Smart Urban Virtual Interactive Digital Helpdesk Assistant (SUVIDHA) - 2026

Contents

1. Hackathon Title

Smart Urban Virtual Interactive Digital Helpdesk Assistant (SUVIDHA) - 2026

2. Introduction

Centre for Development of Advanced Computing (C-DAC) is the premier R&D organization of the Ministry of Electronics and Information Technology (MeitY) for carrying out R&D in IT, Electronics and associated areas. C-DAC represents a unique facet working in close conjunction with MeitY to realize the nation's policy and pragmatic interventions in Information Technology.

CDAC Centres at Bengaluru, Hyderabad, CINE, Delhi along with IIT-BBH is working on a project titled “Smart City 2.0: Empowering Indian Industries with Smart Solutions” in which Indian industry is being encouraged for developing indigenous solutions for Indian cities. These solutions will enhance the functionality of utilities in urban cities and these will help smart city mission. Ministry of Electronics and Information Technology, Government of India (MietY) is supporting this project.

As part of this project, C-DAC proudly announces **“Smart Urban Virtual Interactive Digital Helpdesk Assistant (SUVIDHA) 2026”**, a platform where creativity meets purpose to drive transformative solutions for India’s future!

C-DAC, along with multiple collaborating centers and state departments, is actively working to modernize civic service delivery across India. To enhance the efficiency, transparency, and accessibility of public service delivery in Electricity, Gas, Water, Sanitation, Municipal Services, C-DAC is developing citizen-facing interactive kiosks to deploy across civic utility offices.

A national-level hackathon inviting students to design next-generation Kiosk User Interfaces & Workflows for real-time citizen interaction in public utility offices. Participants will work on building unified, user-friendly, multilingual kiosk systems for government departments to streamline service delivery and improve citizen experience.

3. Problem Statement:

Design and Development of a touch interface of KIOSK for Customer Interaction in Civic Utility Offices. This problem statement reflects the real-world challenges of modern urban governance and provides participants an opportunity to develop innovative, impactful solutions that enhance citizen engagement and streamline civic service delivery in smart cities.

The goal is to build a **single, integrated, self-service kiosk interface** capable of delivering services for:

- Electricity Utility Offices
- Gas Distribution Offices
- Municipal Corporations (Water, Waste Management)

The kiosk must support multilingual UI, secure citizen authentication, bill payments, service requests, complaints, document uploads, status tracking, and receipt generation.

3.1 Background:

As Indian cities continue to expand, the demand for reliable, transparent, and efficient civic services—spanning **Electricity, Gas, Water, Sanitation, and Municipal Grievances**—has increased significantly. Traditional service counters in civic utility offices often struggle to handle high user volumes, resulting in long queues, manual paperwork, inconsistent service quality, delays in processing requests, and limited grievance visibility**.** These challenges directly impact citizen satisfaction and place a heavy administrative burden on utility departments.

To address these gaps, modern civic utility systems are shifting toward digitized, citizen-centric service delivery models**.** A unified **Interactive Self-Service KIOSK Interface** offers a transformative approach by enabling citizens to independently perform essential tasks

3.2 Scope

- **KIOSK Interface & Functionality:**
  - Develop a touch-based interactive interface for customer engagement.
  - Support common tasks such as bill payments, new connection requests, grievance submission, and information retrieval.
- **User Experience & Accessibility:**
  - Responsive UI design for easy navigation.
  - Multi-language support, accessibility options, and clear visual cues for diverse customer groups.
- **Security & Access Management:**
  - Secure user authentication and session management.
  - Ensure data confidentiality through encrypted communication and adherence to compliance standards.

3.3 Objectives

- **Interactive User-Interface:** Offer a user-friendly interface with step-by-step instructions, multilingual support, and visual prompts for ease of use.
- **Self-Service Functionality:** Enable customers to perform routine activities such as bill payment, connection status check, and complaint registration without staff assistance.
- **Real-Time Information:** Provide instant access to account details, consumption data, payment history, and service notifications.
- **Secure Transactions:** Implement secure authentication, payment processing, and encryption to safeguard customer data.
- **Reporting and Analytics:** Capture customer interactions and generate reports to help management optimize service operations.

3.4 Key Features

- **Unified Service Interface:** Centralized access to all civic services through an easy-to-navigate interface.

