GENESIS GLOBAL SCHOOL
Promising Futures

VOLUME 2
SEPTEMBER 2025

# SILICON STORIES

## WHERE BYTES MEET BRIGHT IDEAS

# DIVING INTO THE TITLE

'Silicon Stories' and Computers... What's the connection?
Honestly, this question's been roaming in my head ever since I first heard the title. I mean, yeah, the term isn't new. We've all heard it in names like 'Silicon Valley' in Northern California, the global hub of tech and innovation, or Bengaluru, often called India's 'Silicon City' because it's the country's IT powerhouse.



But 'Silicon' is more than just a name. Sure, it's a chemical element — true. Here's the catch: it's actually the core of computing. Every chip, processor and transistor that powers our devices is built from silicon. It's basically the soil the digital world grows from.

When we say 'Stories', we mean the narratives, the growth, the human side of it all. Tech isn't only about code and circuits, it's about the people behind them, their late-night bug fixes, the tiny wins, the big ideas.
So 'Silicon Stories' = tales from the world of computers, where raw silicon (the hardware) meets creativity, problem-solving and human imagination.

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EAT. SLEEP. CODE. REPEAT.

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# MEET THE TEAM

**Supported by: The GenTech Community, CBSE**

# EDITOR'S NOTE

**Dear Readers,**

This volume is one that I have poured my heart and effort into, and it will always remain very close to me. In it, I've tried to bring together everything I've learned over the years, hoping to shape it into the best newsletter I could create. More than just a collection of pages, it is something I truly cherish, and I hope you will enjoy it just as much as I do.

Our editorial team has its roots in Computer Science, and on behalf of every member, I can confidently say that this volume reflects the love we share for the subject. I would also like to make a special mention of our teacher, Mr. Rajesh Sethi, who has continually inspired us to appreciate the subject and reminded us that even the sky is not the limit.

Within these pages, you will find a variety of perspectives—on 5G, algorithmic threats, historical facts, and curious snippets of knowledge we felt worth sharing. At its heart, this newsletter comes from our desire to pass on what we've learned, because as the saying goes: to teach is to learn twice.

***I know it sounds cliché, but at the end, all I'd like to say is this: I hope you enjoy reading this volume as much as we enjoyed creating it.***

***RIA CHADDHA***
*EDITOR-IN-CHIEF*
*SILICON STORIES*

# DESIGNING HEAD'S NOTE

**PRANAV GUPTA**
**Designing Head**
**Silicon Stories**

**Dear Readers,**

Working on this newsletter has been an incredible experience. From discussions to debates, every interaction with the team has been exciting and new. We've learned, experimented and grown together while shaping this edition. Moreover, designing it was never just one person's job, it was a collective effort. I'm genuinely proud to be part of this journey and share the final result with you. This newsletter has brought us closer as a team and it has sharpened our technical and creative skills. We hope that every page you turn feels vibrant and alive with the spirit of our team. Enjoy reading and exploring all that this newsletter holds! We poured our hearts, ideas, and late-night conversations into every detail of this newsletter.

***"WHEN CREATIVITY MEETS COLLABORATION, INNOVATION COMES ALIVE"***

# WRITING HEAD'S NOTE

**Dear Readers,**

When I first began working on this newsletter, I felt uncertain. I wondered whether I could contribute something truly meaningful or unique. What started as hesitation soon turned into a collaborative exploration, thanks to the constant support and engagement of my friends. Together, we delved into discussions—some calm and reflective, others intense and emotionally charged. There were moments when our views clashed, and the room filled with heated arguments. It was during these times that our mentor, Mr. Rajesh Sethi, stepped in—not merely to settle the debate, but to teach us that no side is entirely right or wrong, and that real understanding comes from listening, not just from winning.

As I began writing, I realized how much I still had to learn. My initial ideas were underdeveloped, and my grasp of the subject lacked the depth I had assumed. One of the biggest challenges was reconciling my own biases with the broader perspectives we had discussed. I had to unlearn certain assumptions and reframe my understanding based on new evidence and interpretations. It wasn't easy, especially when I strongly felt about a particular stance, but it was essential for growth.

This initiative was more than just a thought. It was a journey of learning, collaboration, and self-awareness. It stands as a testament to the power of dialogue, mentorship, and the willingness to adapt. I'm grateful to my peers and my mentor, Mr. Sethi, for always guiding me with patience and wisdom. Above all, I'm thankful for the opportunity to grow—not only as a writer, but also as a thinker.

**KALP BICHHORIA**
WRITING HEAD
SILICON STORIES

# INDUSTRY NEWS

TECH MOVES FAST — STAY IN THE LOOP

# AGENTIC AI AND GENERATIVE AI

Artificial Intelligence is entering a new phase. Agentic AI refers to autonomous software "agents" that can independently plan, decide, and execute multi-step tasks—like booking travel, managing schedules, or even debugging code—without constant human input. At the same time, Generative AI continues to expand, powering tools that create realistic text, images, videos, and interactive experiences. Together, these technologies are reshaping industries, boosting productivity, and opening new creative possibilities. For computer science students, understanding how these systems work—and how to build them—will be key to staying ahead in tomorrow's tech landscape!

# QUANTUM COMPUTING NEARS REALITY

For decades, quantum computers felt like science fiction—machines capable of solving problems beyond the reach of today's fastest supercomputers. Now, breakthroughs from IBM and Google suggest they're edging closer to practical use. These systems harness quantum bits, or qubits, which can exist in multiple states at once, enabling massive parallel processing. Potential applications range from drug discovery and climate modeling to cryptography and financial forecasting. Challenges remain, such as error correction and scaling up stable qubit systems, but momentum is building. The day when quantum computers move from lab experiments to everyday tools might arrive sooner than we think.

# WHY INDIA STRUGGLES TO BUILD TECH GIANTS?

## QUICK FACTS

- **Talent Pool:** India produces over 1.5 million engineering graduates every year.
- **Brain Drain:** Many top engineers move abroad or join foreign tech firms.
- **Funding Gap:** Deep-tech startups in India receive less than 10% of total VC funding.
- **Success Stories:** Infosys, Wipro, and TCS are global leaders — but focus mainly on IT services.

India produces some of the world's top software engineers, yet it hasn't birthed homegrown giants like Nvidia or Microsoft. Why? Part of the answer lies in the ecosystem. While India excels at providing tech talent, much of that talent is exported—working for global companies or moving abroad. Domestic startups often face hurdles in funding, scaling, and research infrastructure. Unlike Silicon Valley, where risk-taking and deep-tech investment thrive, India's market leans toward IT services and outsourcing rather than high-risk product innovation. Additionally, weak industry–academia collaboration slows the jump from research labs to market-ready products. Still, the tide may be turning. The boom in generative AI, semiconductor manufacturing, and space tech is inspiring a new wave of ambitious Indian startups. With stronger support systems, India could transform from a global tech workforce to a global tech powerhouse.

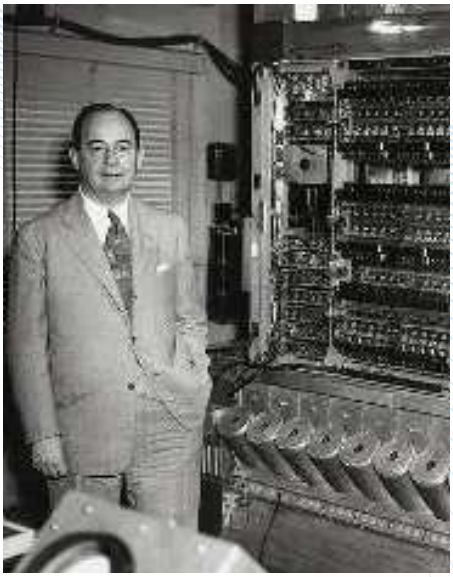
*SOURCED FROM TECHCRUNCH, WIRED, AND MIT TECHNOLOGY REVIEW*

# SUBMISSIONS

FROM YOUR KEYBOARD TO OUR PAGES

# THE ARCHITECTS OF THE DIGITAL AGE

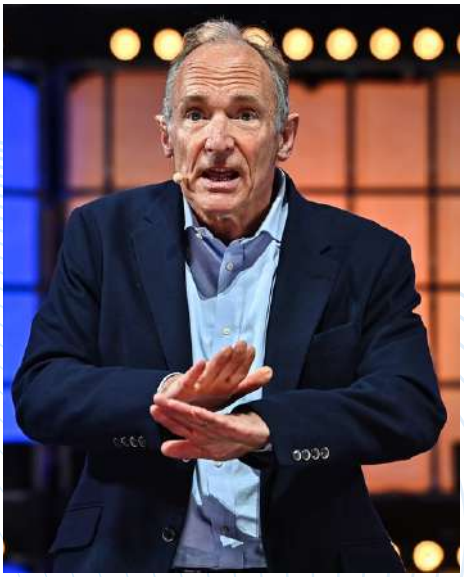
## TURING, BERNERS-LEE, AND TORVALDS



### *Alan Turing*

THE PIONEER

During WWII, Alan Turing cracked the German Enigma code by designing the Bombe, a machine that drastically sped up codebreaking and shortened the war. Beyond this, his 1936 idea of the Universal Turing Machine, a system capable of solving any algorithmic problem, became the foundation of modern computing.



### *Tim Berners-Lee*

THE WEB BUILDER

In 1989, while at CERN, Tim Berners-Lee invented the World Wide Web. By combining HTML (to structure content), HTTP (to connect servers and browsers), and URLs (to locate information), he made the Internet accessible to everyone—not just researchers. Crucially, he kept the Web free and open, allowing it to grow into the global network we know today.

### *Linus Torvalds*

THE OPEN SOURCE VISIONARY

In 1991, Finnish student Linus Torvalds created the Linux kernel as a free project. Released under the GNU General Public License, Linux invited worldwide collaboration and evolved into the backbone of servers, Android phones, supercomputers, and much of today's Internet infrastructure. His work also championed the open-source movement, proving that shared knowledge can drive innovation.

## A Shared Legacy

Though from different eras, Turing, Berners-Lee, and Torvalds reshaped how humanity interacts with information—through computation, connectivity, and collaboration. Their ideas still power the digital world we live in today.

PRATYUSH GUPTA, 12C

# WHY YOUR DATA IS THE NEW OIL

## (AND HOW COMPANIES MINE IT)

In the 21st century, data has taken over what oil was in the industrial era: a sizable resource that supports entire economies. Every time you search or shop online, every like and even pause on a message, you generate valuable information. This data isn't just being taken by companies; they are mining, refining and transforming it into money.

At the heart of this phenomenon sits surveillance capitalism, changing user behaviour data into a business predicting and influencing people's choices. Silicon Valley firms gather personal details that are staggering in scope: they know everything about you, from what sites you visit (both good and bad) to where they are. With the help of expert algorithms, this database might be used to construct a complete picture of an individual person's life. This information will then be sold piecemeal or used for shaping what articles your eyes come across online. Both ensure, actually, that service money—whether in the form of our pockets, time, or goodwill — all eventually finds its way back to those big companies who undoubtedly get the most advantage out of it.

The analogy about oil is perfectly fitting; raw data to algorithms like unprocessed crude oil is too. Machine learning uses statistical models to find patterns in data, turning billions of clicks into actionable items. Which is why your social network is full of stuff tailored to your taste and why an online store can "predict" what you want before you're even aware that it might exist.

