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Pt. MOHAN LAL S.D. COLLEGE FOR WOMEN, GURDASPUR

A MULTI FACULTY POST GRADUATE INSTITUTE

Re - accredited with 'A' grade by NAAC (3rd cycle 2024)

IIC Ranking '3 Star' Rating by Ministry of Education 2025

Listed in the Tribune Guide to best colleges 25th April, 2025

MANAGED BY: GGDSD COLLEGE SOCIETY, CHANDIGARH

AFFILIATED TO: GURU NANAK DEV UNIVERSITY, AMRITSAR

OUR INSPIRING SPIRIT

PT. MOHAN LAL JI

FORMER EDUCATION, HOME AND FINANCE MINISTER, PUNJAB
FOUNDER PRESIDENT OF GGDSD COLLEGE SEC-32, CHANDIGARH
PT. MOHAN LAL S.D. COLLEGE FOR WOMEN, GURDASPUR
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SH. UPKAR KRISHAN SHARMA JI

FORMER PRESIDENT GGDSD COLLEGE SOCIETY, CHANDIGARH
FORMER PRESIDENT PTMLSD COLLEGE FOR WOMEN, GURDASPUR
EX-VICE PRESIDENT, EVEREADY INDUSTRIES INDIA LTD.

E-MAGAZINE

'DARPAN'

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Chief Editor : Principal

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Editor

Dr. Khushboo
Editor

Mr. Ashwani
Technical Expert

Dear Sdians...

It gives me immense sense of fulfilment when I look at the monthly edition of college e-Magazine 'DARPAN'. The essential purpose of e-magazine 'DARPAN' is to inform, engage and inspire faculty, students, parents, alumni and our stakeholders. This e-magazine endeavors to reflect the values and the long tradition of excellence of the institution itself. Throughout the year campus buzzes with various activities that makes learning experience at SD Gurdaspur, a unique one. The perpetual efforts of the faculty, students and clubs/societies of the college in keeping the campus alive are commendable. Workshops, conferences, competitions, rallies, sports, guest lectures, FDPs, PDPs and a great variety of activities that corroborate academic learning help our students to grow in the real sense.

I congratulate Er. Surkhab Shelly and Dr. Khushboo (editors) for giving practical shape to my idea of e-magazine and wish all the best for inspired and result oriented session.

Dr. (Mrs.) Neeru Sharma

Principal

ANNUAL CONVOCATION

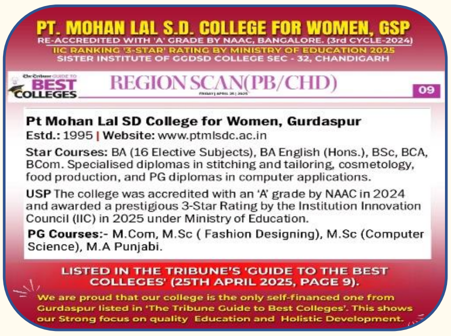
  

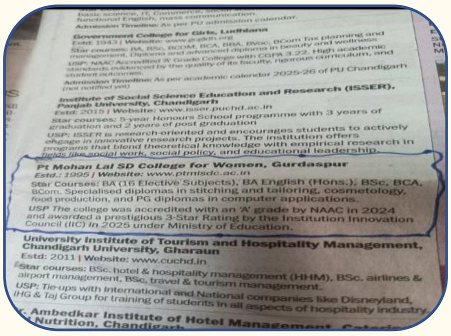
The Annual Convocation of the college was held under the guidance of Principal Dr. Neeru Sharma. The chief guest was Dr. Karamjit Singh, Vice Chancellor of Guru Nanak Dev University, Amritsar. The event was graced by distinguished dignitaries including Dr. P.K. Bajaj (General Secretary, College Management Committee), Mr. Jatinder Bhatia (Finance Secretary), Dr. Ajay Sharma (Principal, GGDSD College, Chandigarh), Mr. Hira Mani Agarwal (Chairman, Local Managing Committee), Mr. Arvind Hastir, Mr. Baldev Sachdeva, Mr. Gorath Nath, Mr. Kamaljit Singh, and other respected members. The ceremony commenced with a floral welcome of the chief guest by the college management and Principal Dr. Neeru Sharma. Dr. P.K. Bajaj expressed gratitude to Dr. Karamjit Singh for gracing the occasion, followed by a brief profile presentation of the chief guest by Mrs. Sandeep Kaur Goraya. College Principal Dr. Neeru Sharma presented the annual report, highlighting notable achievements in academics, cultural activities, sports, and other domains. Degrees were conferred on approximately 192 students across postgraduate and undergraduate programs. Special recognition was given to Guru Nanak Dev University gold medalists Kumari Ramandeep Kaur, Rajwinder Kaur, Kamini Sharma (B.SC Non-Medical), and Kumari Ramanpreet Kaur (B.SC Fashion Designing). International boxer Arshdeep Kaur and national players Manjit Kaur and Gurpreet Kaur were also honoured for their sporting achievements. In his address, Dr. Karamjit Singh congratulated the graduates, encouraging them to stay resilient, uphold good values, and draw inspiration from the teachings of Guru Nanak Dev Ji. The vote of thanks was delivered by Mr. Jatinder Bhatia, who appreciated the Vice Chancellor's presence and advised students to imbibe the guidance shared.

