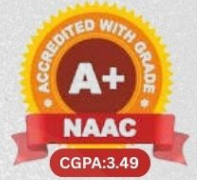




KAS

KONGU ARTS AND SCIENCE COLLEGE

TRANSFORM YOURSELF



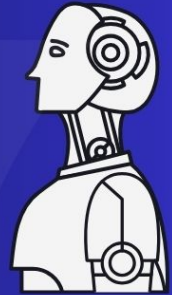
DEPARTMENT OF COMPUTER SCIENCE UG



109

TH

ISSUE



CYBER CREWS STUDENTS ASSOCIATION

IT UNLIMITED MAGAZINE A BI-MONTHLY BONANZA
FEB-MARCH 2026



itunlimitedmagazine@gmail.com



WWW.KASC.AC.IN



EDITORIAL BOARD

PATRON:

Thiru. P. Sachithanandan

EDITORIAL IN CHIEF:

Dr.H.Vasudevan M.Com., M.Phil., Ph.D., M.B.A., PGDCA., SLET.,

EDITORIAL ADVISER:

Prof.P.Ramesh M.Sc., M.Phil.,

FACULTY EDITOR:

Mr.S.Jaganathan M.C.A., M.Phil.,

Correspondent

Principal

HOD

Assistant Professor

STUDENT EDITORS

Kapil Sanjhiv. A.S

Krishnakumar. S

Kamesh M

Guru Shankar. P.J

Dhanusri.U

Sri Janani.P

G.P. Viswagnithin

Abisree. A.P

Sasmitha Karthikeyan

Anusree.k

Sujith

Srinith K

Dharani S B

Dharshini S

Subiksha Sundaram

Kanishka M

III- B.Sc CS-A

III- B.Sc CS-A

III- B.Sc CS-A

III- B.Sc CS With DA

III- B.Sc CS With DA

III- B.Sc CS With DA

II- B.Sc CS-A

II- B.Sc CS-A

II- B.Sc CS-A

II- B.Sc CS-B

II- B.Sc CS-B

I- B.Sc CS-B

I- B.Sc CS-B

I- B.Sc CS-B

I- B.Sc CS With DA






I- B.Sc CS With DA

TABLE OF CONTENTS

WEARABLE HEALTH NAVIGATORS -----	01
SATELLITE BASED INTERNET OF THINGS IoT -	03
6G NETWORK AND HYPER CONNECTIVITY-----	04
BLOCKCHAIN FOR SUPPLY CHAIN INTEGRITY--	06
BRIDGING THE DIGITAL DIVIDE WITH IT-----	08
LEARN A TOOL-----	10
REVIEW BOX-----	13
FAMOUS AND FAVOURITES-----	15
IT VITA AND MIND PUNCH -----	16
ANSWERS-----	17

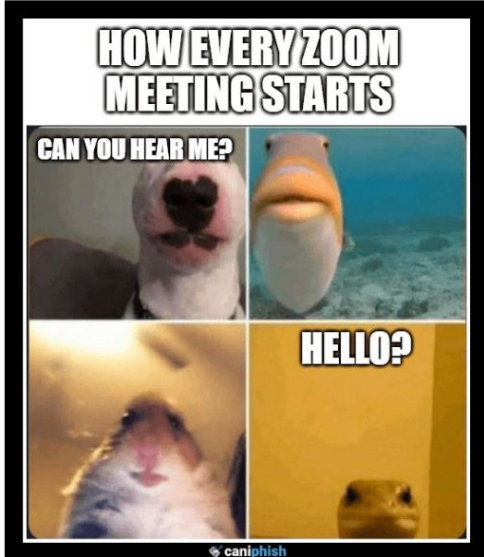
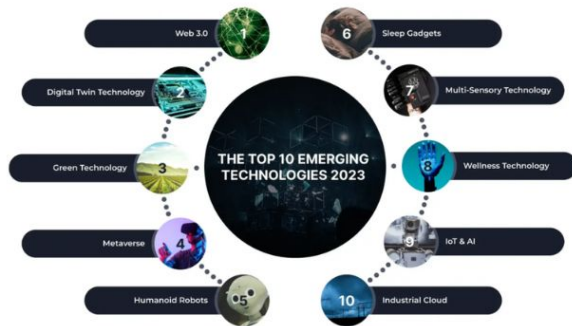
THOUGHTS OF THE ISSUE