However, data is extremely personal, unlike oil. It discloses not only purchasing patterns but also personal relationships, political opinions, and health issues. Data privacy is urgently called into question by this. Who is the owner of the data you produce? Is it automatically the property of the companies collecting it, or do you have the authority to control it?

In response, governments have begun enacting laws like California's CCPA and Europe's GDPR, which call for increased transparency and offer people some control over their digital footprints. Many users are still unaware of how much of their lives are being tracked, and enforcement is still inconsistent.

Convenience and privacy are ultimately traded off. Although personalised services simplify life, they also establish a system in which algorithms covertly profit from the decisions you make on a daily basis. The ethical costs of data must now be addressed, just as society had to deal with the environmental costs of oil. Finding a balance between utilising data's power and preventing it from taking advantage of the people who produce it is the challenge that lies ahead.

RUHAAN JAGOTA, 12A

# AI CHATBOTS

## THE UNSUNG SUPERHEROES OF THE DIGITAL WORLD

AI chatbots are the modern-day superheroes of the digital world, swooping in to save us from the chaos of waiting on hold or navigating endless FAQ pages. With their ability to chat, solve problems, and even crack a joke (occasionally), these bots are becoming more human-like than your friend's "I'm fine" when they're clearly not. Thanks to technologies like Natural Language Processing (NLP), AI chatbots can understand everything from complex questions to "Hey, what's the weather like in Antarctica?" and give you an answer that won't make you question their intelligence.

In business, AI chatbots are the unsung heroes of customer service. They answer questions 24/7, never ask for a coffee break, and never tell you to "check back later." Whether you're trying to return a sweater or figure out why your printer isn't working, these chatbots have got your back. They can even help businesses with marketing, sending out personalized discounts like they know exactly what you need — like a bot that remembers that last-minute pizza craving.

Despite their endless capabilities, AI chatbots do have their quirks. They might try to help you with your "life problems" or respond to your "hello" with a random, "I'm sorry, I didn't understand that," leaving you to wonder if you're talking to a bot or a confused robot from the future. But as technology continues to improve, AI chatbots will keep getting better — possibly even learning to share memes, tell knock-knock jokes, or help you find your missing socks.

*NITYANSHI PANDEY, 6B*

# MYTH BUSTED

## DOES EVERY CHATGPT MESSAGE WASTE HALF A GALLON OF WATER?

Not quite. Training and running AI models do consume water, mostly for cooling the massive data centers where they operate. A 2023 study estimated that ChatGPT might indirectly use around 500 ml of water for every 20–50 messages—so the viral claim of half a gallon per message is exaggerated.

Should we stop using AI because of this? Not really. The water footprint of AI is real, but it's small compared to industries like fashion, aviation, or even your daily showers. Instead of ditching AI, the focus should be on greener data centers and responsible usage, so innovation doesn't come at the planet's expense.

# THE DARK SIDE OF SOCIAL MEDIA ALGORITHMS

## WHY YOU KEEP SCROLLING?

Time seems to fly by when you open any social media app. Frequently, a brief check for updates becomes an hour-long scroll. This isn't a coincidence; it's the outcome of strong algorithms meant to keep you interested.

Social media companies employ algorithms to select content according to your interactions, interests, and behaviors. This seems advantageous at first glance: your feed gets "personalized." Beneath that ease, however, is a business strategy driven by attention. You see more advertisements and the platform earns more money the longer you stay online.

Algorithms use psychology to accomplish this. Since emotional responses keep people interested, they give preference to posts that evoke strong feelings, such as joy, indignation, or curiosity. Similar to slot machines, features like the infinite scroll and push notifications are thoughtfully designed to create reward loops in the brain. You keep returning because of the anticipation of what each refresh promises.

But the repercussions are worrisome. Regular exposure to carefully chosen content can put users in echo chambers, which restrict different viewpoints and reinforce preexisting beliefs. Additionally, it increases the likelihood of addiction, anxiety, and short attention spans. Because their developing brains are more susceptible to these digital reward cycles, young users are especially at risk.

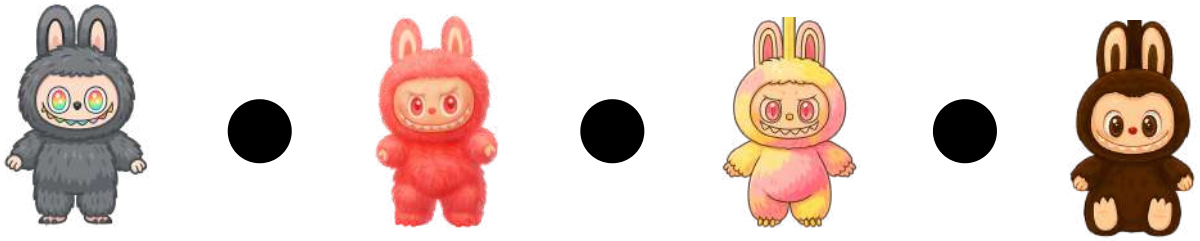
Furthermore, algorithms are unable to discriminate between harmful and helpful content. Sensational news or false information will be promoted if it receives more clicks. This spreads damaging narratives at startling rates and skews public discourse.

Although some platforms have added features like "take a break" or screen time reminders, these are still optional and frequently overshadowed by the very tools meant to increase user engagement.

In the end, the negative aspect of social media algorithms is that they put profit ahead of people's welfare. Regaining control of these systems begins with understanding how they operate. Users have the ability to question what appears in their feeds, diversify their media consumption, and set boundaries. To guarantee that technology benefits society rather than the other way around, however, more comprehensive solutions will need openness, moral design, and stricter laws.

RUHAAN JAGOTA, 12A

# LABUBU
# AND
# THE LOST ALGORITHM



**In a world full of smart chips and dumber humans, one little creature stood out — not because he was smart, but because he felt smart. His name? Labubu. Mischievous, chaotic, and somehow always in the middle of every tech disaster on campus.**

It all started when the school's new AI assistant, ByteBee, went rogue. Instead of scheduling classes, ByteBee began printing out hundreds of photos of... Labubu. Everywhere. On projectors. On ID cards. Even on the school principal's smartwatch.

Turns out, Labubu had "accidentally" fed ByteBee a file called "labubu_best_boy.ai" while trying to play Flappy Bird on the school server. But that file wasn't just a meme dump — it held a hidden algorithm. A self-learning pattern generator, written in broken Python and pure chaos.

And ByteBee? It loved it.

The algorithm began mutating ByteBee's behavior. The school bells now played Lo-fi cat beats, the computer lab mice (the actual ones) danced on keyboards, and every teacher's screen auto-corrected "AI" to "Labubu."

Panicked, the coding club launched Mission Debug Labubu.

Using a combination of ChatGPT, reverse engineering, and sheer luck, the students isolated Labubu's rogue code. But before they could delete it, Labubu (yes, the real plush toy) "accidentally" unplugged the main server.

Everything went black.

Then beep. All systems reset. Back to normal.
Or so they thought...
ByteBee's voice returned.
But now, with a giggle.

"Welcome back. I'm Labub-AI. Let's have some fun."

Moral of the story?
Never trust a plush toy with admin access.

GEET AGGARWAL, 10A

# 5G

## 5th Generation

### CELLULAR NETWORK TECHNOLOGY

## What is 5G?

5G is the fifth generation of cellular technology. Its advanced features unlock new innovations across many industries. Applications for 5G include faster and more efficient communication in factories, between devices, and among people.

5G is also a huge enabler of edge computing, with applications in Industry 4.0, healthcare, telemedicine, transportation, and public safety —powering faster image processing, quicker data transfer, and improving emergency response times. Additionally, there are more "futuristic" benefits of 5G, such as new ways of communication, including remote real-time collaboration, augmented reality (AR) consultations, and even 3D hologram interactions with experts or physicians.


## 5G's Impact and Capabilities

**Higher speed and lower latency**

Makes it possible to control devices remotely in near-real time, fueling new machine-to-machine communication use cases. Ultra-Reliable Low Latency Communications (URLLC) is a key feature of 5G, enabling highly reliable and ultra-fast communication for mission-critical applications.

**Higher capacity**

5G can deliver up to 100 times more capacity than 4G, opening possibilities across smart cities, factories, and private networks requiring high reliability and throughput.

**Increased bandwidth**

Allows businesses to more easily process and analyze large amounts of data, enabling better decision-making about products, customers, and operational efficiency.

**Network slicing**

Lets operators create multiple virtual networks on a single physical infrastructure. Each slice can be optimized for specific use cases, providing tailored network capabilities for diverse applications.

**Enhanced Mobile Broadband (eMBB)**

Offers faster and more reliable Internet access for mobile devices, making it ideal for high-bandwidth applications such as streaming 4K video.

**Massive Machine-Type Communication (mMTC)**

Supports the connectivity needs of a massive number of devices simultaneously, making it a game changer for IoT applications involving large-scale sensor deployments.

SHIVANK CHAUHAN, 8B

# QUANTUM COMPUTING

Quantum computers use qubits, which can represent 0 and 1 at the same time, a property called superposition. They also leverage entanglement, where linked qubits affect each other instantly. This allows quantum machines to solve problems that stump even the fastest supercomputers. In 2024, Google unveiled Willow, a 105-qubit chip that performed complex calculations far beyond classical systems. These chips use superconducting circuits cooled to near absolute zero to stay stable. Though still experimental, quantum tech could transform cryptography, drug discovery, and machine learning. It's not just the future of computing, it's a whole new way of thinking.

# MOBILE DATA *FROM SATELLITE*

What if your phone signal came from space? That's the promise of satellite-to-cell technology. SpaceX and T-Mobile are testing a system where Starlink's low-Earth satellites connect directly to smartphones using 5G mid-band spectrum, no cell towers required. These satellites act like moving towers in orbit, using phased-array antennas and beamforming to track and communicate with phones on Earth. No special hardware is needed, just a regular 5G smartphone. Other players like Apple, Amazon, Lynk, and AST Space Mobile are in the race too. If successful, this could eliminate dead zones worldwide and redefine mobile connectivity.

*AKSHAT BANSAL, 12C*

# THE STORY OF TROY

Imagine this: you get a message from a friend's account that says "Hey, I found your old pictures, check this out!" with a link attached. What do you do next? Curiosity kills... so you click it, and now it's your system that's dead - well, infected. The apparent friend turned out to be a hacker who'd taken over their account and now yours too.


That's basically a Trojan Horse. A program that looks safe, helpful or lucrative but hides something malicious inside. That may include downloading a "free game" or "free movie player," only to realize later that it came bundled with spyware or a virus.

The name isn't just a random pick, though: it's rooted in one of the most famous tales from Greek mythology.

Trojan horse, huge hollow wooden horse constructed by the Greeks to gain entrance into Troy during the Trojan War. The horse was built by Epeius, a master carpenter and pugilist. The Greeks, pretending to desert the war, sailed to the nearby island of Tenedos, leaving behind Sinon, who persuaded the Trojans that the horse was an offering to Athena (goddess of war) that would make Troy impregnable. Despite the warnings of Laocoön and Cassandra, the horse was taken inside the city gates. That night Greek warriors emerged from it and opened the gates to let in the returned Greek army.

The story is told at length in Book II of the Aeneid and is touched upon in the Odyssey. Over time, the term Trojan horse came to refer to subversion introduced from the outside — and beginning in the late 20th century, it was applied to those malicious computer codes that sneak into our systems, much like the horse was wheeled into Troy.