ENTREPRENEUR MELA 2025 – A CELEBRATION OF TALENT, TASTE & INNOVATION

The Entrepreneur Club, Youth Club & IIC organized two-day Entrepreneur Mela 2025 with great enthusiasm, showcasing the vibrant spirit of student entrepreneurship, innovation, and cultural richness. Day 1 witnessed a dynamic start with Hon'ble Barindermeet Singh Pahra (MLA, Gurdaspur) gracing the event as Chief Guest. Student-led stalls reflected innovation and cultural pride that included Desi Swad Bazar: Flavor-packed offerings like Bhelpuri, Lemon Water, Fruit Punch, Noodles, Muradabadi Dal, Fruit Custard, and Vada Pav; Beauty Bar: Mehandi, nail art, and grooming tips; Rangreza Collection: Ethnic wear honoring Punjabi heritage; Amway Booth: Health and self-care awareness; Nature Bucket: Eco-friendly organic jars; Brush & Bloom: A display of student artworks; Alumni Adda: A 'Learn & Earn' initiative led by former students; live Sketch Corner: Live portraits by a talented commerce student, inspiring all with her dedication and skill. Day 2 brought a fresh wave of innovation and sustainability. Highlights included Nature & Style Hub: Eco-friendly items like plants, biodegradable pots, and cloth bags; Glow Clinic: Herbal skincare consultations in collaboration with the Inner Wheel Club; Gadgets Galaxy: Smart gadgets and tech innovations; BMI Booth: Health awareness with fitness checks; Suits & Laces Boutique: Elegant fashion by student designers; Comfort & Craft: Handloom home linen with a touch of tradition. Esteemed guests Shri Arvind Hastir (Governing Body Member) and S. Harmanpreet Singh (Senior Journalist, Punjab Kesari) inspired students through their insightful words.

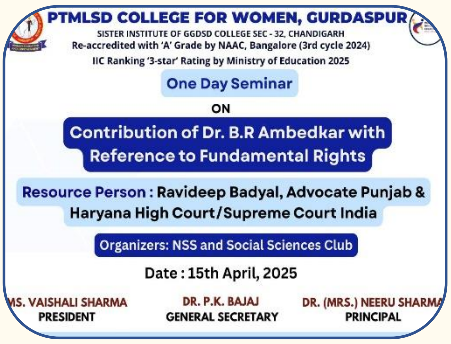
COLLEGE ACHIEVEMENT





It is a matter of great pride that our college has been featured in 'The Tribune Guide to Best Colleges' (25 April, 2025 pg. 9), a significant recognition of the Institution's sustained commitment to academic excellence and holistic education. It is worth mentioning that ours is the only self-financed college from Gurdaspur to earn a place in this prestigious Publication. We extend our gratitude to Management, Parents, Staff, Alumni and well-wishers whose collective efforts have contributed to this milestone. This recognition is the outcome of our NAAC 'A' grade in 3rd cycle in October 2024 and 3 Star rating in IIC by the Ministry of Education.

ONE-DAY SEMINAR



The NSS Unit and Social Sciences Club organized a one-day seminar on 'Contribution of Dr. B.R. Ambedkar with Reference to Fundamental Rights' on the occasion of Dr. Ambedkar's birth anniversary. The resource person for the session was Mr. Ravideep Badyal (Advocate Punjab & Haryana High Court / Supreme Court India) who delivered an insightful and thought-provoking lecture. He spoke in depth about Dr. Ambedkar's visionary thoughts, highlighting how Ambedkar believed in justice, equality, liberty, and fraternity as the pillars of a strong and inclusive nation. He also elaborated on Fundamental Rights added in IIIrd chapter and contribution of B.R. Ambedkar.