A BRIEF HISTORY OF TECHNOLOGY

 1970	<p>The first Apple computer was released in April 1976. This was the first computer readily available to the general public. For the most part society was pretty "green" to the whole concept.</p>
 1980	<p>After Apple, other companies like IBM started creating personal computers and others followed shortly after, searching for new ways to introduce devices into people's everyday lives.</p>
 1990	<p>The technological advancements made in the 90's was revolutionary, it gave birth to the World Wide Web, better known today as the Internet. Today, billions of dollars are made through this platform.</p>
 2010	<p>Before this decade, a cell phone was just a phone. Many previously used devices adapted new purposes. With more people using tech to better their lives, internet security became a serious issue.</p>
 2010	<p>This decade was filled with innovations, creations and revelations beyond many people's wildest dreams.</p>

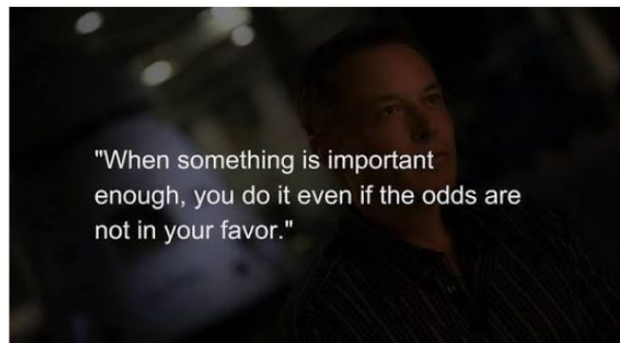
REMEMBER

FREE ADVICE



JUST FOR FUN

MESSAGE



1. WEARABLE HEALTH NAVIGATORS

In the modern era, healthcare is undergoing a digital revolution, shifting from reactive treatment to proactive management. Wearable health navigators—smart electronic devices worn on the body—are at the forefront of this transformation, shaping how individuals understand and manage their well-being. These devices serve as personal health assistants, bridging the gap between patients and medical professionals.

UNDERSTANDING WEARABLE HEALTH NAVIGATORS

Wearable health navigators are electronic tools designed to be worn on the body to monitor physiological processes and track health metrics in real-time. They differ from traditional medical tools by being continuous, non-invasive, and consumer-friendly.



THESE DEVICES EXIST IN VARIOUS FORMS

Fitness Trackers & Smartwatches – Devices

like the Apple Watch or Fitbit that track daily activity, heart rate, and sleep patterns. Biosensors & Patches – Adhesive sensors worn on the skin to monitor specific metrics like blood glucose levels or temperature. Smart Clothing & Accessories – Rings (like Oura) or smart fabrics that unobtrusively collect health data throughout the day. The impact of these navigators is profound. They convert raw physiological data into actionable insights, allowing users to navigate their health journey with precision and awareness.

ROLE OF IT IN HEALTH NAVIGATION

Information technology drives the functionality of these devices, offering powerful solutions to complex health challenges. Key areas where wearable health navigators make a difference include:

1. Continuous Health Monitoring

Unlike traditional check-ups that provide a snapshot of health, wearables offer a continuous video of one's physiological state. Devices monitor vital signs such as heart rate, blood oxygen (SpO2), and blood pressure 24/7. This real-time data allows for the detection of irregularities that might otherwise go unnoticed during a sporadic doctor's visit.

2. Chronic Disease Management

For improved quality of life, IT-enabled wearables are vital for managing long-term conditions. Continuous Glucose Monitors

(CGMs) allow diabetic patients to track sugar levels without painful finger pricks, identifying trends and preventing dangerous spikes or drops. Similarly, wearable ECG monitors help heart patients detect atrial fibrillation (AFib) early, potentially preventing strokes or heart failure.

3. *Preventive Care and Early Detection*

Prevention is better than cure, and wearables act as an early warning system. By analyzing patterns in sleep, activity, and heart rate variability, these devices can predict potential illnesses or exhaustion before severe symptoms appear.

4. *Telemedicine and Remote Patient Monitoring*

Wearables bridge the physical distance between doctor and patient. Data collected by the device can be transmitted directly to healthcare providers, allowing for remote diagnosis and treatment adjustments. This is particularly beneficial for elderly patients or those in rural areas, reducing the need for frequent, stressful hospital visits.