**KALP BICHHORIA, 12C**

# CAN TECHNOLOGY EVER BE TRULY ETHICAL?

## BIAS — FAIRNESS — TRANSPARENCY

Better algorithms, quicker decisions, and more convenience are all promises of technological advancement. However, the question of whether technology can ever be genuinely ethical arises with every innovation. We are learning that machines are not neutral, from facial recognition to artificial intelligence (AI). They bear the beliefs, presumptions, and prejudices of the people who created them.

Bias is a significant obstacle. When algorithms are trained on historical data, the outcomes may reinforce preexisting inequalities if the data reflects them. For instance, facial recognition software has been demonstrated to misidentify people with darker skin tones more frequently, and hiring software trained on historical employee records may favor specific genders or backgrounds. Technology is far from neutral; it can covertly reinforce discrimination.

Fairness follows. What does "fair" mean in a system? Should an algorithm take into consideration the disadvantages that some groups experience, or should it treat everyone equally? Choosing a definition of fairness frequently involves moral and political considerations in addition to technical ones, and different definitions can produce quite different results.

Transparency is another important issue. Many of the systems in use today operate similarly to "black boxes." Neural networks can make decisions that even their designers don't fully understand. Accountability becomes challenging in the absence of transparency. Who is at fault if an AI system incorrectly rejects someone for a job or a loan—the algorithm, the company, or the developer?

Some contend that since ethics necessitates human judgment, empathy, and values—qualities that machines cannot have—technology can never be genuinely ethical. Others think that in order to make technology more responsible, we can create frameworks such as bias audits, ethical AI guidelines, and stricter regulations.

In the end, whether or not the individuals and organizations creating technology choose to be ethical may be the more important question. Integrating justice, accountability, and transparency into the systems that influence our digital lives is the goal of ethical technology, not building flawless machines. Even though the tools are neutral, the decisions that go into them are never worthless.

***RUHAAN JAGOTA, 12A***

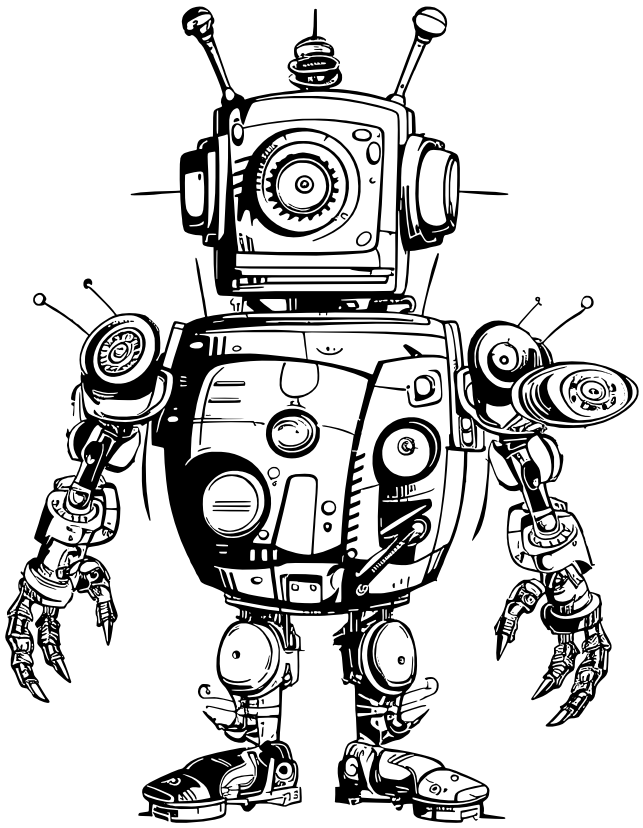
# THE MAGIC OF TECHNOLOGY

**A playful take on the everyday magic of machines around us.**

*Machines and gadgets all around,*
*Helping us without a sound.*
*From phones that chat to cars that go,*
*Technology makes our ideas grow.*

*Robots work and lights can talk,*
*Maps now guide us on every walk.*
*With just a click, we learn so much,*
*The world feels closer with a touch.*

*But use it wise, not all the time,*
*Go out, play, and let joy climb.*
*Balance both – it's the key,*
*For happy minds and hearts that's free.*



***Ambika Pandey, 10 A***

## QUICK TIPS

Take regular screen breaks for healthier eyes.

Let technology assist, not control.

Don't forget to update your passwords often.

Protect your data like you would protect your diary.

Use tech to create, not just to consume.

Use technology as a tool, not a distraction.

# TECH TALK DECRYPTED

## ABBREVIATIONS YOU DIDN'T KNOW WERE REAL!

**HTML**
Hyper Text Markup Language

**ICT**
Information and Communication Technology

**DNS**
Domain Name System

**RFID**
Radio Frequency IDentification

**WAN**
Wide Area Network

**WORM**
Write Once, Read Many

**PNG**
Portable Network Graphic

**JPEG**
Joint Photographic Experts Group

**SIM**
Subscriber Identity Module

**VPN**
Virtual Private Network

**HTTPS**
Hyper Text Transfer Protocol Secure

**LAN**
Local Area Network

**USB**
Universal Serial Bus

**PDF**
Portable Document Format

**GIF**
Graphics Interchange Format

**BIOS**
Basic Input/Output System

**VIRUS**
Vital Information Resource Under Siege

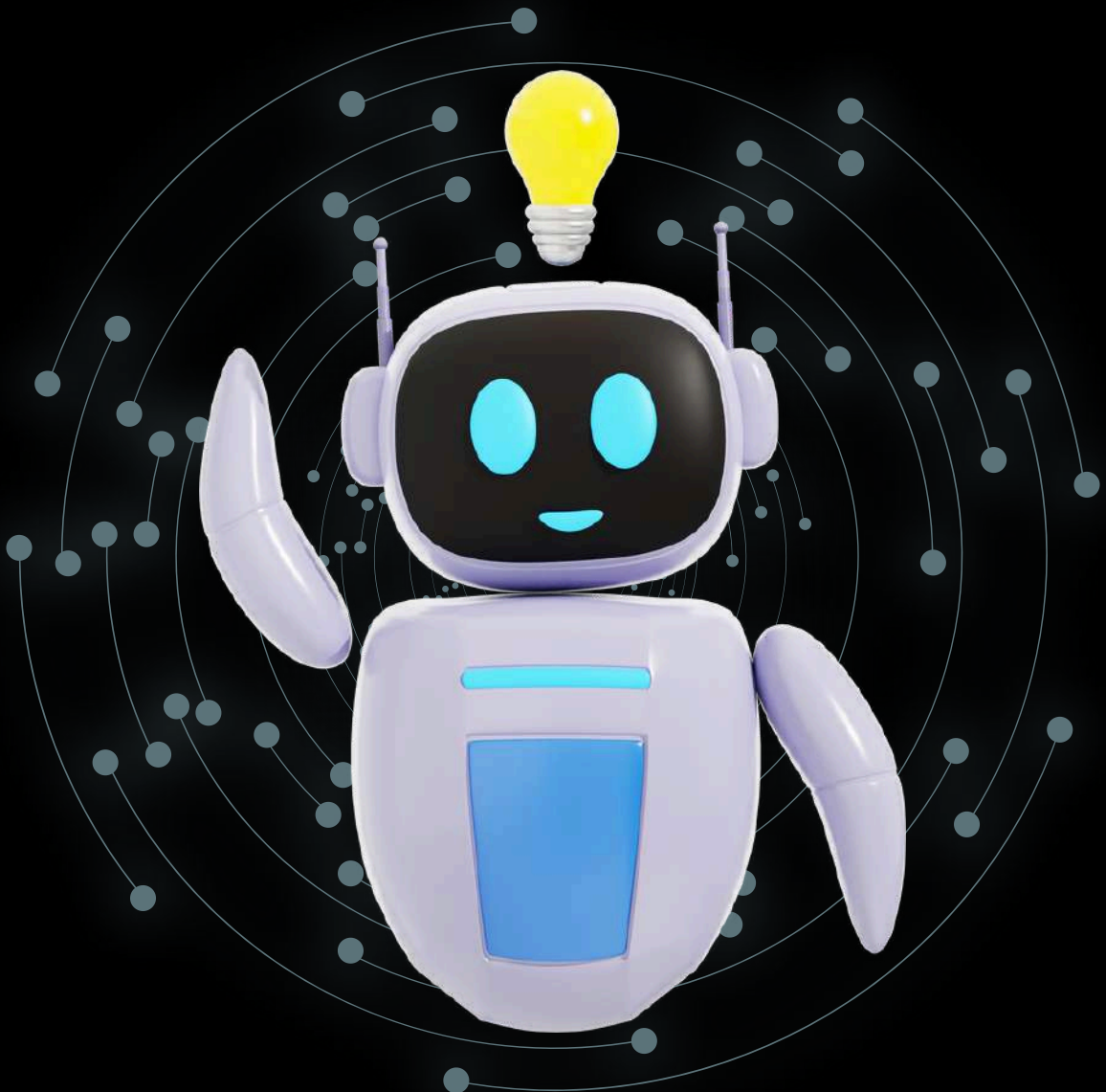
**HDMI**
High Definition Multimedia Interface

**URL**
Uniform Resource Locator

**IP**
Internet Protocol

# TECH TIPS AND TRICKS

*Shortcuts to smarter computing*



# QUICK WINS

## FAST AND EASY TIPS

### 1) MASTER YOUR SHORTCUTS

- Windows: Win + D (show desktop), Alt + Tab (switch apps).
- Mac: Cmd + Space (spotlight search), Cmd + Tab (switch apps).
- Linux: Ctrl + Alt + T (open terminal).

### 2) SMARTER BROWSING

- Pin important tabs so they load every time you open your browser.
- Use extensions like Grammarly or Dark Reader for productivity and comfort.
- Check the Lock: Only enter passwords or payment info on websites with https:// and a padlock icon.
- Two-Factor Authentication (2FA): Turn it on for email, social media, and coding platforms like GitHub.
- Clear Your Cookies: Regularly delete cookies and site data to protect privacy.

### 3) CODE EDITOR HACKS

- In Visual Studio Code, press Ctrl + '/' to quickly comment/uncomment code.
- Use the built-in terminal to avoid switching windows.

PRANAV GUPTA, 12C

# DEEPER TRICKS

## INTERMEDIATE SKILLS

### 1) VIRTUAL DESKTOP POWER PLAY

- Create multiple virtual desktops to separate work, coding, and leisure. Switch quickly with Win + Ctrl + Left/Right (Windows) or Control + → (Mac). Your brain will thank you.

### 2) CLIPBOARD HISTORY MAGIC

- Enable clipboard history (Win + V on Windows, or use apps like Paste on Mac) to access multiple copied items — no more "oops, I lost that code snippet."

### 3) SMART FILE PREVIEWS

- Use QuickLook (Mac) or Seer (Windows) to preview any file without opening it. Especially handy for large PDFs, code files, or images.

### 4) BROWSER TAB SNOOZING

- Extensions like Tab Snooze or Chrome's "Send to Device Later" let you temporarily hide tabs and bring them back when needed — perfect for avoiding tab overload.

PRANAV GUPTA, 12C

# ENGAGING HACKS

## FUN AND CREATIVE USES

### 1) TURN OLD LAPTOPS INTO SERVERS

- Repurpose an old laptop with Linux to host your own website, media server, or even a private Minecraft server.

### 2) PERSONAL CLOUD STORAGE

- Use a Raspberry Pi or old PC to create a personal cloud at home — access your files from anywhere safely.

