YES

DATA VERIFICATION AND AUTHENTICATION RESULT

PROCEED TO TELLER FOR SERVICE ACCESS

FINGERPRINT AUTHENTICATION INITIATED

START

END

NO

**SCENARIO**

**Banks are sensitive areas where people store money and valuables. Signatures have been used to enhance security of these items. This method has many times led to people often losing their money and valuables due to forgery of signatures. The user prepares the document such as a copy of your bank account passbook, ATM when needed and a national ID. AT the bank the user is provided with a withdrawal slip and is required to fill the details such as account number date amount to withdraw and your signature. After filling all these details then you submit it to the teller. If the details are correct, the user collects cash.**

**DISADVANTAGES OF USING SIGNATURES AT BANKS**

**2.Inconsistent signature: peoples signature can vary over time due to various circumstances like being 1.Forgery Risk :signatures are easy to forge when someone gains access to other persons signature.**

**in hurry and feeling unwell which may lead to mismatch with the specimen at bank.**

**3.Limitted security : signatures alone do not offer strong security compared to other methods like pin and biometrics.**

**4.Time consuming : it is manually accessed by human staff and other humans might be too slow.**

**5.Challenging for individuals with disabilities : someone might append his signature while well and get an accident and might loose his fingers thus might not append the required signature.**

**SOLUTIONS TO USE OF SIGNATURES AT BANKS**

**1.Digital signatures : customers can sign electronically using digital signatures which uses encryption to verify identity and secure transactions. It is convenient to customers and more secure compared to handwritten signature.**

**2.Biometric authentication : biometrics such as fingerprints facial recognition and iris scan can be used for identity verification. Tey can not be cloned thus are very secure and speedy.**

**3.Multi-Factor Authentication : banks can use passwords combined with a mobile OTP. This increases security and reduces chances of unauthorized transactions.**

**4.Voice recognition systems : a customers unique voiceprint is used for authentication.**

**NOTE:Biometric authentication proves to be very convenient and secure compared to other methods.**

**HOW THE USE FINGERPRINTS WORKS.**

**1.Enrollment – it involves capturing of the fingerprints using scanners. The image is then analyzed to extract unique features such as ridge endings and bifurcations after which it is stored in the database for future comparison.**

**2.Verification – comparison is done between fingerprint put and the specimen stored.**

**3.Fingerprint capture during use – when individuals places their fingers in the scanner the system captures the image of the fingerprint in real time after which the system matches. If fingerprints matches then the identity is confirmed.**

**ADVANTAGES OF USING BIOMETRICS ST BANKS**

**1.Enhances security as biometrics cannot be forged or cloned.**

**2.Reduced fraud.**

**3.Very convenient as it is very quick.**

**4.Increased accessibility as wide range of users whether physically impared or not can access It**

**.5.Increased accountability and transparency**

**SYSTEM REQUIREMENTS**

**HARDWARE**

**Fingerprint scanner**

**Power supply and backup system**

**Processing unit (high speed processors such as intel core i5, sufficient RAM at least 8GB minimum)**

**Data base and storage system**

**Network infrastructure**

**SOFTWARE**

**Software development kit (SDK)**

**Enrollment software**

**Fingerprint matching software**

**Integration software**

**Security software**

AlGORITHM

1.Customer enters the bank

2.Biometric authentication initiated

3.Biometric data verification and authentication result

4.Service access

5.Ending of transaction

SERVICE ACCES

YES

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In conclusion, use of biometric authentication might reduce the very many cases of forgery and challenges associated with the use of signature methods at bank. Thus we highly recommend its implication.