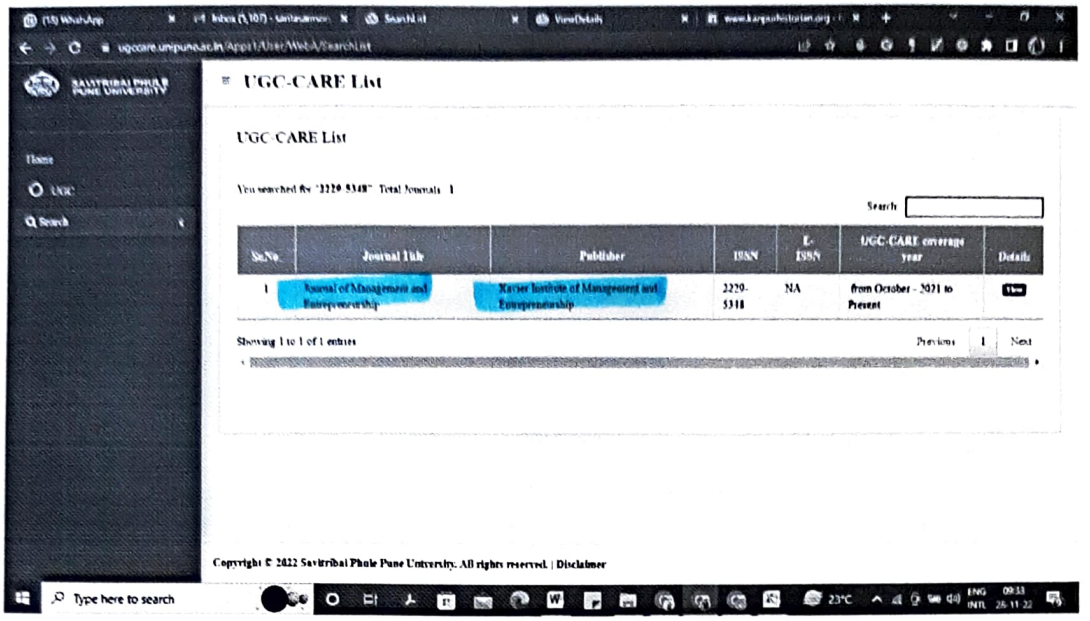
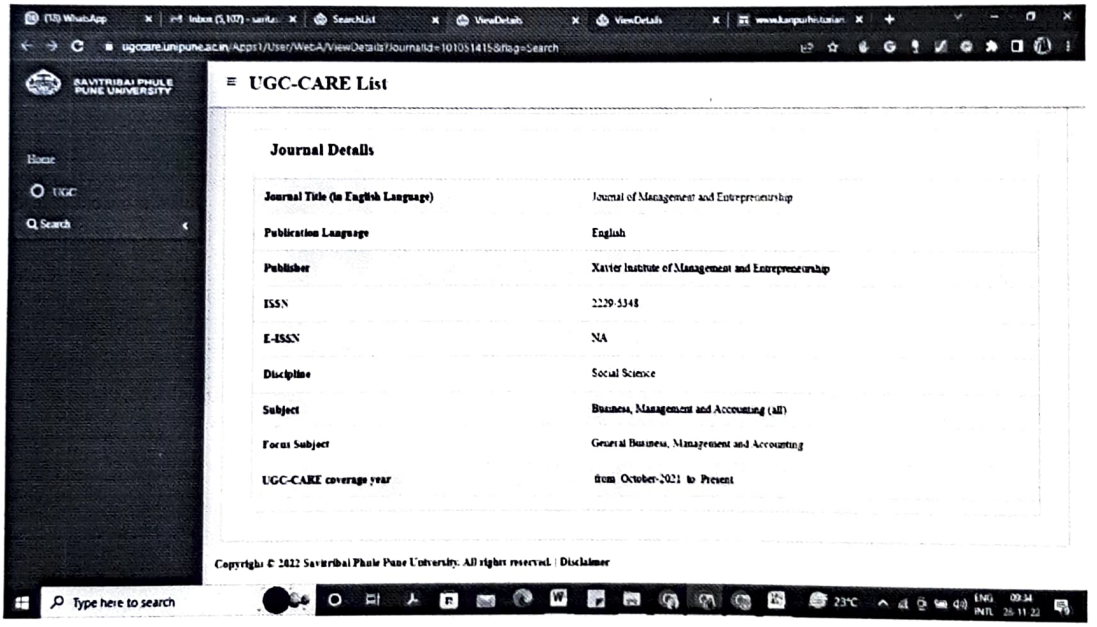