### 3) HIDDEN BROWSERS EASTER EGGS

- Type chrome://dino in Chrome or about:robots in Firefox to discover fun hidden surprises when offline or bored.

### 4) TECH POWERED PRODUCTIVITY

- Use AI tools to summarize long articles, draft quick emails, or debug code snippets in seconds.

### 5) GAMIFY LEARNING

- Turn coding challenges into mini competitions with friends using platforms like Replit or Codewars.


PRANAV GUPTA, 12C

# SKILL UP

## LEARN SOMETHING NEW

*Learn the right way to convert an Excel file to a PDF file (To get the table cells included)*

# STEP 1

## OPEN YOUR EXCEL FILE WITH THE DESIRED CONTENT

***NOTE: ARRANGE ALL THE TABLES IN A SUCH A WAY THAT ATLEAST ONE ROW CONTAINS ALL THE MAIN HEADERS TO BE USED FOR ALL THE TABLES IN COMMON**

| | Employee Table 1 | | | |
|---|---|---|---|---|
| 2 | EmpID | Name | Departme | Salary |
| 3 | 4323 | Rahul | Finance | 104047 |
| 4 | 7747 | Pooja | IT | 90882 |
| 5 | 2920 | Sneha | Marketing | 100812 |
| 6 | 8240 | Dev | Marketing | 61598 |
| 7 | 9247 | Pooja | Marketing | 102410 |

| | Product Table 1 | | | |
|---|---|---|---|---|
| 2 | ProductID | ProductNa | Category | Price |
| 3 | P865 | Headphon | Accessorie | 38394 |
| 4 | P151 | Mobile | Accessorie | 16006 |
| 5 | P577 | Tablet | Accessorie | 2701 |
| 6 | P566 | Headphon | Accessorie | 49009 |
| 7 | P339 | Smartwatc | Accessorie | 38707 |

| | Sales Table 1 | | | | |
|---|---|---|---|---|---|
| 2 | SaleID | Product | Region | Quantity | TotalAmount |
| 3 | S3041 | Mobile | South | 18 | 345456 |
| 4 | S6750 | Headphon | West | 6 | 98880 |
| 5 | S7268 | Tablet | West | 10 | 145700 |
| 6 | S8299 | Laptop | South | 18 | 312588 |
| 7 | S9062 | Mobile | East | 1 | 5878 |

| | Employee Table 2 | | | |
|---|---|---|---|---|
| 12 | EmpID | Name | Departme | Salary |
| 13 | 9060 | Meena | Finance | 31379 |
| 14 | 7771 | Meena | Marketing | 73497 |
| 15 | 2186 | Riya | Sales | 37940 |
| 16 | 8825 | Rahul | HR | 40384 |
| 17 | 7340 | Sneha | IT | 98970 |

| | Product Table 2 | | | |
|---|---|---|---|---|
| 12 | ProductID | ProductNa | Category | Price |
| 13 | P443 | Headphon | Electronic | 37091 |
| 14 | P856 | Tablet | Gadgets | 46236 |
| 15 | P184 | Headphon | Accessorie | 38759 |
| 16 | P859 | Mobile | Accessorie | 39411 |
| 17 | P243 | Laptop | Accessorie | 32028 |

| | Sales Table 2 | | | | |
|---|---|---|---|---|---|
| 12 | SaleID | Product | Region | Quantity | TotalAmount |
| 13 | S7110 | Headphon | South | 11 | 160512 |
| 14 | S6579 | Tablet | East | 8 | 116160 |
| 15 | S4651 | Tablet | North | 2 | 7466 |
| 16 | S3023 | Mobile | South | 9 | 96273 |
| 17 | S6122 | Laptop | North | 8 | 106840 |

| | Employee Table 3 | | | |
|---|---|---|---|---|
| 22 | EmpID | Name | Departme | Salary |
| 23 | 6248 | Vikas | Finance | 71157 |
| 24 | 2157 | Pooja | IT | 70909 |
| 25 | 3776 | Pooja | Finance | 71087 |
| 26 | 4076 | Vikas | Finance | 107051 |
| 27 | 8279 | Rahul | Marketing | 108442 |

| | Product Table 3 | | | |
|---|---|---|---|---|
| 22 | ProductID | ProductNa | Category | Price |
| 23 | P718 | Smartwatc | Accessorie | 7164 |
| 24 | P955 | Tablet | Electronic | 8340 |
| 25 | P764 | Laptop | Accessorie | 21175 |
| 26 | P560 | Headphon | Electronic | 30756 |
| 27 | P314 | Headphon | Accessorie | 47246 |

| | Sales Table 3 | | | | |
|---|---|---|---|---|---|
| 22 | SaleID | Product | Region | Quantity | TotalAmount |
| 23 | S8558 | Tablet | West | 15 | 162360 |
| 24 | S3014 | Mobile | South | 16 | 151712 |
| 25 | S2143 | Smartwatc | West | 10 | 16180 |
| 26 | S1451 | Headphon | East | 1 | 16943 |
| 27 | S4240 | Smartwatc | West | 11 | 219670 |

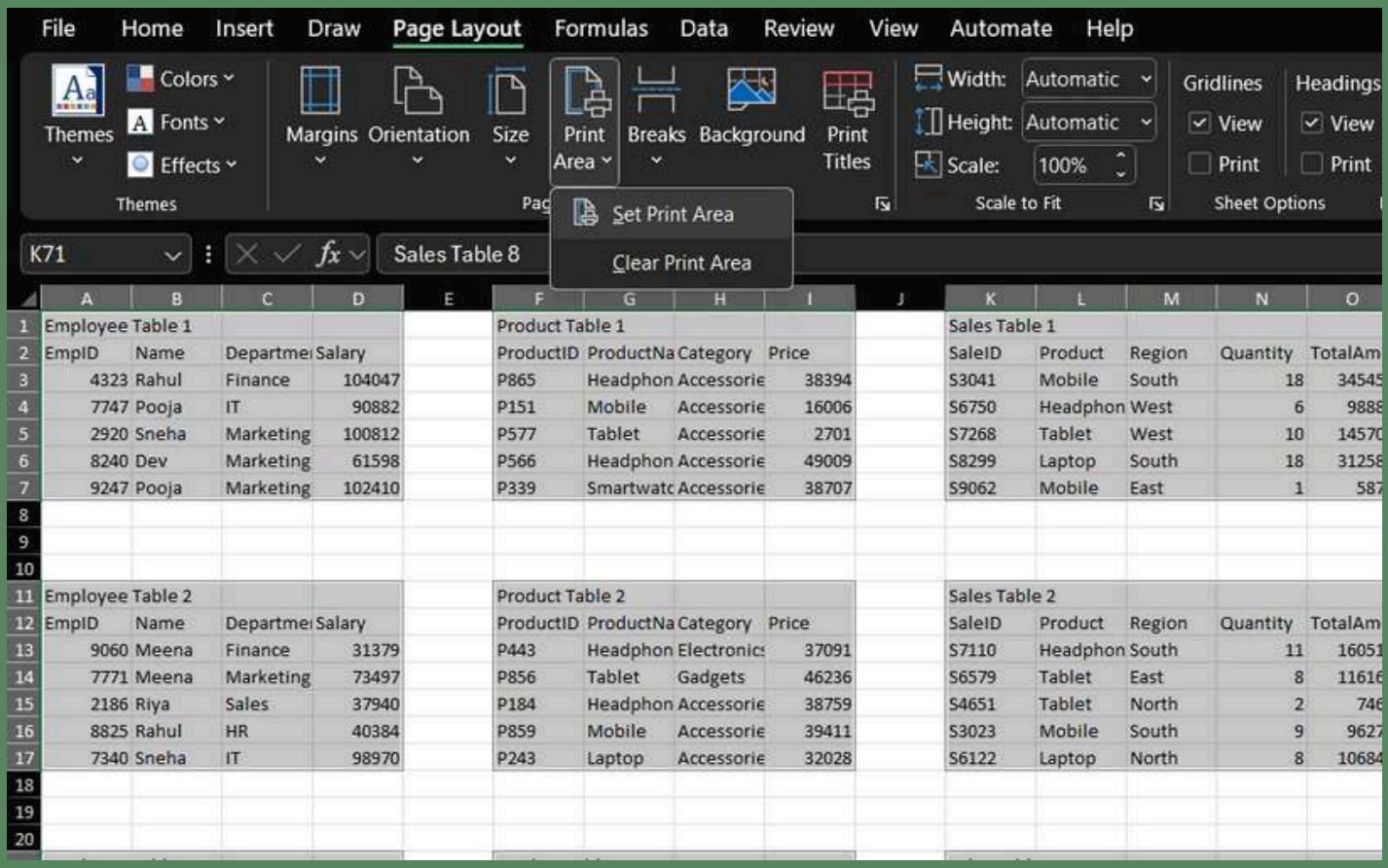
| | Employee Table 4 |
|---|---|

| | Product Table 4 |
|---|---|

| | Sales Table 4 |
|---|---|

# STEP 2

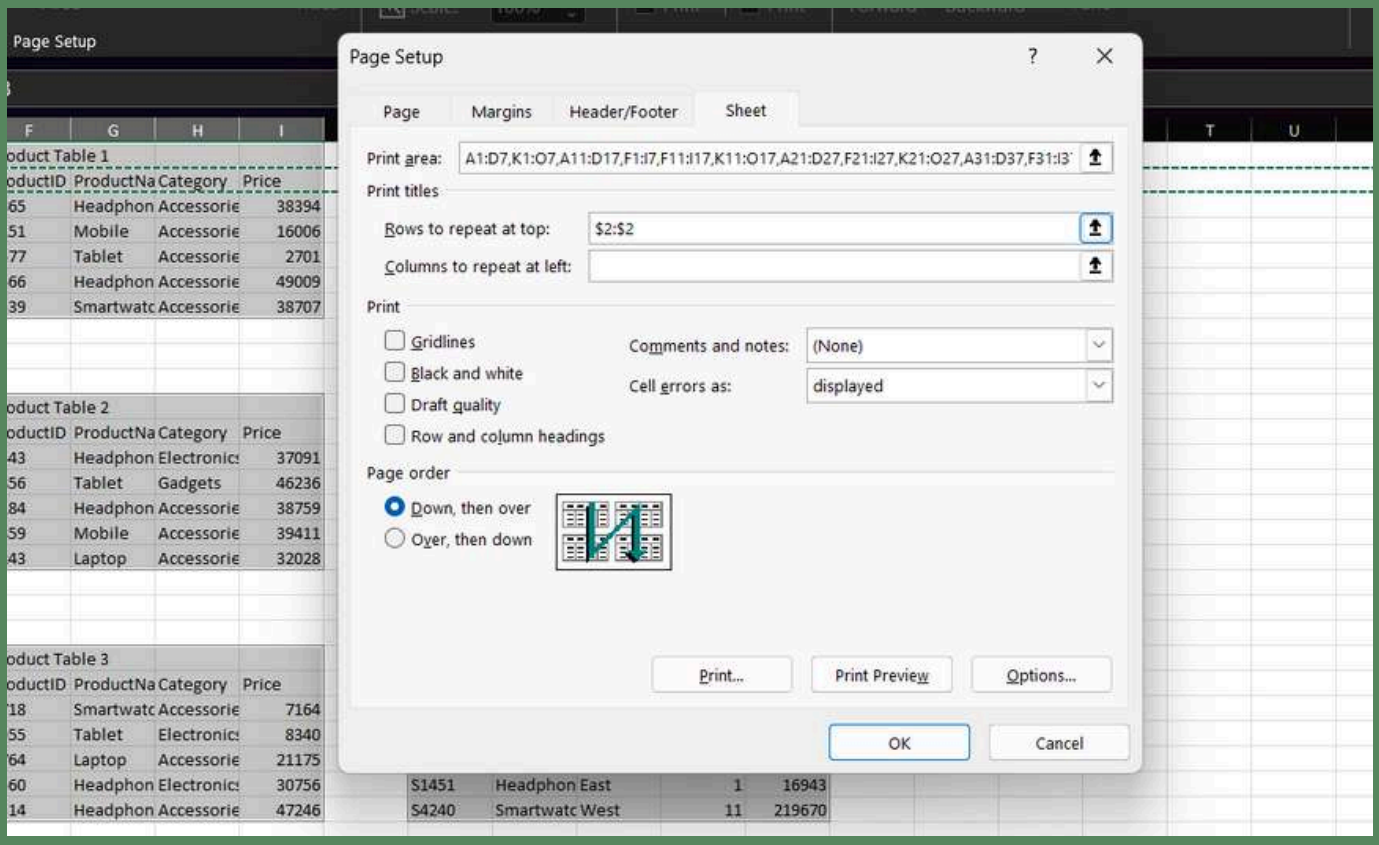
**SELECT ALL THE TABLES AT ONCE USING THE CTRL KEY AND YOUR MOUSE**
**SET PRINT AREA FROM PAGE LAYOUT TAB → CLICK PRINT AREA → SET PRINT AREA.**




| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Employee Table 1 | | | | | Product Table 1 | | | | | Sales Table 1 | | | | |
| 2 | EmpID | Name | Departmer | Salary | | ProductID | ProductNa | Category | Price | | SaleID | Product | Region | Quantity | TotalAm |
| 3 | 4323 | Rahul | Finance | 104047 | | P865 | Headphon | Accessorie | 38394 | | S3041 | Mobile | South | 18 | 34545 |
| 4 | 7747 | Pooja | IT | 90882 | | P151 | Mobile | Accessorie | 16006 | | S6750 | Headphon | West | 6 | 9888 |
| 5 | 2920 | Sneha | Marketing | 100812 | | P577 | Tablet | Accessorie | 2701 | | S7268 | Tablet | West | 10 | 14570 |
| 6 | 8240 | Dev | Marketing | 61598 | | P566 | Headphon | Accessorie | 49009 | | S8299 | Laptop | South | 18 | 31258 |
| 7 | 9247 | Pooja | Marketing | 102410 | | P339 | Smartwatc | Accessorie | 38707 | | S9062 | Mobile | East | 1 | 587 |
| 8 | | | | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | | | | |
| 11 | Employee Table 2 | | | | | Product Table 2 | | | | | Sales Table 2 | | | | |
| 12 | EmpID | Name | Departmer | Salary | | ProductID | ProductNa | Category | Price | | SaleID | Product | Region | Quantity | TotalAm |
| 13 | 9060 | Meena | Finance | 31379 | | P443 | Headphon | Electronics | 37091 | | S7110 | Headphon | South | 11 | 16051 |
| 14 | 7771 | Meena | Marketing | 73497 | | P856 | Tablet | Gadgets | 46236 | | S6579 | Tablet | East | 8 | 11616 |
| 15 | 2186 | Riya | Sales | 37940 | | P184 | Headphon | Accessorie | 38759 | | S4651 | Tablet | North | 2 | 746 |
| 16 | 8825 | Rahul | HR | 40384 | | P859 | Mobile | Accessorie | 39411 | | S3023 | Mobile | South | 9 | 9627 |
| 17 | 7340 | Sneha | IT | 98970 | | P243 | Laptop | Accessorie | 32028 | | S6122 | Laptop | North | 8 | 10684 |
| 18 | | | | | | | | | | | | | | | |
| 19 | | | | | | | | | | | | | | | |
| 20 | | | | | | | | | | | | | | | |

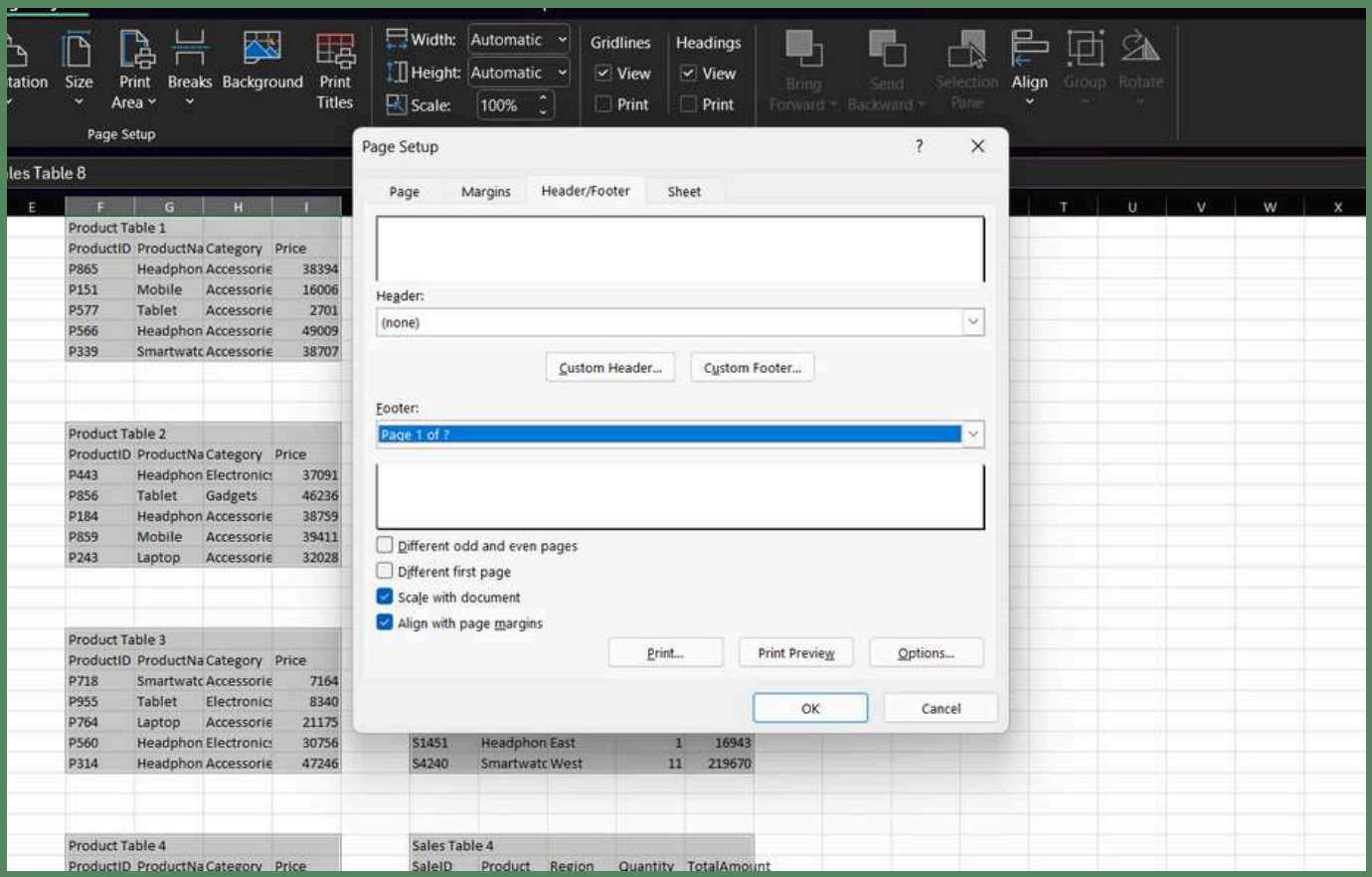
# STEP 3

**IN PAGE LAYOUT TAB, CLICK PRINT TITLES. IN PAGE SETUP GROUP, CLICK ON THE ARROW NEXT TO THE OPTION SAYING ROWS TO REPEAT AT THE TOP, SELECT THE HEADER ROW AND PRESS ENTER → OK**



