NEW VISUAL CRYPTOGRAPHY SCHEME FOR SECURE BANKING APPLICATION

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Abstract: Group of different bank branches provide a set of services for core banking. Bank customer can access there funds and perform the any other simple transaction from any of the different branches of that bank. The most crucial issue with the core banking is the Authenticity of the customer. Due to some of the unavoidable process of hacking the Databases it is very difficult to trust the information on the internet. To overcome from such a problem of Authentication, we are proposing the algorithm which is totally based on the image processing that is Visual cryptography. This paper propose a technique that encode the password of the customer by using improved Steganography. Mostly for steganography three or four adjacent pixels will be used but in the proposed technique is using eight adjacent so that the values grows bigger and dividing into two shares. Number of the share to be created is depending on the scheme chosen by the bank. When two shares has been created one will be stored in the bank database and another one will be shared with the customer. The customer need to present his share during all of the transactions. The share of the customer will be stacked with the first share to get the original image.

2.SCOPE OF THE PRODUCT:

The scope of this project is first to secure the important details of the customers and second is to prevent from the forgery of the password hacking. Visual Cryptography is a method of encrypting the image into secret shares such that authenticated number of shares reveals the secret image. Visual Cryptography provides the solutions to protect the user login from the phishing attacks.

3.SYSTEM PROPOSAL:

In the fast growing technologies it is very usual that the password of the customer may get hacked. The net banking is one of the most important technology in today's world. The hacker can steal all the customer information such as customer credentials (Login and password). In this proposed technique we are mainly concentrating on the customer information and possible password hacking forgery.

The proposed System involves two modules:

Admin Session

- Login module
- Account Types(View only)
- Branch details(Add, Delete, Modify)
- Account Details(Add, delete, Modify)
- Change Password

Description:

        Admin have all the authority to create , edit and delete the Branch Detail, account Details , and also can view the Account types.

Customer Session

- Login module with password protection
- Providing Account Number and giving user share to Server
  - Setting Accounts Password

- ▪ Random Number Generator
- ▪ Dividing the image into two shares using Visual Cryptography
- ▪ Sending the first share through Email using Visual Cryptography
- ▪ Storing the second share in database
- • Fetching Server share based on Account Number
- • Producing Visual cryptography Image
- • Login Verification
- • Home page
  - ▪ Balance Enquiry
  - ▪ Mini Statements
  - ▪ Fund Transfer
  - ▪ Transaction Details

Description:

In this customer session customer can login by providing Account NO and password. After providing the account number, they will generate their password by using visual cryptography techniques. Then Customer will generate two random shares, one will be shared with customer and another one will be store in the server (Database). For getting correct password customer have to download one share from their Mail. Second share , customer will get from server. By merging the two shares ,Customer will get their correct password as a captcha Image.

