Play-to-Earn Apps in Healthcare, Education, Transportation, Work, and Communication Domains.