

"E-ForzaClub Activity -Bits & Volts – Bridging Analog and Digital Worlds"

The Department of Electronics and Communication Engineering, under the banner of **E-Forza Club**, organised an engaging technical activity titled **"Bits & Volts – Bridging Analog and Digital Worlds"** on 21. 11. 2025 at 1:30 pm- 4:00 pm. The event was conducted in two rounds and witnessed enthusiastic participation from **around 185 students**.

Round 1 consisted of a quiz focused on **Analog and Digital Electronics**, testing students' conceptual clarity and speed. Based on performance and time, **50 students** were shortlisted for **Round 2**.

Round 2 was a group activity where participants were tasked with designing circuits using **PSpice** or **MultiSim**, based on assigned questions covering both analog and digital domains. The session was judged by **Mr. Sunil Patra**, Program Manager at **Rakuten Symphony**, who also served as the resource speaker for the event. The winners were rewarded with attractive cash prizes: **Rs.1000 for the first-place team** and **Rs.500 for the runners-up**.

Objectives of the Event

- To enhance students' understanding of analog and digital electronics through interactive and competitive activities.
- To encourage practical application of theoretical concepts using simulation tools like **PSpice** and **MultiSim**.
- To foster teamwork, problem-solving, and circuit design skills among participants.
- To provide a platform for students to showcase their technical knowledge and creativity in circuit design.

Event Overview

The Department of Electronics and Communication Engineering, through its official club **E-Forza**, organised an innovative technical activity titled **"Bits & Volts –**

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Bridging Analog and Digital Worlds”. The event aimed to strengthen students’ understanding of analog and digital electronics through interactive and practical challenges. Conducted in two rounds, the activity witnessed enthusiastic participation from **around 185 students**. The first round was a **quiz** focused on core concepts of analog and digital electronics, where speed and accuracy determined the top performers. Based on scores and time, **50 students** advanced to the second round. The second round was a **group-based circuit design challenge**, where participants used simulation tools such as **PSpice** and **MultiSim** to design circuits based on assigned questions. The session was judged by **Mr. Sunil Patra**, Program Manager at **Rakuten Symphony**, who also provided valuable insights during the event. Attractive cash prizes were awarded to winners, with **Rs. 1000 for the first-place team** and **Rs. 500 for the runners-up**, making the event both educational and rewarding.

The photo captures a vibrant moment from the **E-Forza Club Activity – “Bits & Volts: Bridging Analog and Digital Worlds”** organised by the Department of Electronics and Communication Engineering. The image shows students actively engaged in the event, working in groups on circuit design tasks using laptops and simulation tools like **PSpice** and **MultiSim**. The setting reflects a collaborative learning environment, with participants discussing solutions and applying their knowledge of analog and digital electronics. In the background, faculty members and the resource speaker, **Mr. Sunil Patra**, can be seen observing and guiding the participants. The atmosphere is dynamic and focused, highlighting the practical, hands-on nature of the activity and the enthusiasm of students to showcase their technical skills.



Figure 1: The resource speaker evaluates circuit designs during Round 2 of 'Bits & Volts,' ensuring precision and creativity in bridging analog and digital concepts

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Figure 2: Industry Expert Judges Student Innovation at E-Forza Event



Figure 3: Rewarding brilliance – Winners of the technical challenge proudly holding their certificates

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Figure 4: Achievement Unlocked! Students receive certificates for excelling in analog and digital circuit design



Figure 5: Honoring the champions of 'Bits & Volts' for their creativity and technical skills

Outcomes and Impact

- Students demonstrated strong conceptual knowledge in analog and digital electronics through the quiz.
- Participants gained hands-on experience in circuit simulation using industry-standard tools.
- The event promoted collaborative learning and teamwork among students.
- Exposure to real-world design challenges enhanced problem-solving and analytical skills.

Impact

- Strengthened students' confidence in applying theoretical knowledge to practical scenarios.
- Encouraged the use of simulation tools, preparing students for industry-level design tasks.
- Fostered a competitive yet collaborative environment, motivating students to excel in technical domains.
- Enhanced the department's reputation for organising innovative and skill-oriented activities.

Conclusions

The **Bits & Volts** activity successfully achieved its objectives by bridging the gap between theory and practice in electronics. The event provided students with an opportunity to test their knowledge, apply design skills, and work collaboratively on challenging tasks. Judged by an industry expert, the activity added immense value by aligning academic learning with professional expectations. Overall, the program was a resounding success, inspiring students to pursue further projects and research in analog and digital electronics.



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