30 DAY FITNESS CHALLENGE

Under the insightful direction of College Principal and supervision of Mr. Samrath Sharma, CEO of National EduTrust of India, 25 students participated and accomplished the 30-Day Fitness Challenge from 1st March, 2025 to 31st March, 2025. The participants performed 30 different exercises in these 30 days. The college got the "Champion of Wellness and Vitality Award" and all participants got fitness certificates from the National EduTrust of India. For distribution of certificates to the participants, Mr. Ramesh Mahajan, National Awardee Director IRAC, Gurdaspur was invited as Chief Guest. College Principal Dr. Neeru Sharma congratulated all the participants and acknowledged Mr. Samrath Sharma, CEO of National EduTrust of India for organizing such events to create awareness among students for good health.

EDUCATIONAL VISIT

The Cosmetology Department organized an educational visit to Anamika Salon and Academy, Gurdaspur. The visit provided valuable exposure to salon operations. Mrs. Ranju Soni, the owner, demonstrated the Hydra Facial technique step by step and provided product knowledge. Students gained practical insights into the procedure, making the experience highly beneficial and exciting as they observed the entire process firsthand. College Principal Dr. (Mrs.) Neeru Sharma appreciated the faculty's efforts in organizing such an informative visit.

ONE - ACT PLAY

The English department organized a one - act play ' The Progress' written by St. John Ervine. Dr. Ashwani Bhalla, Principal, Govt. College, Gurdaspur graced the occasion as the chief guest. 'The Progress' is a thought-provoking play that explores the themes of human ambition, morality and the cost of modern advancement. The play was performed by the students, Ishwardeep Kaur, Krishma, Mitali and Sehejdeep Kaur from the department and showcased their acting and creative talents. The performance was well-received by the audience, who appreciated the students' dedication and the play's engaging storyline.The acting skills of the students generated a thunderous applause from the audience. It not only showcased the theatrical talents of the students but also encouraged critical thinking about the ethical implications of the progress.The chief guest of the day was highly impressed with the performance of the students and appreciated their skills of acting. He motivated them to continue their efforts in English theatre. The College Principal felicitated the guest and expressed her gratitude to him for giving his valuable time to the event. Dr. Dinesh Sharma, Head, Department of English and other faculty members received commendation for organizing such a meaningful and well-executed event. Students were honoured with certificates and gifts.

CELEBRATING PI DAY

Maths department of the college displayed a wall magazine to commemorate the value of Pi day. The Wall magazine was displayed to enlighten the students about the importance of Pi. Various posters, diagrams, slogans, pictures etc. representing the value of the term Pi were displayed. College Principal appreciated Maths department faculty for arranging this event for students.

CAREER COUNSELLING SESSION

The Career Guidance & Placement Cell in collaboration with the IIC organised a two day career session that aimed at empowering students with future-ready career options. The session was led by Dr. Agrim Verma, Dean Admission, PTMLSD Business School, Chandigarh. She focused on Artificial Intelligence and its limitations compared to human intelligence. The session ignited curiosity among attendees, opening doors to emerging careers in AI and Data Science. The second session, held in partnership with NIIT, introduced the Axis Bank Young Bankers Program, emphasizing professional training, and the path to financial independence. We were privileged to have Mr. Narinder Salaria (Service Provider for NIIT Ltd.) and Mr. Praveen Kumar (Faculty, CRACK ACADEMY, New Delhi) as the resource persons for the session. Their expertise and guidance significantly enriched the event, offering students valuable insights into career planning and the opportunities available in the banking and finance sectors.

ALUMNI MEET

The Alumni Association organized an amazing Alumni Meet for the session 2023-24. It was a grand celebration that brought together former students from different batches to reconnect, reminisce, and create new memories. The atmosphere was truly vibrant and filled with excitement. To add to the joyous occasion, Principal Dr. (Mrs.) Neeru Sharma spared the time to address the gathering. She shared college achievements with special reference to NAAC A grade and 3 Star IIC ranking with them. She expressed her heartfelt support for the students and wished the Alumni the very best for their future endeavors. Dr. Dinesh Sharma (Head, Alumni Association) thanked the alumni for their continuous support. It was a fantastic opportunity for former students to come together and celebrate their shared experiences.

SLOW LEARNERS MEET

A meeting of weak students was organized by the Slow Learners Club. The members encouraged the students to revise important questions and previous year university papers in order to clear exams. The College Principal motivated students to study hard and to set their priorities first. She guided them to devote time to studies and interact with their concerned subject teachers to clear doubts.

