TECH OZRIC

MAGAZINE

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ADVANCING KNOWLEDGE THROUGH TECHNOLOGY

DEPARTMENT OF INFORMATION TECHNOLOGY

KGISL INSTITUTE OF TECHNOLOGY, COIMBATORE – 641035

TECH OZRIC MAGAZINE

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DEPARTMENT OF INFORMATION TECHNOLOGY

VISION

To produce Competent Graduates suitable for Industry and Organization in the field of Information Technology by providing industry embedded learning with social responsibility.

MISSION

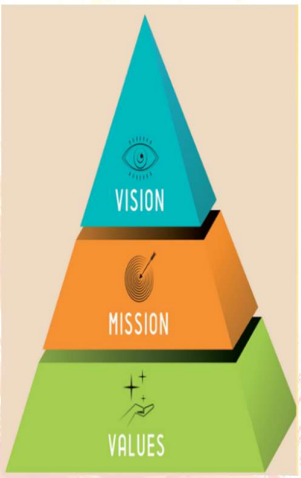
MD-1: To accomplish an effective teaching learning process through innovative practices for empowering the graduates to face societal challenges.

MD-2: To enhance the proficiency of faculty members across various domains of information technology through skill development programs.

MD-3: To nurture IT professionals through the provision of essential infrastructure and facilities for effective learning.

MD-4: To attain research excellence in the field of information technology by instilling the values of self-directed learning and fostering creative thinking through collaborative partnerships with institutes and industries.

MD-5: To foster holistic student growth by engaging them in cocurricular and extracurricular activities.



PROGRAM EDUCATIONAL OBJECTIVES (PEO'S)

PEO1: Demonstrate technical competence with analytical and critical thinking to understand and meet the diversified requirements of industry, academia and research.

PEO2: Exhibit technical leadership, team skills and entrepreneurship skills to provide business solutions to real world problems.

PEO3: Work in multidisciplinary industries with social and environmental responsibility, work ethics and adaptability to address complex engineering and social problems.

PEO4: Pursue lifelong learning, use cutting edge technologies and involve in applied research to design optimal solutions.: Exhibit technical leadership, team skills and entrepreneurship skills to provide business solutions to real world problems.

PROGRAM SPECIFIC OUTCOMES (PSO'S)

PSO1: Develop and deploy software applications using advanced programming languages, data structures, and algorithms to address real-world IT challenges in areas such as system design, web development, and mobile computing.

PSO2: Design and manage IT-based business solutions by leveraging cloud computing, data analytics, and automation tools, demonstrating entrepreneurial capabilities in the IT services and product development sectors.

PSO3: Adapt to the dynamic IT industry by ethically embracing advancements such as artificial intelligence, cybersecurity, and blockchain, while contributing responsibly to societal, environmental, and organizational IT needs.

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Technical Article: "The Ethics of Cyber Security"

By Ms. Sneha N S, IT Department

Cybersecurity ethics play a crucial role in safeguarding sensitive personal and organizational data. Since cyberattacks often target highly confidential information, professionals in this domain must operate with a strong ethical foundation. Poor cybersecurity practices can lead to data breaches, identity theft, financial fraud, and severe privacy violations, ultimately damaging the reputation and operations of an organization. Ethical hacking has become an essential component of modern cybersecurity. While teaching hacking skills helps learners understand threats and defend systems, it also raises concerns about misuse. Therefore, balancing skill development with responsibility and ethical awareness is vital. Cybersecurity professionals handle privileged and sensitive information daily, which demands honesty, confidentiality, and respect for user privacy. Their decisions directly impact customers, organizations, and the wider digital ecosystem. As organizations process increasing volumes of personal data, ethical principles such as consent, transparency, and responsible data handling have become more important than ever. A successful cyberattack can cause financial loss, service disruption, administrative penalties, and reputational damage. Hence, organizations must adopt a holistic cybersecurity approach—strengthening policies, building employee awareness, and implementing continuous monitoring and risk-management strategies.