5. *Patient Empowerment and Engagement*

Access to data empowers individuals to take ownership of their health. "Gamification" features— such as closing activity rings or reaching step goals— motivate users to adopt healthier lifestyles. When patients can see the direct impact of their choices on their health

metrics, they are more likely to adhere to treatment plans and fitness regimes.



CHALLENGES IN WEARABLE HEALTH NAVIGATION

While promising, the widespread adoption of these navigators faces hurdles:

Data Privacy and Security: Health data is highly sensitive. Users worry about how their information is stored, shared, and whether it is vulnerable to hacking or misuse by third parties.

Accuracy and Reliability: While consumer devices are improving, they are not always as accurate as clinical-grade medical equipment. Inaccurate readings can lead to unnecessary anxiety or, conversely, a false sense of security.

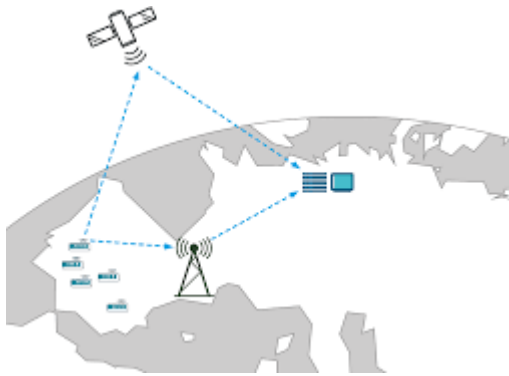
Cost Barriers: High-quality wearables and subscription services can be expensive, limiting access for low-income populations and creating a "health divide."

Battery Life and Maintenance: The need for frequent charging and the complexity of operating advanced devices can be a barrier, especially for older generations.

2. SATELLITE BASED INTERNET OF THINGS (IoT)

INTRODUCTION

Satellite Based Internet of Things (IoT) is a modern technology that connects devices using satellites instead of traditional internet networks. It helps in sending and receiving data from remote and rural areas where mobile towers or broadband connections are not available. This technology enables global communication and real-time monitoring across the world.



WHAT IS SATELLITE BASED IOT?

Satellite Based IoT is a system where sensors, machines, and smart devices communicate through satellites. These devices collect data and transmit it directly to satellites, which then send the information to ground stations and users. It works without the need for cables or mobile networks.

HOW IT WORKS

In this system, sensors collect data such as location, temperature, or movement. The data is sent to a satellite orbiting the Earth through the internet.



ADVANTAGES

- The major advantages of Satellite Based IoT are global coverage, reliable
- Communication and the ability to work in remote locations. It requires less
- Ground infrastructure and supports real-time data monitoring.

DISADVANTAGES

The disadvantages include high initial cost, signal delay, weather interference, and limited data speed compared to traditional internet networks. Applications Satellite Based IoT in smart agriculture, weather monitoring, disaster management, ship and vehicle tracking, logistics, and remote health monitoring. It is especially useful in oceans, deserts, mountains, and border areas. Satellite Based Internet of Things (IoT) plays an important role in connecting the world digitally. It supports smart development and provides communication access even in the most remote areas of the Earth.

3. 6G NETWORK AND HYPER CONNECTIVITY

In the rapidly evolving landscape of technology, the world is moving beyond simple connectivity to a state of hyper-connectivity. While 5G introduced us to the Internet of Things (IoT), the upcoming 6G network promises to integrate the physical, digital, and biological worlds seamlessly. This next-generation technology will not just connect people and devices but will create a unified, intelligent ecosystem. Understanding 6G and hyper-connectivity is essential to prepare for a future where the internet acts as a "digital nervous system" for society.



UNDERSTANDING 6G AND HYPER CONNECTIVITY

6G (Sixth-Generation Wireless) refers to the successor to 5G cellular technology. It is expected to be commercially available around 2030 and will utilize higher frequency bands (Terahertz) to achieve.

KEY DIMENSIONS OF 6G

- *Ultra-High Speed & Low Latency:* 6G targets peak data rates of 1 Terabit per.
- *Microsecond:* This makes communication feel instantaneous, eliminating any perceptible lag.
- *Terahertz (THz) Spectrum:* Unlike previous generations, 6G will operate in the Terahertz frequency range (100 GHz – 10 THz). This untapped spectrum allows massive bandwidth to support holographic data and digital twins.
- *Integrated Sensing and Communication (ISAC):* The network will not just transmit data; it will "sense" the environment. 6G networks will function like radar, capable of detecting objects, movements, and surroundings without needing separate sensors.
- *AI-Native Architecture:* Artificial Intelligence will be built directly into the core of the network.