ADVANCE LEARNERS MEET

A meeting of Advance Learners of all streams was organised by incharges. During the meeting Principal Dr. (Mrs.) Neeru Sharma gave tips to students on the basis of their Pre semester exams. She interacted with students personally and motivated them to secure more University merits and distinctions. Students were encouraged to ask maximum doubts in their classes. They were advised to revise question papers of the last two years and take special tests from concerned subject teachers.

CELEBRATING WORLD CREATIVITY AND INNOVATION DAY



A Bag-Making Competition was organized by the Celebration Cell of the IIC to celebrate World Creativity and Innovation Day. The event aimed to encourage creativity, sustainability and innovation among students. Students showcased their talent by designing and painting beautiful bags. Dr. Rajan Choudhary from Batala appreciated the efforts of the participants and selected the best three bags based on creativity, design and overall presentation.

CELEBRATION OF WORLD INTELLECTUAL DAY



The Celebration Cell of IIC organized an interactive session to mark World Intellectual Day. The session highlighted the significance of intellectual growth in modern era. Dr. Ravneet Kaur, IIC Convener led an inspiring session emphasizing critical thinking and lifelong learning. The event witnessed enthusiastic participation from students and faculty, fostering a vibrant environment for idea exchange. Various real-life examples and thought-provoking questions engaged the audience throughout the session.

CELEBRATION OF WORLD HEALTH DAY

The NSS Unit and Sports Club organized a 'Yoga Session' to celebrate 'World Health Day' Addressing the students, the College Principal said that the real wealth of a person is his health which helps a person to maintain focus in his life. She said that healthy youth can make an important contribution in the development of a nation. She motivated students to adopt yoga on regular basis.

BIRTH ANNIVERSARY OF PT. MOHAN LAL JI

The Central Association commemorated the birth anniversary of our esteemed founder, Pt. Mohan Lal Ji, with a charitable outreach programme in a local slum area, where eatables were distributed to underprivileged children. Prior to this, the Principal, staff, and students paid floral tributes to Pt. Mohan Lal Ji, honouring his legacy as a devoted social worker. College Principal Dr. (Mrs.) Neeru Sharma appreciated everyone’s efforts, highlighting that remembering Pandit Ji is both a tribute to his ideals and a reaffirmation of the college’s social responsibility.

CELEBRATING NAVRATRAS



A Mata Ki Chowki was organized in Hira Devi Hostel to celebrate Navratras. Hostellers sang bhajans in devotion to Goddess Durga. Principal Dr. (Mrs.) Neeru Sharma and hostel incharges also joined the event. It was a joyful and spiritual gathering that promoted cultural values and unity.

ALUMNI CARNIVAL



The Alumni Association of the college in collaboration with IIC organized a vibrant Alumni Carnival that served as a dynamic platform to showcase alumni-led startups and entrepreneurial ventures. 56 alumni from various batches returned to campus to present innovative 10 stalls featuring unique products and services, ranging from tech solutions and handcrafted goods to food brands and fashion labels. Each stall reflected the creativity, resilience, and business acumen behind their startup journeys. The event not only celebrated alumni success but also inspired current students by offering valuable insights into real-world entrepreneurship, fostering a strong startup culture and encouraging future innovation within the college community.

HONOURING OF MERITORIOUS STUDENTS

A ceremony was organised to honour meritorious students for their academic excellence. Dr. Ashwani Bhalla, Principal, Govt. College, Gurdaspur, was the Chief Guest. He motivated students to strive for lifelong learning. The event recognized those who excelled in the college examinations across various streams and disciplines. Certificates of appreciation were awarded to the deserving students as a token of recognition for their hard work, dedication, and outstanding performance.

PARENT TEACHER MEET

Parent Teacher Meet was organised to show the performance of their wards in the pre-semester examination and to get the feedback of the parents about college. There was conducive interaction between parents and teachers during the event as it was the last meeting of this session in which parents, teachers and students gathered on one stage. Parents and teachers discussed the results of the pre- semester exams, including the overall performance, subject-wise scores and areas of improvement. The College Principal met many parents during the meeting personally and provided feedback about the students and suggested means to enhance their performance. Parents were counselled to ensure regular attendance and active participation of their children in academic activities for better performance. The PTM witnessed significant participation from parents and teachers alike.

