

NEW ERA OF INFORMATION TECHNOLOGY

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Abstract

This paper analyses the scientific aspects of information technology. Information technology refers to the use of computers, software, networks, and other electronic systems to manage and process information. We live in an age where technology supports almost everything we do. Information technology is the backbone of modern society. It enables faster communication, efficient services, better healthcare, advanced education, and global connectivity. As technology continues to evolve, its role in shaping the future will become even more important. In the modern era, the use of information technology is widespread and essential in almost every aspect of life. The tools needed to transmit information from one place to another are evolving rapidly. Keeping that information secure is also crucial. We need to learn new technologies and incorporate them into our work.

Keywords –

Information Technology, Communication, Education, Crime Control, Scientific Research, Paranormal Activities, Entertainment

Introduction

Information technology refers to the use of computers, software, networks, and other electronic systems to store, process, transmit, and retrieve information. It plays a vital role in our modern world by speeding up communication, managing data more efficiently, and automating processes in every sphere of society. Information technology plays a major role in our daily lives. We must learn new technologies for communication. In today's digital age, IT is everywhere—from the smart phones we use daily to the systems that run large businesses, hospitals, schools, banks, and even governments. It helps solve complex problems, improve productivity, and connect people globally. As technology advances, information technology is becoming more essential than ever, shaping the way we live, work, learn, and interact with the world. We must adapt to the changes ahead. Letters, telephones, mobile phones, SMS, email, social media (Orkut, Facebook, WhatsApp, X, Instagram, etc.), what's next? We use robots for a variety of tasks. Artificial intelligence is making our daily lives easier. We can create programs, create pictures, and videos with the help of artificial intelligence.

Use of Information Technology in Scientific Research -

Information Technology is now essential in every stage of scientific research from forming hypotheses and conducting experiments to analysing results and publishing findings. It enables scientists to work faster, smarter, and collaboratively, pushing the boundaries of innovation and discovery. Information Technology has revolutionized scientific research by improving the accuracy, speed, collaboration, and analysis of scientific work.

We use information technology in research for many purposes like data analysis, complex calculations etc.

Research – “Research means to discover again and again”.

Unawareness + Science = Invention - Shashikant Upadhyay (S.K.U.)

We can do research in many fields. IT allows researchers to gather, store, analyze, and share information more efficiently than ever before.

Use of Information Technology in Communication -

Communication is the process of sharing information, thoughts, ideas, or feelings between two or more people through spoken, written, visual, or non-verbal means. There are many ways of communication.

Letters

Letters, whether sent by pigeon, post, or digitally, have been important for communication for a long time. Here are the main uses of letters throughout history and today:

1. **Personal Communication-** Sharing news, emotions, and updates among family and friends. Love letters, birthday greetings, condolences.
2. **Official Communication-** Government correspondence, such as orders, appointments, and declarations. Military communication, like using pigeons during wars. Diplomatic messages between countries.
3. **Business and Professional Use-** Job applications, including cover letters and resumes. Contracts, invoices, and legal notices. Business proposals and inter-office communication.
4. **Historical and Record-Keeping-** Letters often serve as historical documents, offering insights into personal lives, political choices, and cultural moments. They are valuable for research to understand past events.
5. **Educational Purposes-** Teaching language, writing structure, and etiquette. Pen-pal programs for cultural exchange and language practice.

Telephone

The telephone allows people to communicate by transmitting sound, primarily voice, over distances using electrical signals.

Evolution:

From landline phones, both corded and cordless, to mobile phones with texting and data capabilities. Smart phones now combine telephone features with internet access, apps, and more.

Uses of the Telephone:

1. **Real-Time Communication-** Enables instant, two-way conversations regardless of distance. Used for personal and professional communication.
2. **Business and Customer Service-** Essential for sales, support, coordination, and remote meetings. Call centres depend on phones for customer interactions.
3. **Emergency Services** - Provides quick access to help during emergencies.
4. **Education and Remote Work-** Used in teleconferencing and virtual learning, connecting teams or students with teachers in different areas.
5. **Social Connection** - Helps families and friends keep in touch over long distances, especially important for elderly or isolated individuals.
6. **News and Alerts-** Automated calls can provide weather warnings, school closures, or community updates.

Social Media

Social media includes online platforms and apps that let users create, share, and interact with content and each other instantly. It is a powerful way of modern communication.

Popular Social Media Platforms:

Facebook - Social networking and community groups.

Instagram - Photos, videos, stories.

TikTok - Short-form videos and trends.

