



# **Technical Seminar on Non Fungible Tokens(NFTs)**

**Presented By**

K Mohan Durga Sathish

18361A0544

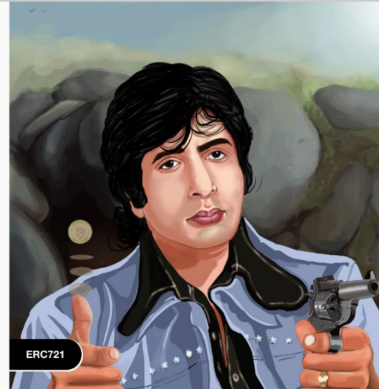
**Under the Guidance of**

Mrs D Jamuna

Assoc. Professor

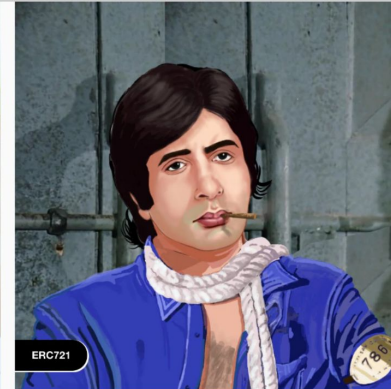
## What Is an NFT?

An NFT is a digital asset that represents real-world objects like art, music, in-game items and videos. They are bought and sold online, frequently with cryptocurrency, and they are generally encoded with the same underlying software as many crypto tokens.



BigB Punks #3

BigB Punks are a heterogenous collection of...



BigB Punks #2

BigB Punks are a heterogenous collection of...

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# Block Chain

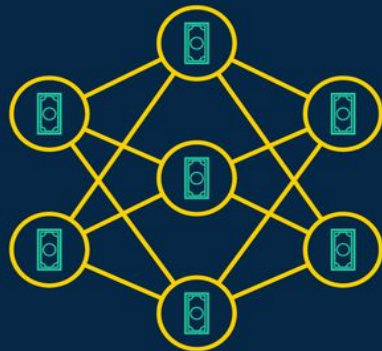
A blockchain is a distributed database that is shared among the nodes of a computer network. As a database, a blockchain stores information electronically in digital format.

A blockchain collects information together as blocks. Blocks have certain storage capacities and, when filled, are closed and linked to the previously filled block, forming a chain of data known as the blockchain.





One party requests a transaction.



Requested transactions are funneled into a P2P network and broadcast to each individual computer (or node).



Individual nodes receive the request and validate the transaction using an algorithm.



Once the block is added to an existing chain, transactions are complete and permanent.



Approved transactions are represented as blocks and added to a public ledger.

# Crypto Currency

A cryptocurrency is a digital or virtual currency that is secured by cryptography, which makes it nearly impossible to counterfeit or double-spend. Many cryptocurrencies are decentralized networks based on blockchain technology.