Phishing remains one of the most prevalent and dangerous threats. Even a single employee falling for a phishing email can lead to a major breach. Regular training, user awareness, and updated defenses are essential to counter evolving phishing techniques. Cybersecurity professionals often face ethical dilemmas, especially regarding network monitoring and user privacy. Clear communication about monitoring practices and adherence to ethical standards help maintain trust while ensuring system protection. Ultimately, integrating ethics into cybersecurity practices allows organizations to build trust, protect critical information, and create a safer digital environment. As the field grows, establishing and following strong ethical codes becomes essential for all cybersecurity practitioners.

Article: "Unlocking the Power of Plant-Based Diets"

By Ms. K. Dhiviya Shree, IT Department

The Greener your plate, the brighter your fate, a future of wellness, where love and health create". Plant-based diets are often misunderstood, with many people believing they're protein-deficient, expensive, and limited. But the truth is, plant-based sources like legumes, nuts, and seeds provide ample protein. Affordable options like beans, lentils, and whole grains make it easy to eat plant-based on a budget and with the rise of plant-based restaurants and meal kits, the options are endless. In reality, plant-based diets offer numerous benefits,

including reduced risk of chronic diseases, weight management, and environmental sustainability. By incorporating more plants into our meals, we can promote overall health and well- being. So, don't let common myths hold you back – give plant-based diets a try and explore the world of flavors and cuisines.

Why the UX Industry Won't Fade Away in 2025? – A Technical Article

By Ms. Nimisha IT Department

The future of UX design has been a hot topic lately, with some voices in the industry predicting a potential decline. However, a deeper look reveals that the outlook is far from bleak. In fact, UX design is more like a thriving city, bustling with creativity and innovation. While challenges and changes are certainly ahead, these only serve to make the industry more dynamic and exciting. It's a rollercoaster of constant evolution, filled with twists, turns, and thrilling opportunities.

Tools and Templates: Allies, Not Threats!

A common concern is the rise of design tools and templates, with some fearing they may replace human designers altogether. However, tools like Google's Material Design, Envato, Freepik, and Flat Icon have been around for years, and rather than disrupting the market, they've proven to be invaluable assets. These tools empower designers, helping them streamline their workflow and focus more on creativity. Far from making designers obsolete, they enhance productivity and enable designers to create even more engaging and innovative experiences.

Technical Article: Serverless Computing

By Ms. S. Ashika, IT Department

Serverless computing is a modern cloud computing model in which the cloud provider automatically manages the infrastructure needed to run applications. Developers can focus solely on writing and deploying code, while tasks such as server provisioning, maintenance, and scaling are handled by the provider. Although servers still exist behind the scenes, all operational responsibilities are abstracted away from the developer.

Serverless computing is commonly implemented through **Functions as a Service (FaaS)** platforms, including AWS Lambda, Azure Functions, and Google Cloud Functions. These platforms execute code in response to events and automatically scale based on demand.

How It Works

- **Event-Driven Architecture:** Serverless functions are triggered by events such as HTTP requests, file uploads, or database updates. When an event occurs, the cloud provider provisions the necessary resources to run the function.
- **Automatic Scaling:** Resources scale automatically based on workload. As event frequency

increases, additional instances are created to handle the load.

- **Cost-Optimized Billing:** Users are billed only for the actual execution time and resources consumed, rather than paying for continuously running servers.

Advantages

- **Cost Efficiency:** Pay only for what you use.
- **Reduced Operational Complexity:** No need to manage or maintain servers.
- **High Scalability:** Automatic scaling ensures smooth performance during traffic spikes.
- **Faster Time to Market:** Developers can focus on code, accelerating development.

Use Cases

- **Web and Mobile Applications**
- **Real-time Data Processing**
- **IoT Applications**
- **Chatbots and AI/ML Workloads**

Serverless computing continues to transform the way modern applications are built by offering a scalable, cost-effective, and developer-friendly approach.