ROLE OF 6G IN HYPER CONNECTIVITY

Information technology, powered by 6G, offers transformative solutions across various sectors.

Some of the key areas where 6G will make a difference include:

1. *Healthcare and Remote Surgery*

One of the most critical applications of 6G is in life-saving medical technology.

- **Telesurgery:** With ultra-low latency, surgeons can control robotic arms to perform complex operations on patients in different countries remotely.
- **Holographic Telepresence:** Doctors can project themselves as 3D holograms into a patient's room for consultations, making remote care feel personal and immediate.
- **Real-Time Monitoring:** Wearable sensors can transmit vital signs continuously, allowing AI to predict heart attacks or strokes before they happen.

2. *Immersive Education and Training*

6G bridges the gap between physical and digital learning environments.

- **Holoportation:** Teachers can be "holoported" into a classroom thousands of miles away, appearing as a 3D figure to interact with students.
- **Tactile Internet:** Students learning skills like surgery or mechanics can "feel" digital objects through haptic feedback suits, allowing for physical skill transfer over the internet. **Global Access:** High-quality, immersive VR

education can reach remote villages, democratizing access to world-class learning resources.

3. *Smart Cities and Autonomous Mobility*

- **Hyper-connectivity** enables cities to "think" and react in real-time.
- **Autonomous Coordination:** Self-driving cars and drones will communicate with each other and the city infrastructure instantly to avoid accidents and eliminate traffic jams.
- **Digital Twins:** Cities can create exact digital replicas of themselves.
- **Administrators** can test emergency responses or traffic changes in the digital twin before implementing them in real life.



4. BLOCKCHAIN FOR SUPPLY CHAIN INTEGRITY

INTRODUCTION

Supply chain integrity is the ability to ensure transparency, accuracy, and trust throughout the entire supply chain process. A supply chain includes all stages involved in producing and delivering a product, such as sourcing raw materials, manufacturing, transportation, and Distribution. Traditional supply chains often face problems like lack of transparency.

WHAT IS BLOCKCHAIN TECHNOLOGY?

Blockchain is a decentralized digital ledger that records transactions securely across multiple computers. Each record is stored in a block, and these blocks are lined together in a chronological chain. Once data is recorded in a block, it cannot be changed or deleted, ensuring data integrity. Blockchain operates without a central authority, making it more reliable and transparent.

HOW BLOCKCHAIN WORKS

A blockchain is made up of three key components:

1. *Blocks*: Each block contains:

- A list of transactions
- A timestamp
- A cryptographic hash (a unique digital fingerprint)
- The hash of the previous block

2. *Chain*: Blocks are linked together in chronological order. Each block connects to the previous one through its hash, forming a secure chain.

3. *Network*: Block chain operates on a peer-to-peer (P2P) network. Every participant (node) in the network has a copy of the entire blockchain. When a new transaction occurs, it must be verified by the network before being added.

NEED FOR BLOCKCHAIN IN SUPPLY CHAIN

Traditional supply chain systems rely on centralized databases, which are vulnerable to manipulation and errors. Information is often shared manually, leading to delays and lack of trust between stakeholders.

In today's global economy, supply chains are complex, involving multiple stakeholders across different countries. This complexity often leads to problems such as fraud, counterfeiting, lack of transparency, and inefficient record keeping.

Blockchain technology offers a powerful solution by providing a secure, transparent, and tamper-resistant system for tracking goods throughout the supply chain.

Blockchain eliminates these problems by providing a single, shared, and tamper-proof record of transactions that can be accessed by all authorized participants.

APPLICATIONS OF BLOCKCHAIN IN SUPPLY CHAIN

- Food Industry: Blockchain helps trace food contamination sources within seconds rather than days, improving safety.
- Pharmaceuticals: Ensures drugs are authentic and stored under proper conditions during transportation.
- Manufacturing: Tracks components across suppliers to ensure quality and compliance.
- Fashion & Luxury Goods: Verifies authenticity and ethical sourcing of materials.