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ROLE OF IOT IN MAKING SMART BUSINESS

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Abstract:

Technological innovation aims at improving a thing or introducing a new process with new technological characteristics to differentiate it from before. Today technology is used in decision making process and maintaining the information. Technological innovation brings benefits and improves the quality. Internet Of Things (IoT) is a system of interconnected objects, usually called smart devices, through the Internet. In the upcoming years, IoT-based technology will offer advanced levels of facilities and practically change the way people life. The Internet of Things (IoT) is the technology that enables everything to communicate by themselves over the internet through devices without the use of computers. The IoT is majorly characterised by the two things – automation and connectivity. IOT plays crucial role in bringing the automation in almost every sector of business. IOT is the backbone of the buzzword 'SMART'. This paper is a review-based paper and highlights the major features of IOT which are responsible for bringing the Smart Business era.

Keywords: Technology, Internet, Automation, Connectivity, Smart Business

Introduction:

Technological innovation aims at improving a thingor introducing a new process with new technological characteristics to differentiate it from before. Once they are brough in the market, it is considered as innovation and works to an advantage to the enterprise concerned or to the general public.Technology can be used to protect data, confidential decisions process and other important information that leads to competitive advantages. Simply put, technology helps businesses keep their ideas away from their competition. Technological innovation brings benefits. It increases productivity and brings citizens new and better goods and services that improve their overall standard of living. The benefits of innovation are sometimes slow to materialize. This innovation develops opportunities for entrepreneurs to found new organizations and establish competitive situations as incumbents' sources of advantage decay. It also creates uncertainty and risk for incumbents because its outcomes can be only imperfectly anticipated. Over 9 billion 'Things' (physical objects) are currently connected to the Internet, as of now. In the near future, this number is expected to rise to a whopping 20 billion. [10]

Internet Of Thing(IoT)

Internet of Things (IoT) is the networking of physical objects that contain electronics embedded within their architecture in order to communicate and sense interactions amongst each other or with respect to the external environment. In other words, IoT is a system of interconnected objects, usually called smart devices, through the Internet. The objects interact with the external environment with the help of embedded technology, which helps them in taking decisions. Since these devices can now represent themselves digitally. "The globally ruling technology acts as a single key to shrinking this whole universe to a tiny globally connected, whereas IoT comprises just two words (Internet and Things) that precisely depict its definition."

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BENEFITS AND CHALLENGES OF BLOCKCHAIN TECHNOLOGY IN VARIOUS DOMAINS

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Abstract:
Blockchain technology developed rapidly from 2008 and has highly recommended in financial industry, governments, private business (supply chain management, advertising etc.) and education field. This technology mainly focuses on decentralization, security, reliability and data integrity. Because of these unique features, blockchain technology has rapidly integrated with number of fields such as healthcare, internet of things, supply chain management etc to make the system more secure and trustworthy. This paper talks about basic blockchain concept, importance of blockchain integration in various domains. The paper is focusing on various challenges of blockchain technology implementation. This paper analyses benefits and challenges of adopting blockchain technology in various fields.

Keywords: Blockchain technology, distributed network, consensus mechanism, immutability, healthcare, advertising, legal, education field, energy.

Introduction:
Bitcoin is the magical word which firstly proposed by Mr. Nakamoto in 2008 in the form of cryptocurrency which implemented in 2009.This bitcoin has enjoyed a huge success with the capital market reaching 10 billion dollars from 2016 to till date. The blockchain technology is the core mechanism of bitcoin cryptocurrency. Technically, blockchain is a combination of blocks linked by hash functions and its essence is a distributed ledger based on asymmetric encryption algorithms. It is an integrated and innovative technology which integrates cryptography, distributed system, network security. The development of blockchain has changed the past pattern of transactions that had to depend on third-party institutions. The central institution can no longer restrict both parties of the transaction and each transaction is verified by more than half of the participants in the network, making a truly distributed peer-to-peer transaction possible. This consensus mechanism supports cryptographic algorithm as proof of work, proof of stake etc. as per the requirement of blockchain applications.

Basics of Blockchain Technology:
A blockchain is a chain of blocks which contain information. Each block records all of the recent transactions and once completed goes into the blockchain as a permanent database. Each time a block gets completed, a new block is generated.
A blockchain is a constantly increasing ledger which keeps a permanent record of all the transactions that have taken place in a secure, chronological, and immutable way.
Let's understand the keywords from above definition,

- **Ledger:** It is a file that is continuously growing.