Technical Article: "Organizing a Technical Quiz Event"

By Ms. M. P. Dharani

Organizing a technical quiz event involves careful planning, creativity, and teamwork. The process begins with defining a clear objective, such as testing students' technical knowledge or encouraging problem-solving and collaboration. A catchy title is then chosen to make the event attractive, followed by identifying the target participants like first-year students or all engineering students. The next step is fixing the date, time, and venue, ensuring maximum participation and smooth arrangements. You must also decide whether the quiz will be an individual or team event and then design the quiz format, selecting the number of rounds and types such as MCQs, Rapid-Fire, Picture Identification, Technical Puzzles, and Audio-Visual rounds. Question preparation is an important part—questions should be collected from reliable sources, covering various technical subjects and balanced across easy, moderate, and difficult levels. Proper logistics must be arranged, including projectors, laptops, buzzers, sound systems, and seating, along with assigning volunteer roles like quiz master, scorer, timekeeper, and technical assistant. To attract participants, the event should be promoted through posters, social media messages, and announcements, followed by setting up an online or offline registration process with a proper deadline. Before the event, a rehearsal should be conducted to ensure everything works smoothly. On the event day, the quiz must be executed with proper coordination, fairness, and transparent scoring. After the quiz, winners should be announced and awarded certificates or prizes, and participant feedback should be collected to understand the strengths and areas of improvement. Finally, an event report summarizing the planning, execution, and feedback helps document the success of the technical quiz and serves as a reference for future events.

Technical Article: "Web Development"

By Mr. K. Parvinkumar

The purpose of this assignment is to design and build a fully functional and responsive website using core web development technologies like HTML, CSS, and JavaScript. The website

should follow best practices and be usable across multiple devices (desktops, tablets, and mobile phones).

INSTRUCTIONS:

1. Website Structure:

Create a website that includes the following sections:

- Home – A landing page with a brief introduction or welcome message.
- About – A page or section describing the website's purpose or the background of the person/organization.
- Services/Portfolio – A section that outlines available services or showcases projects.
- Contact – A contact form with fields like name, email, and message.
- Additional Section – Add any additional section relevant to the website's theme (e.g., blog, testimonials, gallery).

2. Design Requirements:

- Use semantic HTML5 elements to structure your content.
- Style the website with CSS, including at least:
- A consistent color scheme.
- A responsive layout using Flex box or CSS Grid.
- Proper use of typography for readability.
- Ensure the website is responsive and works on different screen sizes.
- Include a navigation menu that smoothly transitions between sections.
- Implement hover effects for buttons, images, or links.

3. Technical Requirements:

HTML5: Correct use of HTML tags, semantic elements

CSS:

- External stylesheets for better code organization.
- Media queries to ensure the website adjusts to different screen sizes.

JavaScript:

- Include basic JavaScript for interactive elements (e.g., a button that scrolls to the top or reveals hidden content).
- Add form validation to the contact form (check for empty fields and proper email format).

4. Optional Features (Bonus Points):

- Implement a dark mode/light mode switch.
- Add animations or transitions for enhancing user experience.
- Use JavaScript to load dynamic content (e.g., a gallery or blog posts).
- Integrate any external libraries or frameworks like Bootstrap or jQuery.

SUBMISSION:

- Folder Structure:
- Include HTML, CSS, and JavaScript files.
- Organize assets (e.g.,images, icons) in appropriate folders.
- Live Demo: (Optional) Host your website on a platform like GitHub Pages, Netlify, or any other hosting platform.
- Report: Write a brief explanation (max 300 words) of the design choices, functionality, and technologies used.

USAGE:

- Personal Expression: Build blogs and portfolios to showcase personal interests and achievements.
- Business Presence: Develop company websites and e-commerce platforms for online visibility and sales.
- Interactive Features: Create dynamic content and responsive designs for enhanced user experience.
- Data Management: Implement tracking, analytics, and data visualization for insights and decision-making.
- Security: Ensure safe transactions and protect user data with encryption and vulnerability prevention.

RUN BEFORE YOU CRAWL

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