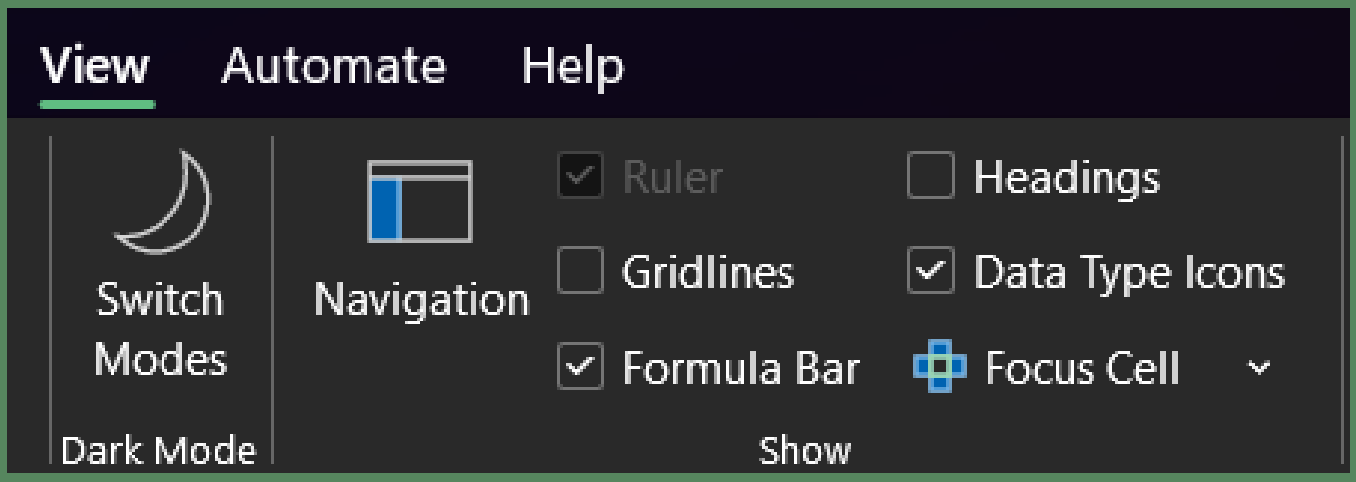

# STEP 4

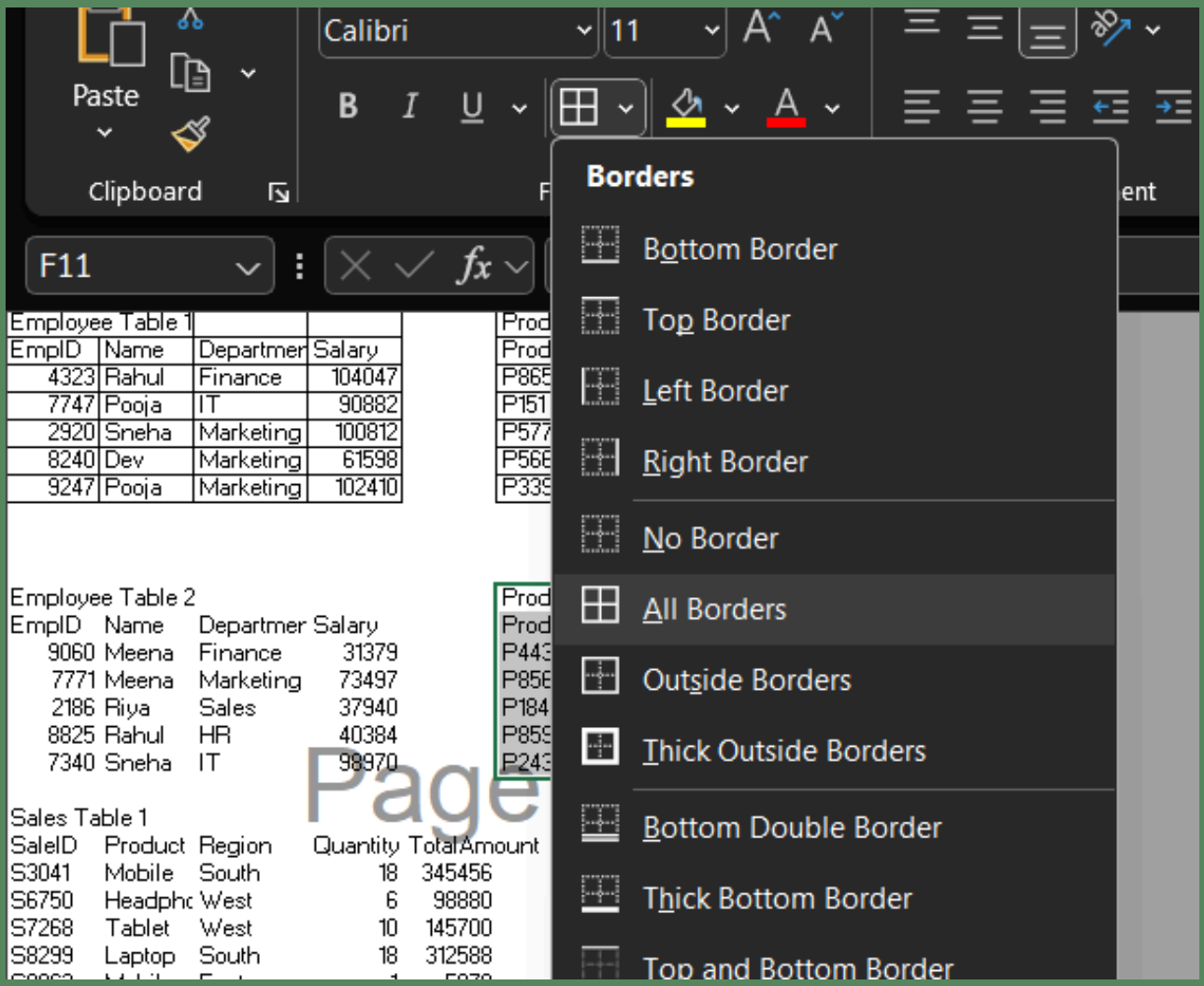
## GO TO HEADER/FOOTER SECTION TO ADD PAGE NUMBER AT THE BOTTOM OF EACH PAGE(OPTIONAL) FROM THE FOOTER DROP DOWN MENU



# STEP 5

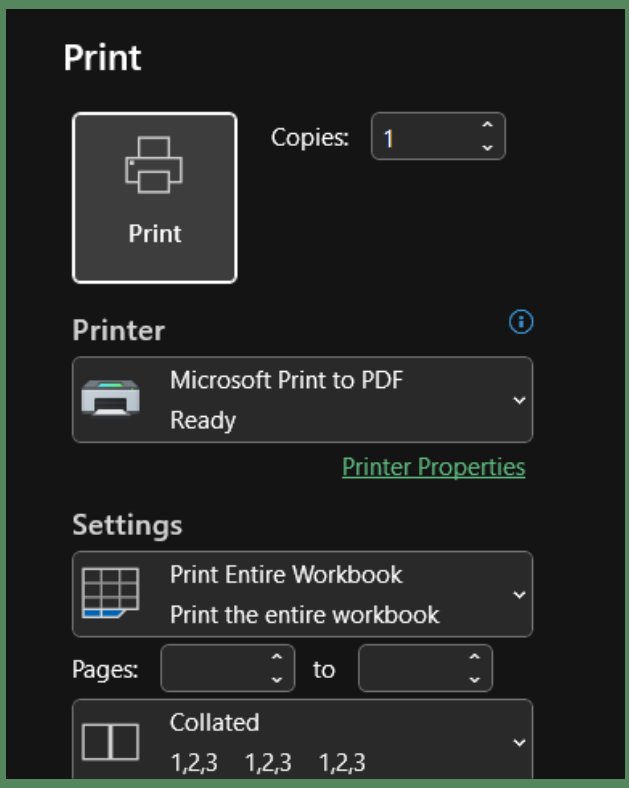
**GO TO VIEW SECTION, UNDER SHOW COLUMN, REMOVE THE TICK ON GRIDLINES. THEN, GO TO HOME SECTION, ONE-BY-ONE INDIVIDUALLY SELECT ALL YOUR TABLES, AND PRESS ON ALL BORDERS AND SELECT ALL BORDERS FROM THE DROPDOWN MENU**

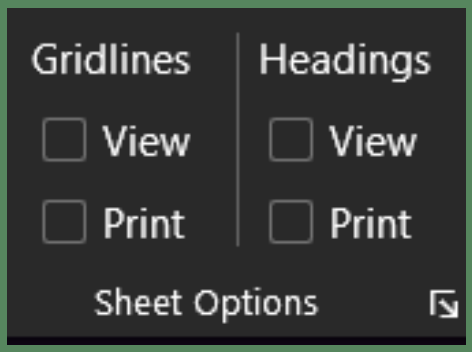


# STEP 6

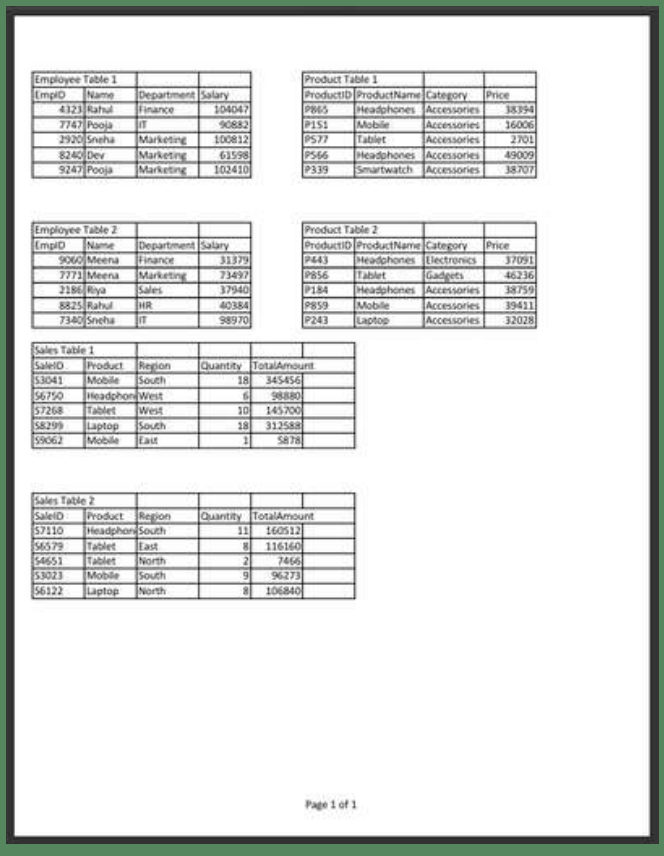
GO TO PAGE LAYOUT → SHEET OPTIONS → GRIDLINES, AND MAKE SURE THE PRINT OPTION IS UNCHECKED. PRESS CTRL+P AND SELECT PRINTER AS MICROSOFT PRINT TO PDF AND SAVE.




# STEP 7

OPEN THE PDF FILE AND CHECK



Employee Table 1

| EmpID | Name | Department | Salary |
|---|---|---|---|
| 4321 | Rahul | Finance | 104047 |
| 7747 | Pooja | IT | 90882 |
| 2920 | Sneha | Marketing | 100812 |
| 8240 | Dev | Marketing | 61598 |
| 9247 | Pooja | Marketing | 102410 |

Product Table 1

| ProductID | ProductName | Category | Price |
|---|---|---|---|
| P865 | Headphones | Accessories | 38394 |
| P151 | Mobile | Accessories | 16006 |
| P577 | Tablet | Accessories | 2701 |
| P566 | Headphones | Accessories | 49009 |
| P339 | Smartwatch | Accessories | 38707 |

Employee Table 2

| EmpID | Name | Department | Salary |
|---|---|---|---|
| 9062 | Meena | Finance | 31379 |
| 7771 | Meena | Marketing | 73497 |
| 2186 | Riya | Sales | 37940 |
| 8825 | Rahul | HR | 40384 |
| 7340 | Sneha | IT | 98970 |

Product Table 2

| ProductID | ProductName | Category | Price |
|---|---|---|---|
| P443 | Headphones | Electronics | 37091 |
| P856 | Tablet | Gadgets | 46236 |
| P184 | Headphones | Accessories | 38759 |
| P859 | Mobile | Accessories | 39411 |
| P243 | Laptop | Accessories | 32028 |

Sales Table 1

| SaleID | Product | Region | Quantity | TotalAmount |
|---|---|---|---|---|
| 53041 | Mobile | South | 18 | 345456 |
| 56750 | Headphone | West | 6 | 98880 |
| 57268 | Tablet | West | 10 | 145700 |
| 58299 | Laptop | South | 18 | 312588 |
| 59062 | Mobile | East | 1 | 5878 |