1

TRANSACTION

2

BLOCK

3

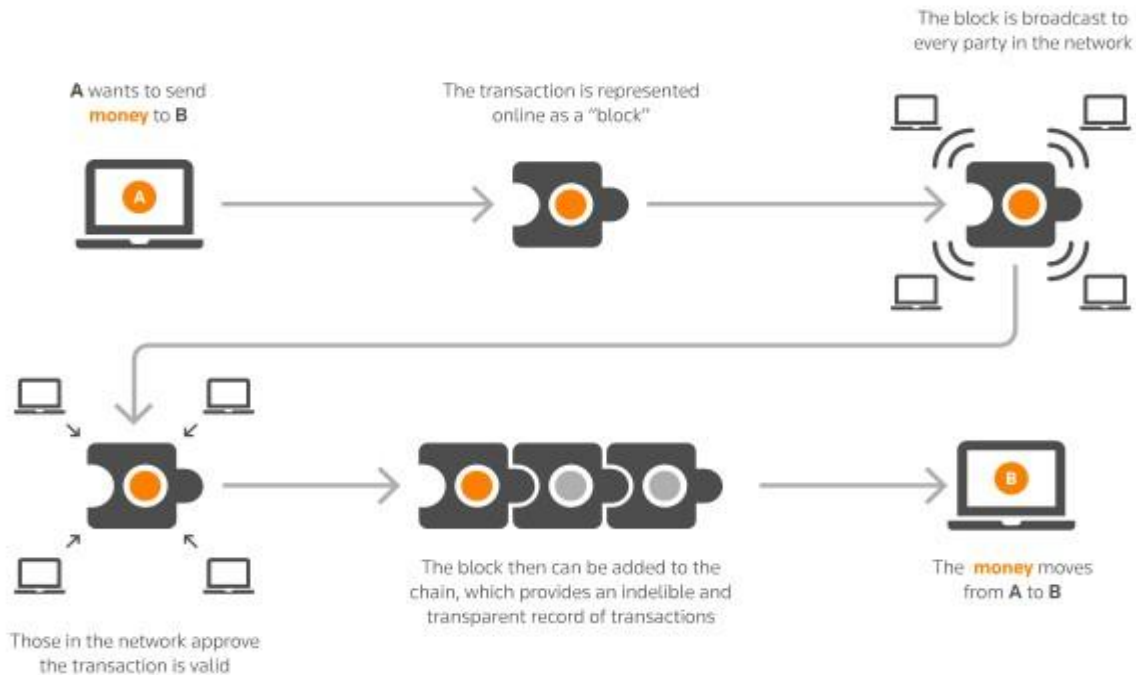
VERIFICATION

4

HASH

5

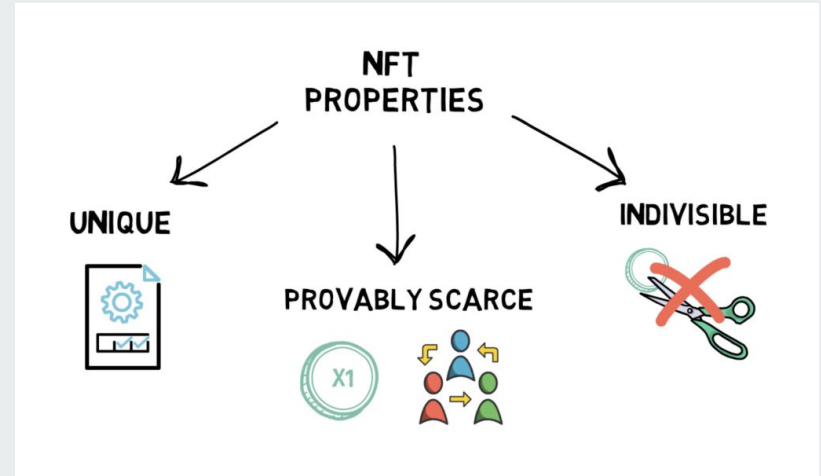
EXECUTION



A non-fungible token (NFT) is a non-interchangeable unit of data stored on a blockchain, a form of digital ledger, that can be sold and traded.

NFT ledgers claim to provide a public certificate of authenticity or proof of ownership.

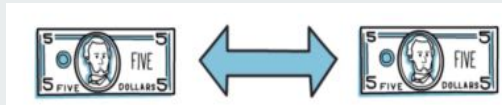
NFTs do not restrict the sharing or copying of the underlying digital files, and do not prevent the creation of NFTs with identical associated files.



## How Is an NFT Different from Cryptocurrency?

NFTs are built using the same kind of programming as cryptocurrency and the similarity ends here.

Cryptocurrencies are fungible, meaning they can be traded or exchanged, as all the tokens are of same value.



1 BTC = 1 BTC

\*Each NFT is unique and has a digital signature

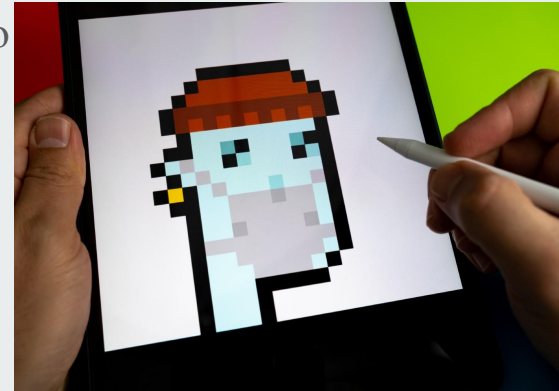





# How are NFTs made ?

An NFT is created, or “minted” from digital objects that represent both tangible and intangible items, including:

- ❑ Art
- ❑ GIFs
- ❑ Videos and sports highlights
- ❑ Collectibles
- ❑ Virtual avatars and video game skins
- ❑ Designer sneakers
- ❑ Music
- ❑ Tweets/Messages





