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PixelGenesis - 24 Hour Hackathon

PixelGenesis is a part of **VertechX 13.0 Technical Fest 2025**, conducted as a fast-paced 24-hour in-house software hackathon hosted at MVJCE. The event was jointly organised by the **NIC and SDC technical clubs**, where students collaborated in teams to conceptualise, design, develop, and deploy a functional software product based on a theme revealed at the start of the event. It was held at the **Smt. Rajalakshmi Jayaraman Seminar Hall** from 13th November 2025 at 10:30 AM to 14th November 2025 at 10:30 AM, and included two evaluation phases to assess idea clarity, technical direction, prototype progress, final implementation, and deployment quality.

Objectives of the Event

The primary objective of this 24-hour hackathon was to foster a real-world engineering mindset where participants move beyond theoretical learning and develop problem-driven, scalable, and deployable software solutions within a time-bound environment. The event aimed to encourage students to apply their technical knowledge, creativity, collaboration, and analytical thinking to build working prototypes aligned with industry standards and emerging technologies. It was designed to:

- Promote innovation, creative problem-solving, and critical thinking among engineering students.
- Help participants experience end-to-end project development, from ideation to deployment.
- Enhance hands-on learning in software development, version control, teamwork, and documentation.
- Build confidence in presenting and defending technical solutions in front of experts.

Event Overview

PixelGenesis formed one of the key technical attractions of VertechX 13.0, providing an industry-aligned hackathon environment where students worked from ideation

to deployment within a non-stop 24-hour window. The event was guided by faculty coordinators Prof. Siva Sakthi (HOD, Department of CSD and Data Science), Prof. Arnab (Assistant Professor, Department of CSE), and Prof. K Veena (Assistant Professor, Department of CSD), whose leadership ensured clear direction and smooth administration. Prof. K L Sujitha (Assistant Professor, Department of CSE), Club Coordinator of NIC, and Prof. Sushma D (Assistant Professor, Department of CSE), Club Coordinator of SDC, played an important role by offering club-level coordination and continuous support. Their combined efforts ensured smooth facilitation, management, and consistent supervision throughout the 24-hour duration.

The judging panel consisted of highly experienced industry experts from leading organizations, including Ms. Priya Shankar (Manager - Industry Lead, Accenture Services Pvt Ltd), Mr. S. Mohan Kumaar (Assistant Consultant at Tata Consultancy Services), Mr. B. Vadivelan (Senior Architect), and Mr. Prasanna Srinivasan (Serial Entrepreneur, Fractional CTO, and Multidisciplinary Engineer), Mr. Lakshma Reddy (Manager). Their professional insights and feedback added significant value to the overall learning experience, elevating PixelGenesis beyond a competition into a true industry-aligned engineering challenge.

Problem Statement Brief

The theme for PixelGenesis was revealed at the start of the hackathon, challenging participants to build a Decentralised Digital Identity Credential Vault focused on secure, private, and self-sovereign data ownership. The problem emphasised the shortcomings of existing centralised identity systems such as DigiLocker, where personal documents are stored on government servers, creating risks related to data breaches, limited interoperability, and loss of user control. Participants were expected to propose solutions grounded in blockchain technology to ensure privacy, transparency, and user autonomy in digital identity management. Teams were tasked with developing a system that uses Decentralised Identifiers (DIDs), Verifiable Credentials (VCs), and IPFS-based decentralised storage to enable individuals to securely own, manage, and share their identity documents without relying on a central authority. This theme encouraged participants to move beyond traditional app development and engineer a reliable, future-focused identity ecosystem suited for real-world digital infrastructures.

Detailed Event Timeline and Summary

The registration process for PixelGenesis began at 8:00 AM, with participants reporting at the main gate, followed by formal verification and onboarding. A total of 51 teams, consisting of 193 participants, registered for the hackathon. At 10:30 AM, the event officially commenced with the release of the problem statement by Dr Srinivas L. Gombi (Dean Academics), marking the beginning of the 24-hour development phase. During the afternoon, teams submitted their GitHub account details and repository links, enabling real-time code validation and progress tracking. To ensure proper participation management and adherence to event protocols, attendance was recorded at 4:30 PM, confirming that all teams were actively engaged throughout the event.

Judging and Evaluation

1: Progress Review Initial Evaluation (13th November)

The Phase 1 evaluation officially commenced at 6:00 PM, with judges visiting each team's workstation to evaluate their progress. Forming two evaluation panels. They were assigned specific groups of teams for efficient assessment. Panel 1 (Teams 26 – 51) Ms Priya Shankar, Mr B Vadivelan ,Mr Srinivasan Panel 2 (Teams 1 – 25) Mr S Mohan Kumaar, Mr Lakshma Reddy

The judging process concluded at 11:45 PM, despite the late hours, most teams continued working, integrating feedback received during evaluation and refining their systems with renewed focus. Following the completion of Phase 1 evaluation, the hackathon seamlessly transitioned into Development Phase 2, where teams focused on enhancing functionality, strengthening deployment, and improving overall system performance.

2: Deployment, Final Demonstration Closing (14th November)

The final judging and presentation round began at 8:30 AM with the same panel members who evaluated Phase 1. Each team was allotted 7-10 minutes to clearly present their idea and problem interpretation, explain their system architecture, and demonstrate their live-deployed solution. Breakfast was arranged simultaneously, ensuring smooth coordination and allowing teams to present in an organised sequence without delay while others waited for their turn. All Phase 2 presentations concluded by 11:30 AM, marking the official completion of the technical evaluation process for the hackathon. With this, Phase 2 formally ended, after which the judges proceeded with internal discussion and deliberation to finalise the winners.

Winners of the 24-Hour Hackathon

Winners of the 24-Hour Hackathon The 24-Hour Hackathon concluded with exceptional performances from various teams. Participants assembled in the auditorium for the announcement of the winners. Judges announced the winners based on innovation, technical quality, deployment success, and overall presentation. The following teams secured the top positions :

1st Prize: Team Plus-Minus Eeshan - 1MJ23IS019 Ayush Kumar - 1MJ23IS010 Abhay M - 1MJ23IS002 Rohan Thakur - 1MJ23IS065

2nd Prize: Team Ciphers 2.0 Karthik M -1MJ23CD024 Shashank V A - 1MJ23CD045 Preetika Kour - 1MJ23IS059 Chinmayanand H - 1MJ23CD010

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Figure 1: Honouring the Guest

(a) Winners of the Hackathon

(b) Team of Hackathon

Conclusions

PixelGenesis proved to be a highly successful and impactful 24-hour hackathon, demonstrating exceptional teamwork, innovation, and execution from both participants and the organising teams. The collaboration between NIC and SDC technical club played a crucial role in planning, coordinating, and delivering the event smoothly, setting a strong example of how joint technical clubs can work together to achieve large-scale outcomes. We sincerely thank Dr Ajayan K R (Principal, MVJCE), Dr Salim A (Dean, School of CSE), and Dr Hammem (Dean of Student Affairs) for their continuous support, guidance, and encouragement, which greatly contributed to the successful planning and execution of PixelGenesis.

Overall, PixelGenesis set a new benchmark for student-led technical events at MVJCE, becoming the first successfully executed 24-hour hackathon on campus and reinforcing the success and potential of collaborative club initiatives.