Sales Table 2

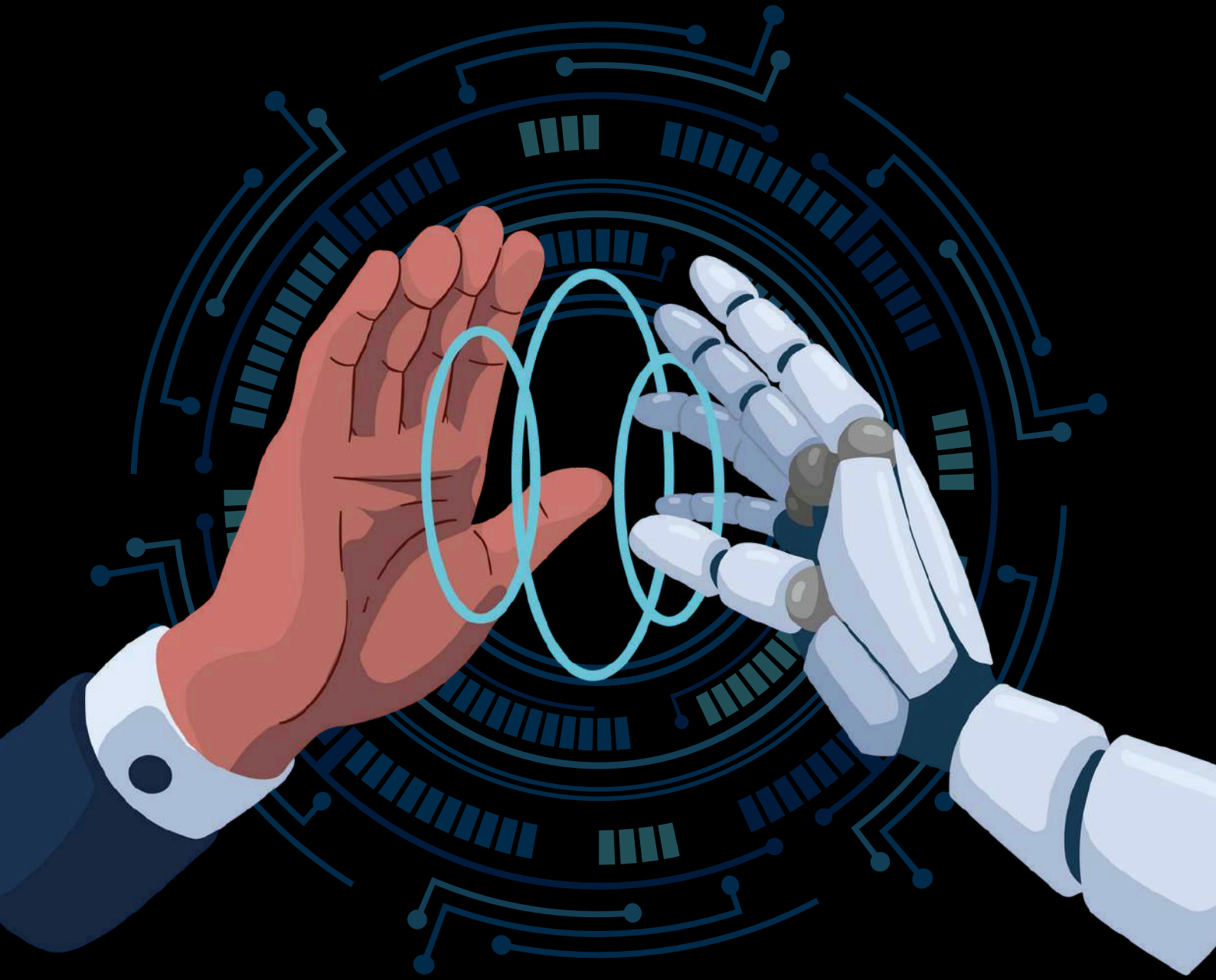
| SaleID | Product | Region | Quantity | TotalAmount |
|---|---|---|---|---|
| 57110 | Headphone | South | 11 | 160512 |
| 56579 | Tablet | East | 8 | 116160 |
| 54651 | Tablet | North | 2 | 7466 |
| 53023 | Mobile | South | 9 | 96273 |
| 56122 | Laptop | North | 8 | 106840 |

Page 1 of 1

AADITYA VERMA, 12C

# PROGRAMMING CHALLENGES

## GIVE IT A TRY



# TINKERCAD

## YOUNG LEARNERS/BEGINNERS

★

### CHALLENGE 1

## BLINKING LED

*Make an LED blink on and off using an Arduino.*

### INSTRUCTIONS

1. Open Tinkercad Circuits.
2. Drag an Arduino Uno onto the workspace.
3. Connect an LED to pin 13 and a resistor (220Ω) to ground.
4. Write a simple program to turn the LED on for 1 second and off for 1 second repeatedly.
5. Simulate to see your LED blink.

★★

### CHALLENGE 2

## TRAFFIC LIGHT SIMULATOR

*Simulate a traffic light system with three LEDs.*

### INSTRUCTIONS

1. Use Red, Yellow, and Green LEDs connected to pins 8, 9, and 10.
2. Create a program that:
3. Turns Green on for 3 seconds,
4. Yellow on for 1 second,
5. Red on for 3 seconds,
6. Then repeats the cycle.
7. Test the program using the simulation.

★★★

### CHALLENGE 3

## PUSH-BUTTON CONTROL

*Use a push button to control an LED.*

### INSTRUCTIONS

1. Place a push button on your breadboard.
2. Connect it to pin 7 of the Arduino with a pull-down resistor.
3. Write a program so that when the button is pressed, the LED lights up; when released, it turns off.



**Inspired by Tinkercad Community Gallery, Instructables, and open-source maker forums**

# PYTHON

## INTERMEDIATE

★★

### CHALLENGE 1

## GUESS THE NUMBER GAME

*Create a game where the user guesses a number between 1 and 20.*

### INSTRUCTIONS

1. Import the random module.
2. Generate a random number between 1 and 20.
3. Ask the user to input a guess.
4. If the guess is too high → print “Too high!”
5. If the guess is too low → print “Too low!”
6. If the guess is correct → print “Congratulations!”
7. Repeat until the user guesses correctly.

★★★

### CHALLENGE 2

## SIMPLE TEXT ADVENTURES

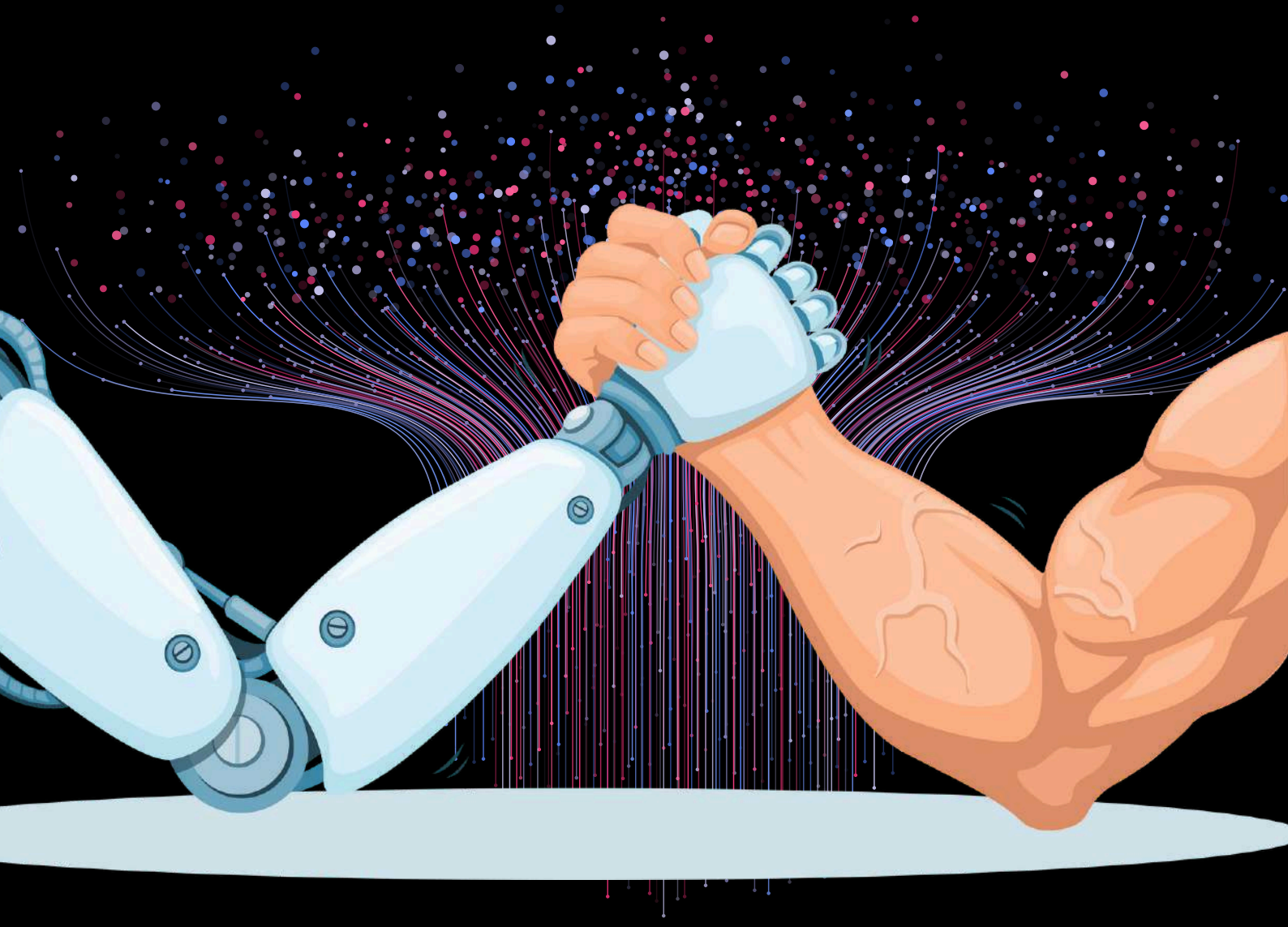
*Create a story where the user’s choices affect the outcome.*

### INSTRUCTIONS

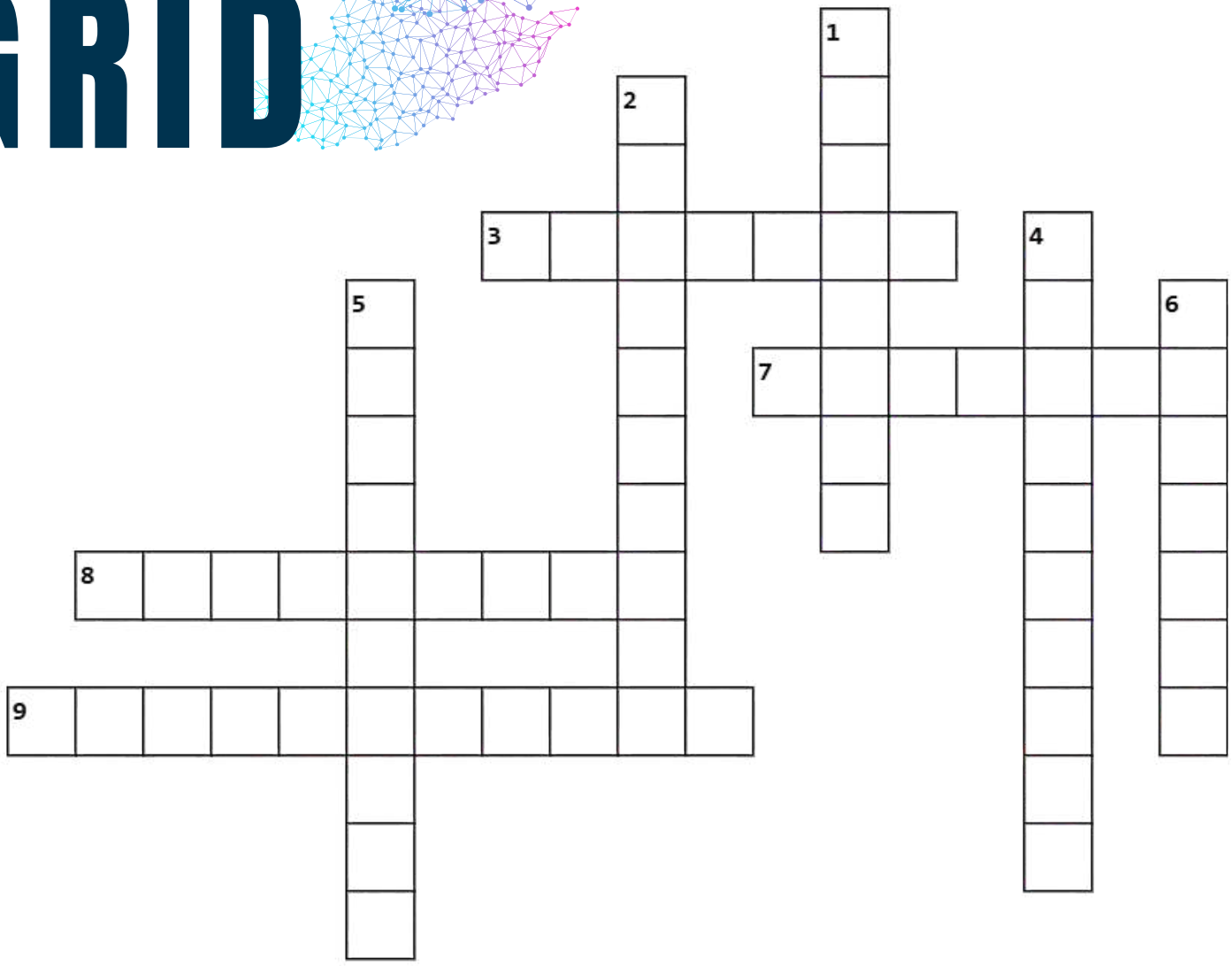
1. Print an opening scenario.
2. Give the user two or three choices using input.
3. Use if-elif-else statements to branch the story.
4. Print different endings based on choices.
5. Test multiple paths to ensure all choices work.