ADVANTAGES

- Improves trust among supply chain partners
- Increased transparency
- Reduced fraud and counterfeiting
- Faster recall management
- Enhanced consumer trust
- Better regulatory compliance
- Lower operational costs

CHALLENGES

Despite its advantages, blockchain implementation faces challenges:

- High implementation costs
- Integration with legacy systems
- Data accuracy
- Scalability concerns

NEED FOR INDUSTRY-WIDE ADOPTION

- High cost of implementation
- Scalability and performance issues
- Requirement of technical expertise

CONCLUSION

Blockchain technology is transforming supply chain management by enhancing transparency, traceability, and trust. By providing a secure and immutable record of transactions, blockchain strengthens supply chain integrity and reduces fraud, counterfeiting, and inefficiencies.

As adoption increases, blockchain has the potential to become a foundational technology for building more reliable and transparent global supply networks.

Although there are challenges in implementation, the long-term benefits make blockchain a promising solution for building reliable and trustworthy supply chains in the future.

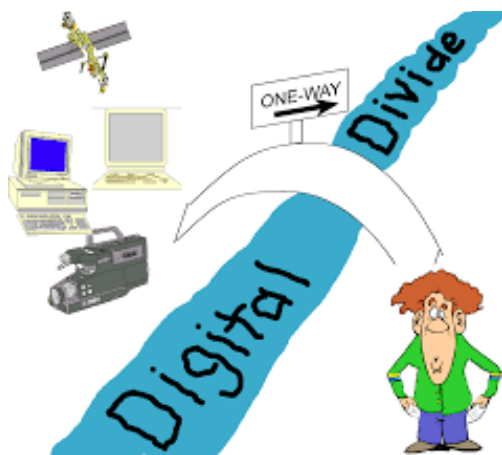


5. BRIDGING THE DIGITAL DIVIDE WITH IT

INTRODUCTION

The digital divide refers to the gap between individuals, communities, and countries that have access to modern information and communication technologies (ICT) and those that do not. This divide limits access to education, healthcare, employment opportunities, financial services, and civic participation. Bridging this divide is essential to ensure that everyone has equal opportunities to participate in the modern digital world.

Information Technology (IT) plays a critical role in reducing this gap by expanding access, improving digital literacy, and creating inclusive digital ecosystems.



UNDERSTANDING THE DIGITAL DIVIDE

The digital divide refers to the difference between individuals, communities, or countries that have access to modern information and communication technology (ICT) and those who do not.

THIS DIVIDE EXISTS ON MULTIPLE LEVELS

Geographical Divide – People in rural or remote areas often lack access to reliable internet, modern devices, or even electricity, making it harder to connect digitally. *Socio-Economic Divide* – Low-income families may not afford smartphones, computers, or broadband connections, putting them at a disadvantage. *Educational Divide* – Digital literacy is critical for using technology effectively. Without proper training, even those with access may not benefit fully.

Generational Divide – Older generations may struggle with adapting to new technologies compared to younger people who grow up in digital environments. The consequences of this divide are significant. Lack of digital access restricts opportunities for learning, limits economic prospects, hinders access to healthcare, and reduces civic participation in society.

HOW IT CAN BRIDGE THE DIGITAL DIVIDE

1. *Expanding Internet Infrastructure:* Governments and technology companies are investing in broadband expansion and satellite internet systems to reach remote areas. For example, companies like SpaceX are deploying satellite networks to provide global

internet coverage through projects such as Starlink. Improved connectivity allows underserved communities to access online education, telemedicine, and e-commerce.

2. Affordable Devices and Connectivity:

Low-cost smartphones, tablets, and laptops make technology accessible to more people. Technology companies such as Google and Microsoft have launched initiatives to provide affordable digital tools and cloud-based services for education and small businesses. Public Wi-Fi programs and community technology centers also reduce cost barriers.

3. Digital Literacy Programs:

IT-driven training programs teach essential digital skills such as:

- Using productivity software
- Online safety and cybersecurity
- Digital communication
- E-commerce and online entrepreneurship
- Organizations like UNESCO support global digital literacy and education initiatives.

4. E-Learning and Remote Education:

IT enables online learning platforms, virtual classrooms, and digital libraries. During the COVID-19 pandemic, platforms like Khan Academy helped millions of students continue their education remotely. E-learning reduces geographical barriers and increases educational equity.

5. Telemedicine and Digital Health:

Information technology improves healthcare access through telemedicine, electronic health records, and mobile health applications.

6. Financial Inclusion Through Digital Platforms:

Mobile banking and digital payment systems allow unbanked populations to participate in the formal economy. Digital financial services support entrepreneurship and economic empowerment.