DECLAMATION AND SLOGAN WRITING COMPETITION

The Science Club and Eco -Club organized a declamation and slogan writing competition to celebrate Earth Day on the theme 'Our power and Our planet'. In the declamation contest, Hargun Kaur and Mahi bagged first and second position respectively. In the slogan writing competition, Geetanjali and Raghvi bagged first and second position respectively. Also, the Red Ribbon Club celebrated World Health Day by organising slogan writing competition.

AWARENESS RALLY – WAR AGAINST DRUGS


An awareness rally was organized by the NSS and Red Ribbon Club under the guidance of the District Administration, Gurdaspur. Motive behind such rallies is to aware our students about bad impact of drugs. The theme of the rally was 'War Against Drugs'. Volunteers from both clubs actively participated in the event to spread awareness about the harmful effects of drug abuse and to motivate the youth to lead a drug-free life.

ROADSHOW CUM RALLY

As the drug menace continues to plague Punjab, Gulab Chand Kataria started six day foot march to create awareness about the drug problem. During this march he addressed public gathering at PTMLSD college, Fatehgarh Churian. Fifty volunteers of the NSS unit and two program officers contributed significantly to the roadshow cum rally under the Drug-Free Punjab Campaign started by the Governor. College Principal Dr. (Mrs.) Neeru Sharma also joined this rally. A slogan writing competition was organized by the Fine Arts Department of the college and after that volunteer participated in the Drug-Free Punjab Campaign. On this occasion, volunteers raised slogans against drugs. Our worthy Management members from Chandigarh acknowledged the contribution of NSS volunteers and incharges Dr. Sukhwinder Kaur and Mrs. Samita .

UNDERSTANDING BEHAVIORAL FINANCE IN INVESTMENT DECISION-MAKING

Introduction

Investment decisions are often viewed through the lens of logic, mathematics and economic theory. Traditional finance assumes that investors are rational actors who make decisions based on risk, return and available information. However, real-world investing often tells a different story which is driven not just by data, but also by emotions, biases and psychological patterns. This is where behavioral finance comes into play. Behavioral finance combines insights from psychology and economics to explain why investors sometimes make irrational financial choices. It helps us understand how cognitive errors and emotional influences can impact investment decisions—often leading to suboptimal outcomes.

Behavioral Finance: Meaning

Behavioral finance is the study of how psychological influences and biases affect the behavior of investors and financial markets. It challenges the traditional assumption of rational decision-making and instead suggests that human behavior is influenced by emotion, cognitive limitations and social factors. This field gained popularity after the 2002 Nobel Prize in Economic Sciences was awarded to Daniel Kahneman, who, along with Amos Tversky, laid the groundwork for behavioral economics. Since then, behavioral finance has become essential to understand real-world investor behavior.

Common Behavioral Biases in Investing

Several cognitive and emotional biases can impact investors. Here are some of the most influential ones:

- **Overconfidence Bias**

Many investors believe they are better at predicting markets than they actually are. This overestimation of knowledge or ability can lead to excessive trading and risk-taking. Studies show that overconfident investors often underperform the market because they ignore potential risks.

- **Herd Mentality**

People tend to follow the crowd, especially during market booms or crashes. This behavior is evident in stock market bubbles, where investors buy into rising prices simply because others are doing the same, not because of sound financial analysis.

- **Loss Aversion**

According to Kahneman and Tversky's Prospect theory, people feel the pain of a loss more intensely than the pleasure of an equivalent gain. As a result, investors might hold onto losing stocks longer than they should or avoid potentially profitable but risky investments.

- **Anchoring Bias**

Investors often rely too heavily on the first piece of information they receive—such as the purchase price of a stock and make decisions based on that "anchor," even if market conditions have changed significantly.

- **Confirmation Bias**

This occurs when investors seek out information that supports their existing beliefs and ignore evidence that contradicts them. It can lead to poor judgment and a lack of objectivity in decision-making.

Behavioral Finance in Action: Real-World Examples

- Dot-com Bubble (1997–2000): Investors poured money into tech startups with little revenue, driven by hype and herd behavior. The bubble eventually burst, leading to massive losses.

- 2008 Financial Crisis: Overconfidence in mortgage-backed securities and the belief that housing prices would never fall contributed to irrational risk-taking, resulting in a global financial meltdown.
- Cryptocurrency Craze: Many investors entered the crypto market based on social media trends and fear of missing out (FOMO), rather than thorough analysis.

These examples show how psychological factors can have significant economic consequences.