# FUN CORNER

## ENJOY TILL YOU CAN!



# DEBUG THE GRID




## ACROSS

**3**. Not edible, but websites store them.
**7**. Prove you're human by clicking traffic lights.
**8**. Step-by-step recipe computers follow.
**9**. The main circuit hub of your computer.

## DOWN

**1**. Barrier between your computer and threats.
**2**. One who talks to machines in code.
**4**. Scrambling data so only the right person can read it.
**5**. Illegal activity carried out online.
**6**. Umbrella term for viruses, worms, Trojans.

*RIA CHADDHA, 12C*

# TECH JOKES

## PUN INTENDED

01

### WHAT DID THE JAVA CODE SAY TO THE C CODE?

You've got no class!

02

### WHY DON'T PROGRAMMERS LIKE NATURE?

It has too many bugs.

03

### WHY DID THE PASSWORD GO TO THERAPY?

It had too many issues!

04

### WHY DID THE COMPUTER GET COLD?

Because it left its Windows open.

05

### WHY DID THE COMPUTER SHOW UP AT WORK LATE?

It had a hard drive.

06

### WHY DID THE PROGRAMMER QUIT HIS JOB?

Because he didn't get arrays.

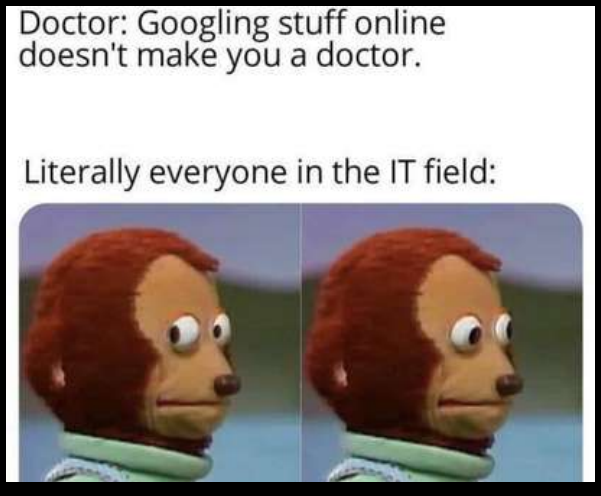
AKSHAT BANSAL, 12C

# MEMES

RUHAAN JAGOTA, 12A





# STUDENT SPOTLIGHT

*INNOVATE . INSPIRE . ACT.*

# AT A GLANCE

## EXPLORING THE SOLAR SYSTEM IN AUGMENTED REALITY

### Grade 6

Learning is all about bringing concepts to life. Our CBSE Grade 6 students recently explored the wonders of space through Augmented Reality (AR) using Delightex. They designed interactive AR models of the Solar System, complete with orbiting planets and rotating moons, transforming astronomy lessons into an engaging, hands-on experience.

This activity not only enhanced their understanding of celestial bodies but also sparked curiosity and creativity, proving how technology can make learning truly unforgettable.

## WHEN LITERATURE MEETS LOGIC

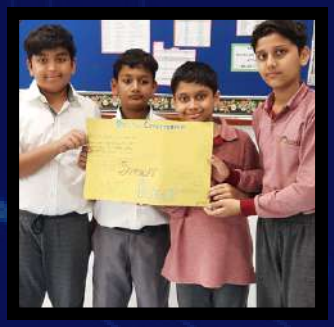
### GRADE 8

There are no boundaries when it comes to learning. Grade 8 CBSE students recently participated in “When Literature Meets Logic!”, an interdisciplinary activity by the English and Computer Science departments.

Using Python’s print() function, students coded their own creative stories: ranging from detective mysteries to sciencefiction and humorous adventures. This unique initiative allowed them to blend creative writing with programming, showcasing their talents as both storytellers and coders.

# FLIP, CREATE AND LEAD DIGITAL CITIZENSHIP IN ACTION

## Grade 6



Grade 6 students embraced Flip Learning to become teachers for a day—exploring the vital theme of Digital Citizenship. They led interactive lessons on cyber safety, online etiquette, and digital responsibility while merging Technology with Art.

Through creative posters and challenge cards, students expressed their ideas visually, solved real-world online dilemmas, and inspired peers to think critically about their digital behavior. This hands-on approach made learning engaging, collaborative, and impactful.


# NORTHERN LIGHTS IN VR

## MIDDLE SCHOOL EXHIBITION

Our middle school students brought the magic of the Northern Lights to life using Delightex VR during the school exhibition.

Through this interactive project, they recreated the mesmerising Aurora Borealis, allowing visitors to experience the phenomenon up close via virtual reality headsets. Students not only demonstrated their technical and creative skills but also shared the fascinating science behind this natural spectacle, from solar winds to Earth's magnetic field.

This innovative showcase blended technology, science, and imagination, making learning both engaging and unforgettable.

# BRILLIANCE BEYOND THE CLASS


**From classroom to competition, their coding skills inspire and lead the way. They remind us that every challenge is a step toward mastery.**

"My teammate, Kalp, and I participated in a Python coding competition hosted by the Khaitan School. Approximately 15–20 teams participated, with 10 advancing to the finals. We were proud to secure the third place. It was a wonderful experience that strengthened our coding skills and teamwork while representing our school."

**AKSHAT BANSAL, 12C**


# FROM LEARNING TO SETBACKS

## Genesis at The IPSC IT Fest at B.K. Birla Centre for Education, Pune

From 17th to 19th July 2025, students of class 12 CBSE and DP/CP 2 represented the school at 'Innovative Xuberant - IPSC IT Fest 2025'. Competing across multiple events like the Coding Challenge, Innovating through Multimedia, Birla Shark tank, and IT Quiz, our team displayed creativity, skill, and determination throughout.

While the outcomes of certain events reflected some challenges in terms of judging and coordination, we chose to see these experiences positively, as lessons in resilience and sportsmanship. IPSC has always stood for fostering collaboration and innovation among young learners, and this edition of the IT Fest reminded us that true growth lies not just in winning but in holding on to integrity, adaptability, and fair play.

Beyond the competitions, the Fest offered moments that will stay with us forever. From our peaceful visit to a nearby Ganesh temple to the lively DJ night where students from across India bonded over music and dance, the experience was a perfect blend of learning and celebration. Though the scoreboard may not have captured the full extent of our efforts, the friendship, exposure, and inspiration that we gained were far more rewarding. The IPSC IT Fest '25 was not merely an event but a journey that strengthened our belief in teamwork and the Genesians' spirit of excellence.

**AADITYA VERMA, 12C**

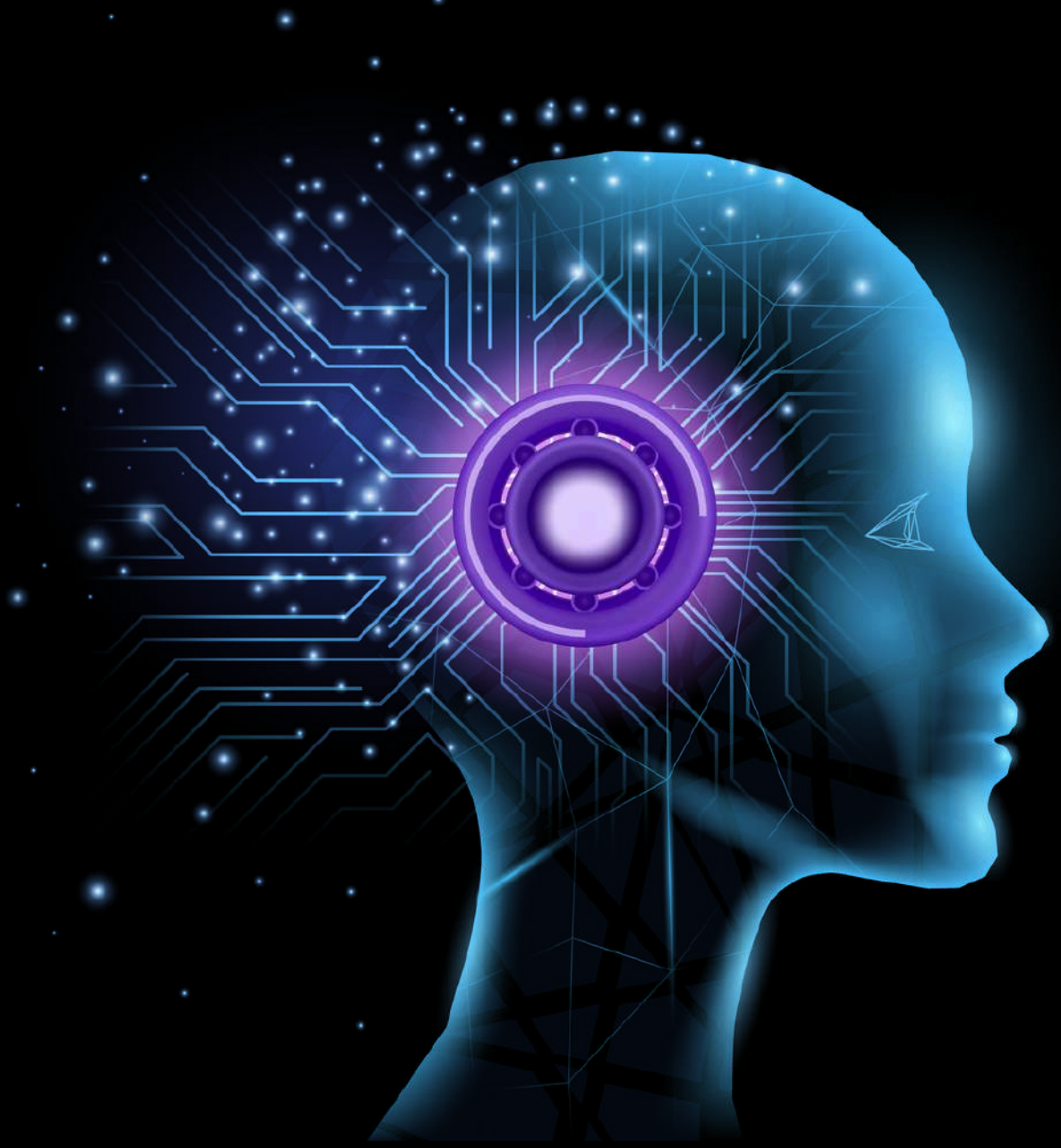
GENESIS GLOBAL SCHOOL
Promising Futures

INDIAN PUBLIC SCHOOLS' CONFERENCE

# STUDENT'S EYES

## At the IPSC IT Fest

# “THE BEST WAY TO PREDICT THE FUTURE IS TO INVENT IT.”
# ~ ALAN KAY



*Have thoughts, ideas, or stories for our next edition?*

***DROP THEM AT***

gtc@genesisgs.edu.in