CHALLENGES IN BRIDGING THE DIGITAL DIVIDE

- Infrastructure Issues
- Cost Barriers
- Cultural and Social Resistance
- Limited Content in Local Languages
- Infrastructure Development
- Affordable Access
- Local Content Development
- Inclusive Policies
- Rural Digital Literacy in India

CONCLUSION

Bridging the digital divide is essential for achieving inclusive economic and social development. IT provides the tools to expand connectivity, enhance digital literacy, and create equal opportunities for all. With continued collaboration between governments, private companies, and international organizations, IT can help ensure that no community is left behind in the digital age.

LEARN A TOOL

Cisco Packet Tracer is a powerful, cross-platform network simulation tool that empowers students, engineers, and IT professionals to design, configure, and troubleshoot virtual networks without ever touching physical hardware. Whether you're preparing for a Cisco certification such as the CCNA or simply exploring networking fundamentals, Packet Tracer provides a risk-free environment where you can experiment with routers, switches, protocols, and end devices. In this two-page guide, we'll explore what makes Packet Tracer an industry favorite, highlight its standout features, walk through a hands-on mini lab, and point you toward advanced applications that will sharpen your skills and boost your confidence.



WHAT IS CISCO PACKET TRACER?

At its core, Cisco Packet Tracer is an educational simulation tool developed by Cisco Systems for the Networking Academy program. It replicates real-world network components and behaviors, letting you:

- Build virtual topologies of routers, switches, firewalls, and end devices
- Configure protocols like OSPF, EIGRP, VLAN tagging, and IPv4/IPv6 addressing
- Observe packet flows in real time or step-by-step simulation modes
- Troubleshoot errors using built-in diagnostic tools such as ping, traceroute, and console logging

Packet Tracer caters primarily to CCNA aspirants, networking students, and hobbyists. While a full license is free for Cisco Networking Academy learners, a limited version is publicly available at no cost-making it an accessible first step for anyone curious about networking.

KEY FEATURES

Packet Tracer's beginner-friendly design conceals a robust feature set capable of advanced labs:

1. Drag-and-Drop Interface

Easily add routers, switches, PCs, wireless devices, and specialized modules (e.g., hubs, printers) onto a canvas, then connect them with appropriate cables.

2. Real-Time & Simulation Modes

Switch between instant packet forwarding and slowed-down "playback" that visualizes each frame of traffic, helping you dissect protocol behaviors.

3. Multi-Protocol Support

Practice DHCP and DNS deployments, establish secure management via SSH/Telnet, and implement routing protocols such as RIP, OSPF, and EIGRP.

4. Activity Wizard & Pre-Built Labs

Access guided exercises that walk you through step-by-step scenarios, reinforcing concepts from basic IP addressing to complex WAN setups.

5. Collaboration & File Sharing

Export .pkt files to share network topologies with classmates or instructors, enabling collaborative troubleshooting and peer learning.

Unlike heavyweight emulators like GNS3 or EVE-NG, Packet Tracer requires minimal configuration and runs smoothly on modest hardware ideal for beginners who seek instant gratification without steep setup hurdles.

GETTING STARTED - A MINI LAB

Lab Title: Building a Simple LAN

1. Launch Packet Tracer and open a new blank workspace.

2.

2. Add Devices

Drag one 2960 switch and two generic PCs onto the canvas.

3. Interconnect

Choose Copper Straight-Through cables and connect PC0 FastEthernet0/1, PC1 → FastEthernet0/2 on the switch.

4. Configure IP Addresses

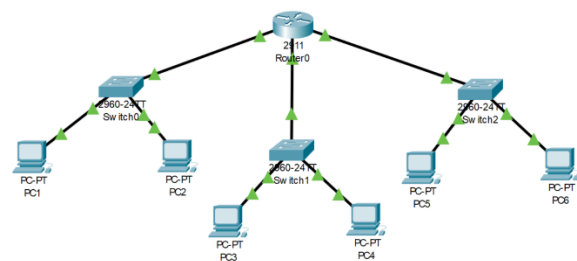
- Click PC0, go to the Desktop tab → IP Configuration, and set:
- IP Address: 192.168.1.1
- Subnet Mask: 255.255.255.0
- Repeat for PC1 with IP 192.168.1.2.

5. Test Connectivity

Switch to Simulation Mode, generate an ICMP ping from PC0 to 192.168.1.2, and observe the echo request/reply frames traversing your virtual switch.

6. Troubleshooting Tip

If the ping fails, verify that IP addresses and subnet masks match and that the correct cable type is used.