Improving Investment Decisions with Behavioral Insights

Understanding behavioral finance can help investors make more rational and informed decisions. Here are a few strategies to combat biases:

- Set clear investment goals: Having a long-term strategy can help resist emotional reactions to short-term market volatility.
- Diversify your portfolio: This reduces risk and prevents overexposure to a single asset class.
- Avoid frequent trading: It's often driven by emotion and can lead to lower returns due to transaction costs and taxes.
- Stay informed but objective: Seek multiple sources of information and question your own assumptions.
- Use professional advice: Financial advisors can offer an unbiased perspective and help manage emotional decisions.

The Role of Behavioral Finance in Financial Planning

Behavioral finance is increasingly being integrated into financial planning and advisory services. Financial advisors now use behavioral tools to assess a client's risk tolerance, emotional triggers, and decision-making styles. This allows for more personalized and effective financial advice. For instance, robo-advisors (automated digital platforms) are being programmed with behavioral finance principles to help investors avoid panic-selling or overtrading during market swings.

Conclusion

Behavioral finance provides a deeper, more realistic view of how and why investors make decisions. While no one is immune to biases, being aware of them is the first step toward making smarter investment choices. In an era of market uncertainty and rapid change, understanding the human side of finance is not just important rather it's essential. By combining traditional financial knowledge with insights from psychology, investors and professionals alike can develop strategies that are not only technically sound but also behaviorally intelligent. After all, successful investing isn't just about what you know—it's also about understanding how you think.

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MRS. SEEMA MAHAJAN

HEAD & ASSISTANT PROFESSOR

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PROGRAMMING LANGUAGES

Programming Languages are the digital era's backbone. They act as a means for humans to communicate instructions to computers and create software solutions.

From low-level assembly languages to high-level scripting languages, each type serves a specific purpose and offers unique capabilities.

Programming languages are formalized systems used by developers to instruct computers on specific tasks. They serve as intermediaries between human logic and machine operations, facilitating the creation of software applications, websites, and systems that power modern technology.

Types of Programming Languages

Programming languages can be broadly categorized based on their abstraction level and usage:

1. **Low-Level Languages: These include machine and assembly languages. Machine language consists of binary code directly understood by the computer's hardware. Assembly language uses mnemonic codes to represent machine-level instructions, providing a slight abstraction to simplify programming. However, both require detailed knowledge of the computer's architecture.**

2. **High-Level Languages: Designed to be user-friendly, high-level languages allow developers to write code that is more abstracted from machine operations. They often resemble human languages and include features like control structures, data types, and syntax that are easier to read and write. Examples include Python, Java, and C++.**

Historical Development

The evolution of programming languages reflects advancements in computing and shifts in developer needs:

- **1950s: FORTRAN and COBOL:** FORTRAN (Formula Translation) was developed for scientific computations, while COBOL (Common Business-Oriented Language) was designed for business data processing.
- **1960s: ALGOL and BASIC:** ALGOL (Algorithmic Language) introduced block structure and influenced many subsequent languages. BASIC (Beginner's All-Purpose Symbolic Instruction Code), co-developed by Thomas Kurtz and John Kemeny in 1964, aimed to make programming accessible to non-experts.
- **1970s: C and Object-Oriented Languages:** C provided efficient low-level access and structured programming features. Object-oriented languages like Smalltalk and later C++ emphasized data abstraction and code reusability.
- **1990s: Scripting and Web Languages:** Languages like JavaScript and PHP emerged to handle dynamic content on the web, enabling interactive features and server-side processing

Modern Programming Languages

Contemporary languages address specific needs in software development:

- **Python:** Known for its readability and extensive standard library, Python is widely used in web development, data analysis, artificial intelligence, and scientific research.
- **JavaScript:** Essential for web development, JavaScript enables interactive elements on web pages and is also used in server-side development with environments like Node.js.
- **Rust:** Emphasizing safety and performance, Rust prevents memory-related errors without sacrificing speed, making it suitable for system-level programming. A 2022 study highlighted Rust's growing popularity among developers.

- ## Choosing a Programming Language

Selecting a programming language depends on various factors, including the project's requirements, performance needs, and the development team's expertise. For instance, system-level programming might favor languages like C or Rust, while web applications might lean towards JavaScript or Python. It's also essential to consider the language's community support, available libraries, and frameworks that can accelerate development.

Conclusion

Programming languages are foundational to the field of computer science, each offering unique features and capabilities tailored to different aspects of software development. Understanding their evolution and characteristics aids developers in making informed decisions that align with project goals and technological advancements.

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MS. SONAM SURI

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5G AND BEYOND: THE FUTURE OF TECHNOLOGY

"Do you remember the days of 2G and 3G, when buffering a video felt like an eternity? Now, imagine downloading a movie in just a few seconds. That's the power of 5G".