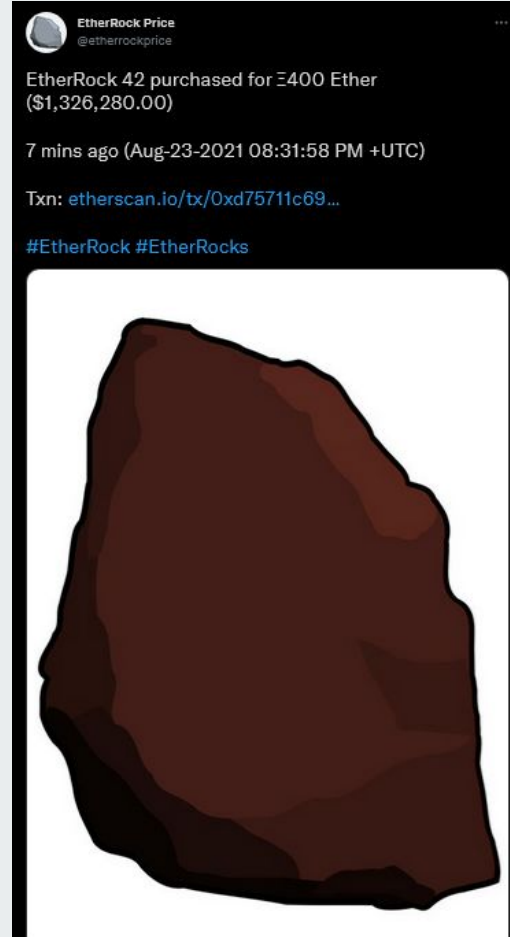
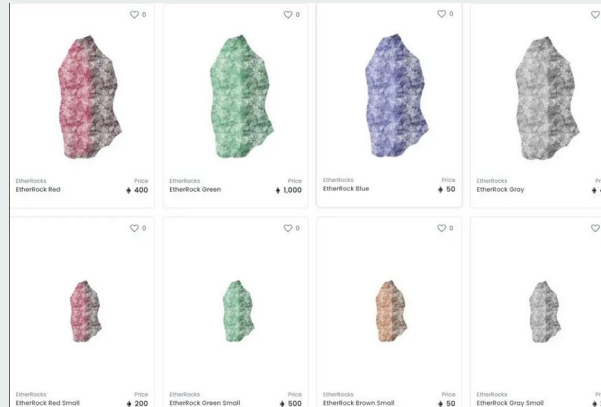
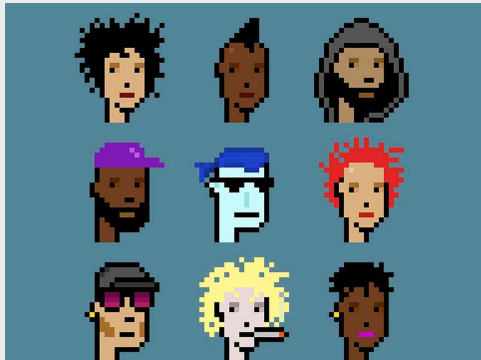
Creators of NFTs get exclusive ownership rights. NFTs can have only one owner at a time. NFTs' unique data makes it easy to verify their ownership and transfer tokens between owners. The owner or creator can also store specific information inside them. For instance, artists can sign their artwork by including their signature in an NFT's metadata.

Essentially, NFTs are like physical collector's items, only digital. So instead of getting an actual oil painting to hang on the wall, the buyer gets a digital file instead.

## Digital Art

Digital art is a common use case for NFTs.

- "Merge" by artist Pak being the most expensive NFT with a price of \$91.8 million
- Everyday: the First 5000 Days, by artist Mike Winkelmann at US\$69.3 million in 2021.




## Games

CryptoKitties was an early successful blockchain online game where players adopt and trade virtual cats. The monetization of NFTs within the game raised a \$12.5 million investment, with some kitties selling for over \$100,000 each.

## Music

In February 2021, NFTs reportedly generated around \$25 million within the music industry, with artists selling artwork and music as NFT tokens.

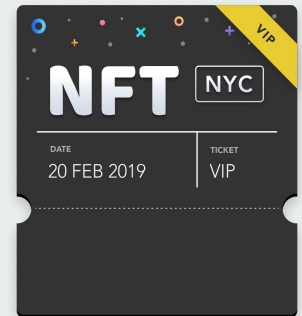
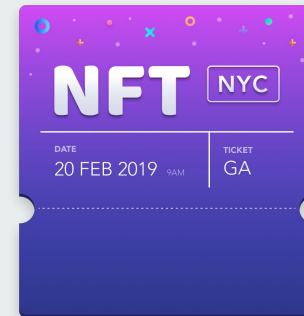




Some virtual worlds, often marketed as **Metaverses**, have incorporated NFTs as a means of trading virtual items and virtual real estate.

In 2019, Nike patented a system called **CryptoKicks** that would use NFTs to verify the authenticity of physical sneakers and give a virtual version of the shoe to the customer.