Visual Aid: Imagine two PCs flanking a switch, each linked by a grey cable, with successful ping arrows lighting up in Simulation Mode.

ADVANCED APPLICATIONS

Once you've mastered the basics, Packet Tracer scales to complex scenarios:

- CCNA Certification Prep Practice VLAN segmentation, trunking protocols, inter-VLAN routing, and Access Control Lists (ACLs) in multi-switch environments.
- IoT & Automation Simulate smart sensors, cameras, and actuators using Packet Tracer's IoT device library. Configure simple Python scripts on edge devices to automate data collection.
- Wireless Networking Deploy wireless routers, set up SSIDs, apply WPA2 security, and roam between access points to understand ESS and BSS architectures.
- Enterprise-Scale Labs Design campus networks with redundant Layer-3 switches, implement HSRP/VRRP for high availability, and test QoS policies for voice and video traffic.

ADVANTAGES

- Free for Networking Academy students
- Beginner-friendly
- Supports multiple networking concepts
- Visual learning experience

LIMITATIONS

- Not a full replacement for real hardware
- Limited advanced enterprise features
- Some commands differ slightly from real Cisco devices

CONCLUSION

Cisco Packet Tracer is a powerful educational tool for learning networking concepts and practicing configurations. It provides a hands-on experience in building and troubleshooting networks, making it an essential tool for IT and networking students.

Review Box

INTRODUCTION

Adobe Firefly, the AI-powered creative suite long revered on desktop, now lives in your pocket. With its mobile app for iOS and Android, Firefly brings generative AI artistry to designers, marketers, and hobbyists alike. Tap a prompt, and in seconds you'll have high-quality images, stylized text effects, or seamless photo edits—no PC required. Whether you're crafting social-media visuals on the subway or retouching photos between meetings, Firefly mobile promises professional results with minimal learning curve. In this two-page deep dive, we'll unpack what Firefly offers, examine its performance and interface, weigh its pros and cons, and help you decide if it deserves a permanent place on your home screen.



WHAT IS THE ADOBE FIREFLY MOBILE APP?

At its core, Adobe Firefly Mobile is a standalone generative-AI art engine optimized for smartphones. It taps Adobe's proprietary Firefly models—trained

exclusively on licensed Adobe Stock and public-domain assets—to ensure ethically sourced outputs free of copyright entanglements. Unlike browser-only or desktop-bound tools, the mobile app delivers:

- *Generative Fill*: Remove unwanted objects, extend backgrounds, or insert
- New elements by painting over areas of your existing photos.
- *Text Effects*: Transform plain typography into neon, watercolor, or chrome-embossed masterpieces with a single tap.
- *Ecosystem Integration*: Sync your creations to Adobe Express, Creative Cloud Libraries, or Photoshop on desktop, preserving seamless workflows.
- *In comparison to giants like MidJourney or DALL-E, Firefly mobile's claim to fame is its ethical stance*: every image generation abides by strict licensing, and Content Credentials metadata tracks provenance, model versions, and user attribution.

FEATURES & PERFORMANCE:

1. *User Interface & Experience* Firefly Mobile adopts the familiar clean lines of Adobe Express. A bottom prompt

bar anchors the canvas, while tabs across the top switch between generation modes— Image, Fill, Text Effects. Prompt suggestions and style-preset carousels guide novices, and realtime low-resolution previews let you refine iterations before committing your credit. The minimalist design ensures that complex AI controls never clutter the screen, keeping creativity front and center.

2. *AI Generation Quality* Under typical network conditions, Firefly Mobile returns polished, photorealistic renders in 5–10 seconds. The engine excels at natural scenes—landscapes, portraits, product mockups—and produces painterly or abstract styles without explicit training. Advanced sliders let you nudge “Style Intensity,” adjust “Lighting Mood,” or switch aspect ratios on the fly.
3. *Editing Tools* Generative Fill empowers on-the-go retouching: simply paint over an unwanted background object, hit “Generate,” and watch AI seamlessly reconstruct the scene. Expansion tools let you extend horizons or add context beyond the original frame. A suite of presets—vintage film, cyberpunk neon, pastel watercolor—applies cohesive color

grading and grain effects that feel handcrafted

4. *Pricing & Limitations* Firefly Mobile uses a credit system: the Free tier grants a modest monthly allotment for testing; heavy users will quickly need the Premium plan (\$4.99/month) for higher priority processing and more credits. Unlike some competitors, there’s no offline mode—an internet connection is mandatory. Video and 3D model generation are also absent, limiting the app to stills and basic photo edits.