Technology is evolving at an incredible speed. From the 1G mobile networks to the highly advanced 5G technology. Every generation of technology bring new advancements that change the way we live, work and communicate. One such development is 5G – The Fifth Generation of mobile networks . But 5G is not just about faster internet; it's about creating a whole world of possibilities. But what's next ? Let's explore what the future holds.

The Road To 5G : A Quick Recap

- **The first generation of mobile networks, known as 1G, introduced wireless voice communication.**

- **With the arrival of 2G, mobile networks became digital. This improved call quality, added SMS (text messaging), and made communication more reliable.**
- **3G was a game-changer. It brought faster internet speeds, enabling video calls, web browsing, and multimedia sharing was the beginning of smartphones.**

- **With 4G, mobile internet became incredibly fast. Streaming videos, playing online games, and using advanced mobile applications became smooth. It also laid the foundation for app-based services like Uber, online shopping, and food delivery.**

WHAT IS 5G ?

5G, or the fifth generation of wireless technology, is a revolutionary advancement in mobile networks that offers significantly higher speeds, lower latency, and greater connectivity compared to its predecessors. It enables faster data transfer rates, reaching up to 10 Gbps, which is about 100 times faster than 4G. With ultra-low latency, as low as 1 millisecond, 5G ensures real-time communication, making it ideal for applications like autonomous vehicles, remote surgeries, and smart cities. 5G is not just about faster internet; it is about changing the world. It will improve industries, make communication easier, and introduce new technologies that were once only in science fiction.

The Next Generation Beyond 5G:

The future is exciting, and with 5G and upcoming technologies, we are stepping into a smarter and more connected world! Researchers are already working on 6G, which could arrive by 2030. It promises even faster speeds, AI Driven networks, and applications like brain computer interfaces. Imagine controlling your phones and car with your thoughts!

Key Features of 6G:

- **Terahertz (THz) Frequencies – Speeds up to 100 Gbps or even 1 Tbps, enabling ultra-fast data transmission.**
- **AI-Driven Networks – Intelligent, self-optimizing systems for better efficiency and connectivity.**
- **Holographic Communication – Real-time 3D holograms for meetings, gaming, and education.**
- **Quantum Communication – Highly secure encryption using quantum mechanics.**
- **Internet of Everything (IoE) – Seamless connectivity between humans, machines, and smart environments.**

Conclusion

6G technology will bring many benefits and will also improve healthcare, education, and daily life. However, we must use it wisely because it may also have negative effects, such as privacy concerns, radiation risks, and over-dependence on technology. Like everything, 6G also has both good and bad sides. If we use it responsibly, it can make our lives easier and better without harming us or the environment.

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NANDINI GUPTA

BCA 6TH SEM

ROLL NO. 2918

INDIA’S E-COMMERCE BOOM: PROJECTED GROWTH AND EMERGING TRENDS

Introduction

India’s e-commerce sector is experiencing unprecedented growth, reshaping the nation’s retail landscape. Recent reports forecast a significant expansion, with the market size projected to reach $550 billion by 2035, growing at a compounded annual growth rate (CAGR) of 15% from $125 billion in 2024. This surge is driven by factors such as increasing internet penetration, widespread smartphone adoption, and a tech-savvy young population. India’s e-commerce sector is poised for substantial growth, driven by increasing internet penetration, rising disposable incomes, and a growing consumer preference for online shopping.

Understanding the meaning of E-commerce in business

E-commerce refers to the buying and selling of goods and services through the internet. It involves any kind of commercial transaction conducted online. It has revolutionized the way businesses operate and how consumers shop. It is an integral part of the modern economy, enabling fast, efficient, and global trade. With the continuous advancement of technology, E-commerce is expected to evolve further, making transactions even more seamless and secure.

Projected growth of E-commerce market

India’s e-commerce market is expected to reach a significant value, growing at a compound annual growth rate (CAGR) of approximately 20% over the next few years. Several factors contribute to this impressive growth. Firstly, the increasing internet penetration,

particularly in rural areas, is expanding the consumer base for online retailers. Secondly, the rise in disposable incomes is enabling more Indians to afford online purchases. Thirdly, the growing adoption of smartphones is making online shopping more convenient and accessible. Finally, the increasing trust in online payment systems is further encouraging online transactions.

India is a mobile-first economy, with mobile commerce accounting for 80% of e-commerce transactions, driven by widespread smartphone use and low fixed-line broadband penetration.

