ICMI LEARNING

EMV Testing and certification process

EMV Testing and certification process

Provides testing and certification programs to ensure that the chip card conforms to the EMV specifications

EMV Testing and certification process

Testing and certification process consists of several steps:

- *Pre-certification testing*
- *Card type approval*
- *Card personalization validation*
- *Security Evaluation*
- *Certification*

EMV Testing and certification process

Pre-certification testing

An optional step before submitting their products for formal approval

Involves running a series of tests to ensure that the chip card meets:

- *Functional requirements*
- *Performance criteria set out in the EMV specifications*
- *Specific requirements of the payment network*

EMV Testing and certification process

Card type approval

Formal approval to test a range of functional and performance requirements specified by the payment network

Tests are designed and administered by EMVCo

Functionality

Security

Performance

EMV Testing and certification process

The approval process of chip cards

Payment networks

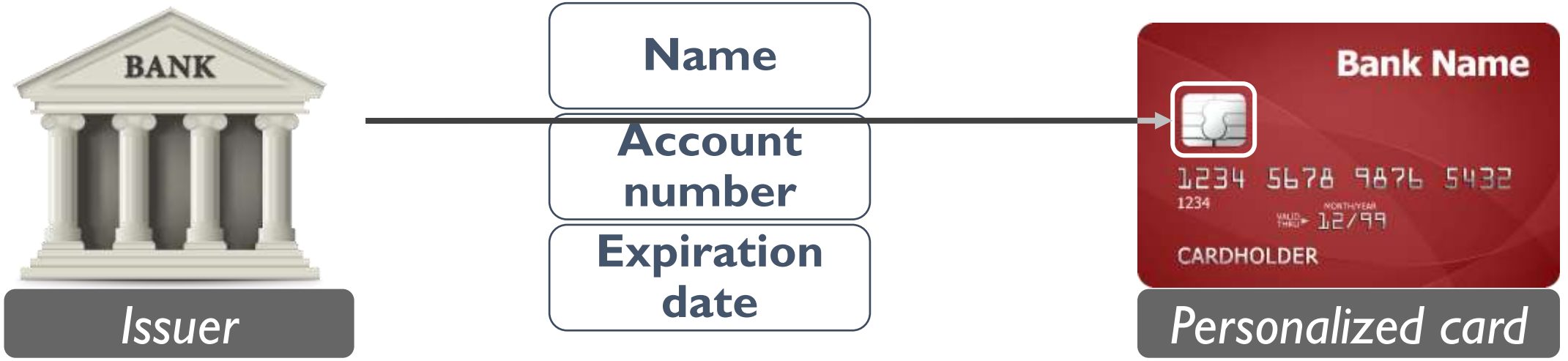
The approval process for chip cards comply with the international payment system card specifications

Involved in approval process for chip cards that are designed to be compliant with the EMV Common Core Definition & Common Payment Application

EMV Testing and certification process

Card personalization validation

It is the process of customizing a chip card with unique data or information for a specific user or account



EMV Testing and certification process

Issuer

*The issuer **blows a software fuse** on the chip card, which moves the card into its live stage*

Personalized card

EMV Testing and certification process

Issuer

Personalized card

Card personalization ensures that each card is uniquely identified and associated with the correct user or account

Card personalization validation is performed by **payment networks**

EMV Testing and certification process

Security evaluation

Evaluates the chip card's security features and confirms that it meets the required standards

Security evaluation is performed by **payment networks**

VISA

Visa Chip Security Program – Security Testing Process

Visa Supplemental Requirements

Version 2.2

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EMV Testing and certification process

Certification

Once the chip card has passed all of the previous steps, it can be certified by the payment network

The certification confirms that the chip card meets the standards

- Functionality
- Security
- Interoperability
- Suitable for use

EMV Testing and certification process

Security approvals are only for a certain duration and are not permanent

Security approvals for the EMVCo Common Payment Application (CPA)

- For **3 years**
- Reviewed annually for **6 years**

Security approvals for the EMVCo Chip (IC) and Platform

- For **1 year**
- Reviewed annually for **6 years**

EMV Testing and certification process

Security approvals are only for a certain duration and are not permanent

After the chip card is issued

Security approvals for the chip and operating system

- Should be less than **3 years old**

To ensure that the chip card remains secure and up-to-date with latest standards

Summary

Summary

1) Card specification finalization

Involves defining the technical specifications of the chip card, ensuring that it meets industry standards

ISO/IEC 7816	• Communication protocols & electrical interfaces
ISO/IEC 7810	• Physical characteristics and dimensions
ISO/IEC 7812	• Identifying the issuer (PAN)
ISO/IEC 14443	• Radio frequency identification (RFID) technology
ISO/IEC 3166	• Country codes
ISO/IEC 4217	• Currency codes

Summary

1) Card specification finalization

Involves defining the technical specifications of the chip card, ensuring that it meets industry standards

EMV specifications

- Contact
- Contactless
- Near Field Communication

Payment networks

- Contact
- Contactless
- Near Field Communication

Summary

1) Card specification finalization

Involves defining the technical specifications of the chip card, ensuring that it meets industry standards

Issuer specifications

- Branding requirements
- Security features
- Card design

Summary

2) Card application approvals

Involve submitting the card design and specifications to the appropriate regulatory bodies for approval

Payment networks

VISA MasterCard

The approval process for chip cards comply with the international payment system card specifications

EMVCo

Involved in approval process for chip cards that are designed to be compliant with the EMV Common Core Definition & Common Payment Application

3) Card personalization validation

Involves ensuring that the personalization data, such as the cardholder's name and account number, are correctly printed or embossed on the card

4) Production

Mass-produced and distributed to consumers or businesses