PROS & CONS

Pros:

Top-Tier Output Quality: Renders often match or exceed desktop-only AI tools.

Adobe Ecosystem Sync: Instant transfers to Express, Photoshop, and Lightroom.

Ethical Training Data: Licensed imagery ensures never building on pirated content.

Cons:

Limited Free Credits: Casual users may burn through their allowance quickly.

Subscription Push: Feature set feels gated behind Premium.

No Video or 3D Generation: Falls short of platforms like Canva or Runway for multimedia.

FAMOUS AND FAVOURITES

Sir Timothy John Berners-Lee stands among the most transformative pioneers in computing history, forever altering how humanity communicates and shares knowledge. Born June 8, 1955, in London to mathematician parents Conway and Mary Lee—early computer programmers themselves—Tim’s fascination with electronics led him to build his first crude computer in university using a Motorola processor, TTL gates, a soldering iron, and an old television’s CRT. After earning a physics degree from The Queen’s College, Oxford, in 1976, he joined CERN in 1980 and, frustrated by the challenge of sharing documents across the lab’s sprawling network, drafted in March 1989 a proposal for a “distributed information system.” By December he had written the first web server (httpd), the inaugural browser (WorldWideWeb), and defined HTML (HyperText Markup Language), HTTP (HyperText Transfer Protocol), and the URL (Uniform Resource Locator), the three pillars that transformed the internet from a niche academic network into a universal, hyperlinked platform for publishing, commerce, and collaboration. Released free by CERN on August 6, 1991, his code sparked a global explosion in web development. Recognizing the

necessity of open standards, Tim founded the World Wide Web Consortium (W3C) at MIT in 1994, guiding the evolution of XML, CSS, DOM, accessibility guidelines, and countless other protocols that ensure interoperability among browsers, servers, and devices. In recent years he has championed data sovereignty through the Solid project—introducing personal “pods” that separate user data from application logic—and co-founded Inrupt to bring enterprise-grade Solid solutions to market, enabling individuals and organizations to reclaim control of their personal information and counter data monopolies. Today, Sir Tim splits his time as a professor of computer science at both MIT and the University of Oxford, mentors the next generation of ethical technologists, and continues to direct W3C while serving as CTO of Inrupt



MIND PUNCH

1. The SI unit of force is the _____.
2. The process by which plants convert light energy into chemical energy is called _____.
3. The powerhouse of the cell is the _____.
4. The chemical symbol for Sodium is _____.
5. The acceleration due to gravity on Earth is approximately _____ m/s².
6. The branch of science that deals with the study of fungi is called _____.
7. The gas most responsible for the greenhouse effect is _____.
8. The pH value of a neutral solution at 25°C is _____.
9. The largest organ in the human body is the _____.
10. The transfer of heat through direct contact is known as _____.

IT VITA

1. The time complexity of Binary Search in the worst case is _____.
2. In OOPs, the concept of hiding implementation details is called _____.
3. The SQL command used to remove a table and its structure from a database is _____.
4. In networking, the protocol responsible for reliable data transmission is _____.
5. The data structure that follows the Last-In, First-Out (LIFO) principle is called _____.
6. In operating systems, the technique of dividing memory into fixed-size blocks is known as _____.
7. The hexadecimal number system is based on _____ symbols.
8. In software engineering, the model that follows a linear sequential approach is called the _____ model.
9. The process of converting source code into machine code is called _____.
10. The algorithm used to find the shortest path in a weighted graph without negative weights is _____.

ANSWERS

Q.No.	MIND PUNCH	IT VITA
1	Newton	$O(\log n)$
2	Photosynthesis	Abstraction
3	Mitochondria	DROP
4	Na	TCP (Transmission Control Protocol)
5	9.8	Stack
6	Mycology	Paging
7	(CO ₂)	16
8	7	Waterfall
9	Skin	Compilation
10	Conduction	Dijkstra's Algorithm

SENSE OF GRATITUDE

THE EDITORIAL BOARD EXPRESSES ITS
SINCERE GRATITUDE TO ALL THOSE
WHO ARE RESPONSIBLE, EITHER BY
BEING ON THE STAGE OR BEHIND THE
SCREEN FOR THE SUCCESSFUL
LAUNCH OF THE MAGAZINE