Key players in the Indian e-commerce market include established giants like Amazon and Flipkart, as well as a host of emerging domestic companies that are rapidly gaining market share.

The COVID-19 pandemic acted as a major catalyst for e-commerce adoption in India, with many consumers turning to online shopping for the first time due to lockdowns and social distancing measures. This has led to a significant increase in online sales across various product categories, and has accelerated the overall growth of the market.

Projected Growth Trajectory: Factors Driving Expansion and Future Forecasts

Future forecasts for the Indian e-commerce market paint a picture of continued robust growth. Industry analysts predict that the market will reach unprecedented valuations within the next few years. Several key factors will drive this expansion, India boasts the second-largest internet user base globally with 881 million users.

India is projected to reach over 900 million active internet users by 2025, with a significant 56% of new users hailing from rural areas. This is coupled with a notable rise in female internet users, who will account for 65% of new users, marking a shift towards inclusivity and empowerment. The growing digital presence also highlights how

media affects the share market , as increased access to information influences investment decisions and market trends

Another key driver of e-commerce growth in India is the increasing popularity of mobile commerce (m-commerce). With the vast majority of Indians accessing the internet through their smartphones, m-commerce is becoming the preferred way for many consumers to shop online. E-commerce companies are investing heavily in their mobile apps and websites to provide a seamless and convenient shopping experience for mobile users.

The increasing availability of financing options, such as buy-now-pay-later (BNPL) schemes, is also helping to drive e-commerce growth in India. These financing options are making it easier for consumers to afford expensive products online and are encouraging them to make larger purchases. The future of e-commerce in India is promising, with projections indicating annual growth rates of 18% through 2025. By 2030, India is anticipated to emerge as the third-largest consumer market globally, underlining the vast opportunities and potential that lie ahead of the e-commerce sector in the country.

The rise of emerging technologies like augmented reality, artificial intelligence, and machine learning will revolutionize the way consumers interact with e-commerce platforms, leading to more personalized and immersive shopping experiences. Additionally, as the Indian economy continues to grow and consumer spending power increases, coupled with the facilitation of 100% FDI in B2B e-commerce and marketplace, India's e-commerce ecosystem is poised for sustained growth and innovation.

Current and Emerging Trends

Notably, the rural internet subscriber base is growing rapidly, currently standing at 375.66 Mn subscribers, indicating the democratization of

online access. Close to 100% of pin codes in India have seen e-commerce adoption. As per the study titled E-Commerce Logistics: Unveiling Data Driven Shopping Patterns by ISB Institute of Data Science and Ecom Express, Tier-2, Tier-3, Tier-4 cities, and beyond account for the largest volume of online orders, marking a significant shift in consumer behaviour, underlining the ease in shopping, availability of choices, and efficient supply chain infrastructure.

The first-of-a-kind study revealed that one of the most prominent growth hotspots is Port Blair. The fashion and accessories category dominates the e-commerce market, representing 60% of transactions by volume, followed by beauty, cosmetics and toiletries (11%); electronic gadgets (10%); home, kitchen & office (8%); and health, sports and fitness (5%). The Government e-Marketplace (GeM) has played a pivotal role in facilitating government procurement, crossing an impressive INR 4 Lakh Cr in Gross Merchandise Value and doubling its business in a year. Moreover, the Online Network for Digital Commerce (ONDC) has democratized e-commerce by creating an open and inclusive network where buyers and sellers can connect directly, thus empowering small businesses, especially in rural areas.

In two years of its launch, ONDC has onboarded over 2.3 Lakh diverse sellers and service providers, Social commerce is another significant trend, leveraging the power of social media platforms like Facebook, Instagram, and WhatsApp to drive online sales. Other emerging trends include the rise of vernacular e-commerce, and machine learning (ML) to personalize the shopping experience and improve customer service.

Conclusion

India's e-commerce landscape is poised for exponential growth, supported by a tech-savvy population, government reforms, and robust investments from global players. Mobile commerce, digital

wallets, and regional expansion will be key drivers of the next phase of growth.

Firstly, the rapid expansion of internet connectivity, especially in rural areas, is broadening the potential customer base. Additionally, the proliferation of smartphones and affordable data plans has facilitated easy access to online shopping platforms. The increasing digitization of payments through platforms like UPI (Unified Payments Interface) has simplified transactions, fostering trust and convenience among users. Moreover, the emergence of e-commerce marketplaces offering a wide range of products at competitive prices and regular sales has attracted consumers from diverse demographics.

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