- **Real-Time Status & Notifications:** Live updates on service requests, payments, outages, advisories, and emergencies.
- **Self-Service Citizen Operations:** Support bill payments, new connections, meter readings submission, and complaints registration.
- **Document Access:** Citizens can download or print receipts, certificates, and service summaries.
- **Admin Controls:** Backend access for office staff to monitor KIOSK usage, generate reports, and manage content.

3.5 Technical Requirements

- **Front-end**: React.js or Angular with responsive design frameworks.
- **Backend:** Node.js / Python / Go / Java for developing individual services.
- **Architecture Style:** Independent, loosely coupled microservices communicating via REST or gRPC.
- **Security:** OAuth2 / JWT for authentication, TLS for secure service-to-service communication.
- **Payment Gateway:** Secure integration for online transactions.
- **Database:** MySQL / PostgreSQL for storing interaction logs and user data.

Note: Participants must ensure that their solution adheres to all relevant Government of India norms, policies, and regulatory frameworks, including— but not limited to— the Digital Personal Data Protection (DPDP) Act, IT Act guidelines, cybersecurity directives, accessibility standards, and municipal governance rules applicable to Smart Cities.

3.6 Expected Deliverables

- Fully functional Interface of **Unified Civic Services KIOSK** with multi-service integration.
- Secure authentication, payment gateway integration, and document printing support.
- Admin dashboard for monitoring kiosk activity and managing services.
- Technical documentation including system design, API details, deployment steps, and user manual.

3.7 Use Case Examples

- **Smart City Municipal Center:** Citizens access all civic services at one point.
- **Public Places:** Deployed at bus stations, metro stations, and community centers for quick service access.
- **Urban Local Body Offices (ULBs):** Reduces workload at counters and speeds up citizen service turnaround.

- **Emergency Information Display:** Citizens receive real-time updates on outages, weather alerts, construction notices, etc.

4. Judging Criteria

Criterion	Description	Weightage
Functionality	Real-time data streaming, control capabilities, and automation features	40%
Usability & Design	User interface aesthetics, customization options, and responsiveness	20%
Innovation	Novel features, scalability, and overall technical approach	15%
Security & Robustness	Implementation of secure authentication, error handling, and data protection	15%
Documentation & Deployment	Quality of documentation, clarity of API, and ease of deployment	10%

5. Guidelines for Submission

- Team Composition: Student teams must consist of 3 to 4 members, including a mentor.
- Institutional Requirement: All team members must belong to the same institution.
- Eligibility: Participants must provide valid proof of their institution's approval or recognition by AICTE or UGC.
- Application Process: Applications must be submitted exclusively through the Google Forms provided on the official social media link. Submissions via any other method will not be considered.
- Application Format: Submissions must strictly follow the format available on the hackathon website or social media link. Applications in any other format will be rejected.
- Selection Process: The initial screening and finalist selection will be conducted online. Shortlisted teams must be available online for the presentation/demo stage.
- Rules & Modifications: The Hackathon Organizing Committee reserves the right to modify the event's rules, format, or prizes at any time. Any changes will be communicated to participants in a clear and timely manner.
- Participation Certificate: Teams that successfully pass the initial screening will receive a certificate of participation.

6. Evaluation Process Flow

7. Certificates and Awards

Prize	Denomination
Winner	3,00,000
First Runner-up	2,00,000
Second Runner-up	1,00,000

8. Timeline

Event	Date	Mode
Application Submission Start Date	6 January 2026	Online
Application Submission Deadline	10 February 2026	Online

Announcement of Teams Qualified for the 2nd -Level Evaluation	20 February 2026	Online
Presentation of the Qualified Teams	2 March 2026	Online
Finalists Announcement	5 March 2026	Online
Grand Finale (Presentation/Demo)	25 March 2026	Offline
Award Ceremony	TBD	Offline

10. Intellectual Property Rights

Any Intellectual Property (IP) arising from projects submitted at this hackathon will be the sole property of C-DAC. By participating in the hackathon, all participants agree that any inventions, designs, code, patents, or other forms of IP created during the event or submitted at this event will be transferred to and owned by C-DAC.

11. Registration form: https://forms.gle/eHqRazyLEVMaH2Mr8

12. Proforma for Submitting Technical Proposal: Click

13. Need Support?

Email us: smartcities.challenges@cdac.in