Tickets, for any type of event, have been suggested for sale as NFTs. Such proposals would enable event organizers or performers to garner royalties on resales.



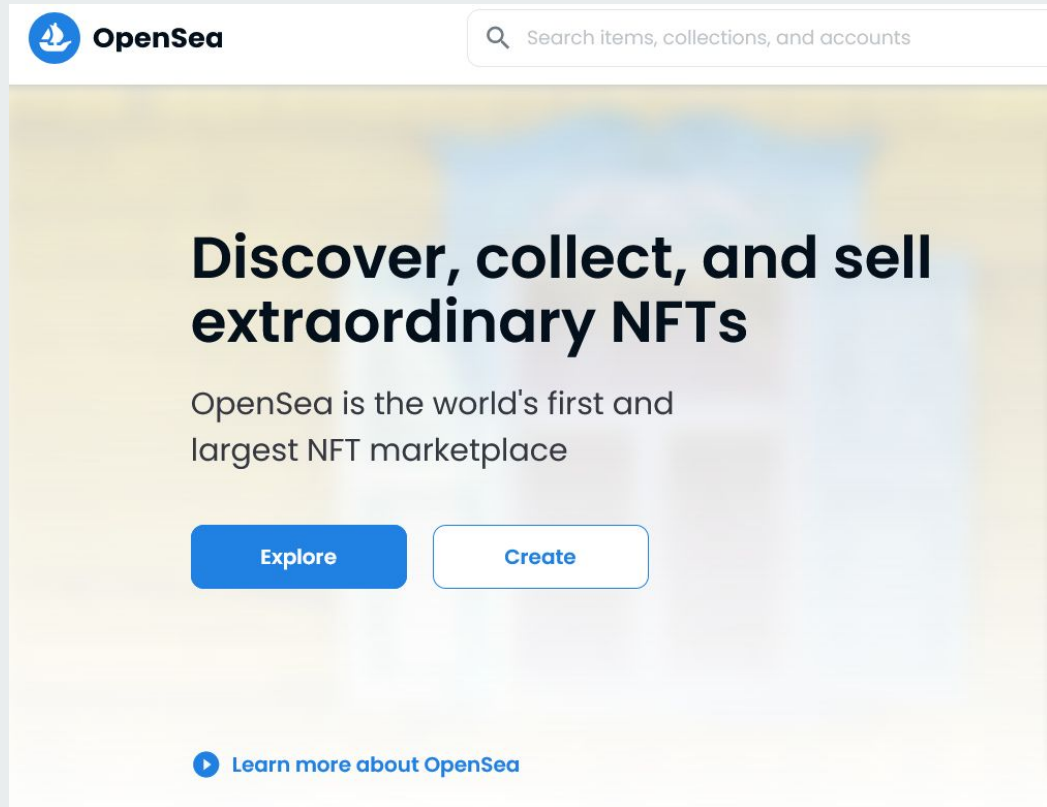


# Opensea

A peer-to-peer marketplace for NFTs, rare digital items and crypto collectibles.

Buy, sell, auction, and discover NFTs.

The OpenSea platform is worth  
\$13.3 Billion.  
(₹10,08,25,83,70,000)



The screenshot shows the OpenSea website interface. At the top, there is a navigation bar with the OpenSea logo (a blue circle with a white flame icon) and the text "OpenSea". To the right of the logo is a search bar with a magnifying glass icon and the placeholder text "Search items, collections, and accounts". Below the navigation bar is a large hero section with a blurred background image of a blue and yellow abstract shape. The hero section contains the following text: "Discover, collect, and sell extraordinary NFTs" in a large, bold, black font. Below this is the text "OpenSea is the world's first and largest NFT marketplace" in a smaller, regular black font. At the bottom of the hero section are two buttons: a solid blue button with the text "Explore" and a white button with a blue border and the text "Create". At the very bottom of the page is a small blue play button icon followed by the text "Learn more about OpenSea".

OpenSea

Search items, collections, and accounts

## Discover, collect, and sell extraordinary NFTs

OpenSea is the world's first and largest NFT marketplace

Explore Create

Learn more about OpenSea



# Carbon Footprint

NFT purchases and sales are enmeshed in a controversy regarding the high energy usage, and consequent greenhouse gas emissions, associated with blockchain transactions.

A major aspect of this is the proof-of-work protocol required to regulate and verify blockchain transactions on networks such as Ethereum, which consumes a large amount of electricity.

Attempts are made on various networks to replace proof of work with proof of stake.



# References

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**Thank You!**