Twitter/X - News, opinions, real-time updates.

LinkedIn - Professional networking.

YouTube - Long-form video sharing.

Failure of social media -

Orkut

Orkut was one of the first and most popular social networking sites, especially in the mid-2000s. Developed by Orkut Büyükkökten, a Google engineer, it launched in 2004. Though it is no longer active, Orkut significantly influenced the early days of social media. Orkut was particularly popular in Brazil and India, dominating social networking in those regions for years. It was seen as innovative in social interaction and community building. Competition from Facebook and Twitter led to a drop in users. Google officially closed Orkut on September 30, 2014. The platform was replaced by Google+, which also eventually shut down in 2019. Orkut introduced social networking to many in emerging markets and holds a nostalgic place in the hearts of users in Brazil and India.

Use of Information Technology in Crime Control -

Information Technology plays a vital role in modern crime control, helping law enforcement agencies to prevent, detect, investigate, and respond to crimes more effectively and efficiently. Information Technology helps law enforcement become more proactive, responsive, and accurate in controlling crime. It strengthens security, ensures faster justice, and makes communities safer.

“Rights give responsibilities or responsibilities give rights” - Shashikant Upadhyay (S.K.U.)

We can use Information Technology in crime control. We can get the data of any person from his social media network and with the help of that data we can easily understand the nature of a person and his activities. We can trace a person through his mobile phone or his activities on the internet.

Uses of IT in Crime Control-

1. Surveillance Systems- Examples: CCTV cameras, body cameras, drones.

Benefits- Monitor public spaces in real time, Deter criminal activity and Provide video evidence in investigations.

2. Crime Databases and Record Management- Examples- National Crime Information Center (NCIC), fingerprint databases, facial recognition systems.

Benefits- Quick access to criminal records and suspect profiles, Easy sharing of data between law enforcement agencies and Helps identify repeat offenders.

3. Cybercrime Investigation Tools- Track hackers, online fraudsters, and cyber bullies, Monitor illegal activities on the dark web, Trace IP addresses and digital footprints and Digital forensics, anti-virus/malware analysis, encryption breaking.

4. Communication & Coordination- Police radios, mobile apps, secured email and messaging platforms

Benefits- Rapid communication among officers and departments, Quicker response times to crimes or emergencies and Better coordination in multi-agency operations.

5. Predictive Policing- Using data analysis and AI to predict where crimes are likely to occur.

Benefits- Helps deploy officers more effectively, Reduces crime rates through prevention and Saves time and resources.

Use of Information Technology in Education -

Education is the process of acquiring knowledge, skills, values, beliefs, and habits through teaching, training, research, or self-learning.

Types of Education

1. Formal Education: Structured, systematic education delivered in institutions like schools, colleges, and universities.

Characteristics: Follows a curriculum, Leads to certification or degrees, Delivered by trained teachers

Examples: Kindergarten to Grade 12 (K–12), College/University education and Technical or vocational training schools etc

2 Informal Education: Learning that occurs naturally outside formal institutions, through life experiences, family, media, etc.

Characteristics: No specific structure or syllabus, No certification, Happens unconsciously or intentionally

Examples: Learning to cook from a parent, Gaining skills through travel or hobbies and Watching educational videos online etc

3. Non-Formal Education: Organized educational activity outside the formal system, designed for a specific group or goal.

Characteristics: Flexible and learner-centered, Often short-term or part-time and May or may not lead to certification

Examples: Adult literacy programs, Skill development workshops and Community education or training sessions etc

Einstein once said, "Education is not the learning of facts, but the training of the mind to think."

Sometimes students get upset with their exam results and take wrong decisions. First, try your best to achieve success. If you fail to do so even after trying your best, then try some other method to achieve success. We should always do what we like and have the strength to do.

“We should be fool to make our life cool “-Shashikant Upadhyay (S.K.U.)

“Everyone is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid.” - Albert Einstein

We use information technology to keep records of books in the library. We use information technology in education for e-learning, online classes, e-books etc.

Information technology in medical field-

Information Technology has transformed healthcare by making medical services more efficient, accurate, and accessible. Here's a detailed look at how IT is used in the medical field:

1. Electronic Health Records -What it is Digital version of a patient's medical history.

Benefits- Easy access to patient records for doctors and nurses, Reduces paperwork and errors and Supports better diagnosis and treatment.

2. Telemedicine- What it is Remote diagnosis and treatment using video calls and apps.

Benefits- Enables care for patients in rural or remote areas, Saves time and travel costs and Especially useful during emergencies or pandemics.

