Smart card in Orissa by Bimalendu

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A smart card or any chip based card contains embedded integrated circuits. It also contains some volatile memory and microprocessor components. The card is made of plastic, generally polyvinyl chloride, but sometimes acrylonitrile butadiene styrene or polycarbonate. Smart cards may also provide strong security authentication for single sign-on (SSO) within large organizations. Smart cards can provide identification, authentication, data storage and application processing. Proximity authentication can embedded into smart cards to increase the security of all services on the card.

For example, a smart card can be programmed to only allow a contactless transaction if it is also within range of card reading device.

Smart card is generally categorized into two types:

Contact and contactless.

Contact:

A contact smart card must be inserted into a smart card reader with a direct connection

to a conductive contact plate on the surface of the card (typically gold plated).

Transmission of commands, data, and card status takes place over these physical contact points.

Contactless:

A contactless card requires only close proximity to a reader.

Both the reader and the card have antennae, and the two communicate using radio

Frequencies (RF) over this contactless link. Most contactless cards also

Derive power for the internal chip from this electromagnetic signal.

The range is typically one-half to three inches for non-battery-powered cards,

Ideal for applications such as Attendance entry, Security Entry and Canteen system that require a very fast card interface.

Smart cards have two key attributes: they can carry a substantial quantity of data in a compact and computer readable form (as can many non-smart cards), and they can carry it securely (a point of major difference from non-smart cards). The second attribute is crucial to the role that smart cards will play in health care, in which security of data and confidentiality are generally recognized as being pillars of ethical practice.

Computing environments that have many users routinely experience problems in three areas: authenticating the identity of individual users, ensuring confidentiality of data in storage, and securing data against interception or alteration when in transit (communication).

Smart cards can provide identification, authentication, data storage and application processing. The

benefits of smart cards are directly related to the volume of information and applications that are programmed for use on a card. A single contact/contactless smart card can be programmed with multiple banking credentials, medical entitlement, driverâ€™s license/public transport entitlement, loyalty programs and club memberships to name just a few. Multi-factor and proximity authentication can and has been embedded into smart cards to increase the security of all services on the card. For example, a smart card can be programmed to only allow a contactless transaction if it is also within range of another device like a uniquely paired mobile phone. This can significantly increase the security of the smart card. For example, consumers only need to replace one card if their wallet is lost or stolen. Additionally, the data storage available on a card could contain medical information that is critical in an emergency should the card holder allow access to this.

Smart health cards can improve the security and privacy of patient information, provide a secure carrier for portable medical records, reduce health care fraud, support new processes for portable medical records, provide secure access to emergency medical information, enable compliance with government initiatives and mandates, and provide the platform to implement other applications as needed by the health care organization.

Smart cards are being provided to students at schools and colleges.

Usage includes:

ï,§Tracking student attendance

ï,§As an electronic purse, to pay for items at canteens, vending machines etc

ï,§Tracking and monitoring food choices at the canteen, to help the student maintain a healthy diet

ï,§Tracking loans from the school library

Formula One Solutions is the only solution Provider of Contactless cards in Orissa.

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Formula One Solutions Pvt Ltd is the leading provider to the Orissa's finest organizations. We have a challenging and inspiring mission: to improve the quality of biometric by enabling organizations to do more. This mission gives us the purpose to develop innovative technologies and products that help the organizations.

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