**Name of the Event:** **Hackathon**

**Event Type:** **Tech-Spotlight**

**Theme:** **Evolution of Technology**

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## Problem Statements

1. **Snake Game, throughout time from Nokia Phones to Android Google Play Instant Games.**
   - Develop a Snake game for Android or web that showcases its evolution from Nokia phones to modern instant games, allowing users to play with retro, intermediate, and modern graphics to experience how gameplay and visuals have evolved over time.

2. **Evolution of Cryptography from simple substitution ciphers (Caesar) to modern encryption ciphers (AES).**
   - Build an interactive website demonstrating the evolution of cryptography, where user-entered plaintext is encrypted using classical and modern ciphers—from Caesar to AES—with step-by-step explanations and animations to visualize how encryption techniques have advanced over time. (Caesar, Playfair, Hill, Rail Fence, Vigènere, Vernam, DES, AES, etc.)

3. **Simulation of Windows 95 OS inside a web browser.**
   - Create a web-based simulation of the Windows 95 operating system that recreates its visual style and core OS behaviour, including basic system features and simulated utility applications such as Calculator and Notepad.

4. **Multiplayer MCQ Quiz based on important innovations in computer technology.**
   - Develop a multiplayer MCQ quiz focused on the evolution of computer technology, testing players on major innovations, historical milestones, and key contributors across computer hardware, software, and technological development.

5. **Generational Social Media Comparison, evolution of social media platforms.**
    - Build a web app that allows users to compare different generations of social media platforms, from early ones like MySpace and Friendster to modern platforms like Instagram or TikTok. Users can see what features were introduced, how the platforms looked, and which technology stacks were used.

6. **Devolution of Python code to C and Assembly (x86)**
    - Using a LLM API, create a tool that converts Python code into C and Assembly code, demonstrating the evolution of programming languages, highlighting trade-offs in performance, readability, and system-level control.

7. **Progress of Display and Storage Media**
    - Emulate how an image would look like in Monochrome, EGA, CGA, VGA, SVGA, XGA, HD (Note: keep in mind the resolution and modes.
    - 3D comparison of disk capacity, speed and occupied space of various storage mediums like Floppy, CD, DVD, HDD, SSD, NVMe, etc.

8. **Communication Evolution Simulator**
    - Send a message through different eras like Telegraph (Morse code, delays), Telephone switchboard (manual connection), Early email (command line), SMS (character limits), Modern messaging (instant, rich)

9. **Morse to Modern: The Messaging Bridge**
    - An android messaging app where a user can type a message in plain English, and the app transmits it to another device in Morse code using the phone's flashlight and rear camera.

10. **A Timeline of Innovation: The Evolution of Computer Technology (1800–Present)**
    - Design an interactive website that uses a calendar or timeline animation to showcase one key invention or discovery from each decade since the 1800s that contributed to modern computer technology, helping users visually understand the long-term evolution of computing.

## Schedule

| Time | Activity |
| --- | --- |
| **Day 1** | |
| 09:30 AM – 09:45 AM | Registration |
| 09:45 AM – 10:00 AM | Introduction |
| 10:00 AM – 01:00 PM | Software Development |
| 01:00 PM – 02:00 PM | Break |
| 02:00 PM – 03:00 PM | Software Development |
| **Day 2** | |
| 09:00 AM – 01:00 PM | Software Development |
| 01:00 PM – 02:00 PM | Break |
| 02:00 PM – 03:00 PM | Presentation |