3. Medical Imaging and Diagnostics- Examples: MRI, CT scans, X-rays, Ultrasounds

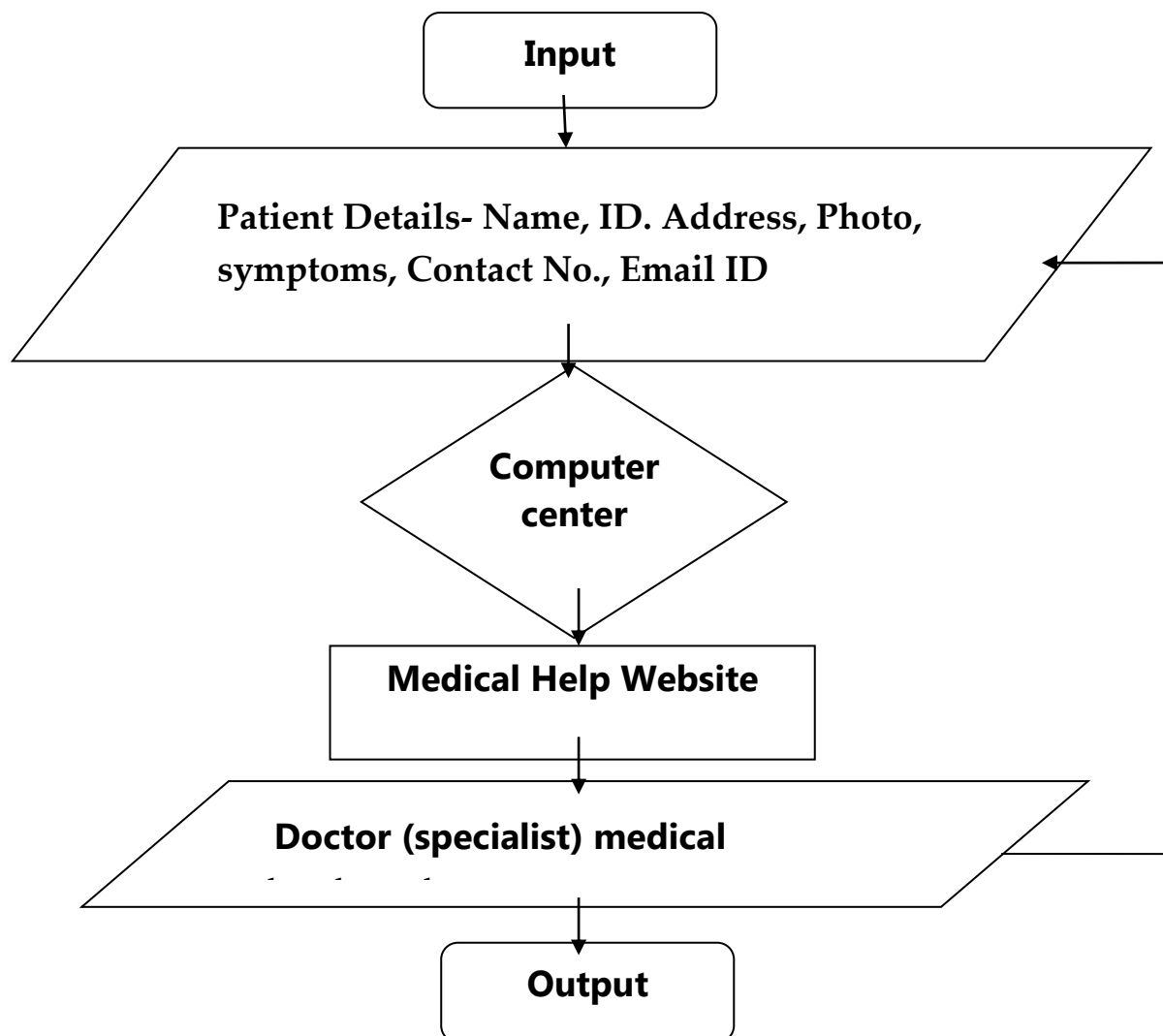
Benefits- Advanced software enhances image clarity and diagnosis, AI helps detect diseases like cancer early and Images can be shared electronically with specialists.

4. Hospital Management Systems (HMS)-What it is Software that manages hospital operations.

Benefits- Streamlines appointments, billing, staff scheduling, and inventory, Reduces waiting time and improves patient experience and Enhances coordination between departments.

5. Wearable Health Devices & Apps- Smart watches, fitness bands, health-tracking apps.

We use information technology in medical field for many types of operations and treatment of diseases. Information plays a vital role in medical field. If we get the right information at the right time then we can treat many patients. Many times the patient does not get the right treatment at the right time and dies without proper treatment. We spend both our time and money to save the patient, but due to lack of correct information the patient dies. We should make a website where anyone can upload the details of their patient and get the right treatment at the right time.



Flow Chart - Serious patient treatment (Emergency)

In rural areas, if a patient suddenly becomes seriously ill, this will help in getting them admitted to the right hospital and getting them the right treatment.

Use of Information Technology in Paranormal Activities -

Paranormal activity refers to events, phenomena or abilities that cannot be explained by known scientific laws. We can use cameras and sensors to know about paranormal activity.

Albert Einstein equation -

$$E=mc^2$$

According to this equation we can convert energy into mass and mass into energy. If any energy exists, then the mass of that energy cannot be zero and we can trace that energy on a frequency.

“The speed of light depends on the source of light like candle light, bulb light, laser light etc”

Time energy relation:-

Albert Einstein equation -

$$E=MC^2$$

C stands for speed of light so replace c with v for speed

Speed $v = \text{Distance } D / \text{Time } T$

$$E = M \left(\frac{D}{T} \right)^2$$

For constant mass and distance

$$E \propto \left(\frac{1}{T} \right)^2$$

“For constant mass and distance energy inversely prepositional with time square.”

There are still many areas of science that require research. When we observe something that modern science cannot explain, we attribute it to paranormal activity. With the help of information technology, we can record such phenomena and try to understand them.

Use of Information Technology for Entertainment –

Entertainment is not just about fun. it plays a vital role in human life by supporting mental, emotional, and social well-being.

1. Stress Relief- Helps relax the mind and body after work or studies, Reduces anxiety, depression, and emotional fatigue and Activities like watching movies, listening to music, or playing games calm the mind.
2. Mental Refreshment- Breaks the monotony of daily routines, Boosts creativity and imagination and Keeps the brain active and engaged through games, puzzles, and stories.
3. Social Connection- Brings people together e.g., sports events, concerts, online gaming.
4. Education Through Entertainment - Combines fun with learning e.g., educational cartoons, documentaries, trivia games.
5. Cultural Expression- Showcases traditions, languages, and art from different cultures.

“Live your life in your style” – Shashikant upadhyay (S.K.U.)

We use information technology for entertainment like playing games, listening to music, watching videos etc. We use social media to share information with each other. We play online games like Free Fire, PUBG etc.

Here is a simple HTML code to create a simple game.

sku puzzle game -

```
<html>
<title>
Sku Game
</title>
<body>
SKU Puzzel<br>Correct Puzzel - Arrange the letters in the correct order as shown below.<br>
****A****<br>
```

```
****B****<br>
```

```
****C****<br>
```

```
****D****<br>
```

```
Refresh for Restart<br>
```

```
<marquee direction="up" onmouseover="stop();" onmuuseout="start();">
```

```
****A****
```

```
</marquee><br>
```

```
<marquee direction="left" onmouseover="stop();" onmuuseout="start();">
```

```
****B****
```

```
</marquee><br>
```

```
<marquee direction="right" onmouseover="stop();" onmuuseout="start();">
```

```
****C****
```

```
</marquee><br>
```

```
<marquee direction="down" onmouseover="stop();" onmuuseout="start();">
```

```
****D****
```

```
</marquee><br>
```

```
</body>
```

```
</html>
```

This is a simple HTML code to create a simple game. You can run this code by saving it in a notepad with the .html extension.

Information Technology plays a huge role in transforming and enhancing the entertainment industry. From how content is created, distributed, and consumed, IT drives innovation and accessibility. Information Technology has revolutionized the entertainment world, making it more interactive, immersive, and accessible. It affects every stage—creation, delivery, and consumption—of entertainment content.

Conclusion-

Information technology has become an essential part of modern life, transforming the way we communicate, work, learn, and do business. It has improved efficiency, connectivity, and access to information in all sectors, including education, healthcare, finance, and government. We need to adapt and learn as new technologies emerge. These tools are crucial to our work and daily lives. We use social media in our daily lives. We upload photos, files, and other things. Social media sites should provide download features to access our data from social media sites. In the future, social media sites like Orkut will be shut down. Our data will remain safe. As technology continues to evolve, IT will play an even greater role in solving global challenges and shaping the future. Therefore, understanding and adopting information technology is crucial for personal growth, social development, and economic progress.

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