4. SYSTEM WORKFLOW OF THE PROPOSED SCHEME

DFD - Admin Session

DFD - User Session
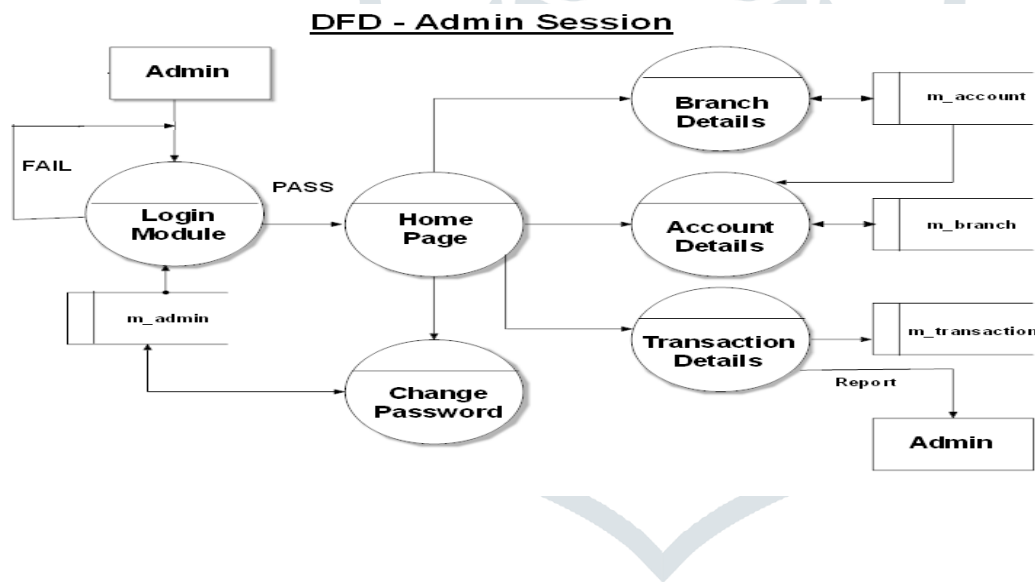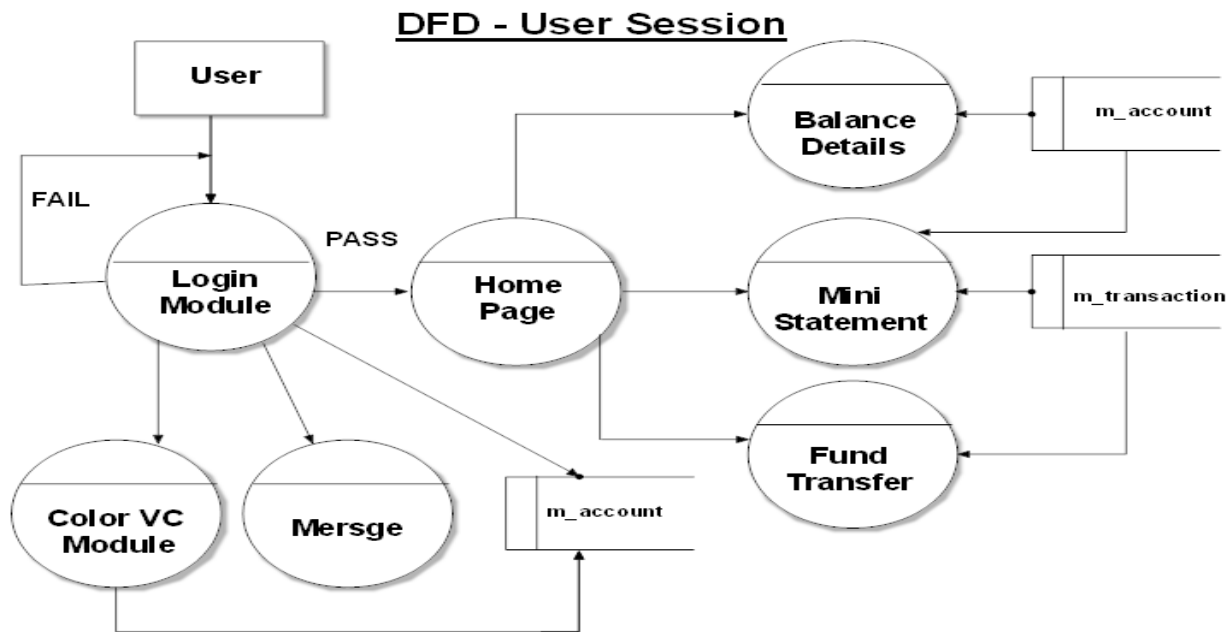
5.EXISTING THREATS

- Most of the present applications gives the main protection towards the password security hence the phishing attacks occurs more and more .Phishing attackers are getting the password from the user and they enter into relevant web sites with correct password.
- There is no efficient technique to safe guard the users from the phishing websites.
- Application which are used to secure the users credentials are not securing it from phishing attacks.

6.CONCLUSION

This proposed system is developed as a Web Application by using java Technology. It is implemented on TomCat Web server and also tested as to complete the aim and objective of the project. This system uses Color Image Visual Cryptography for password protection and it is not able to break this protection with present technology. This system will be a boon for the Core Banking Application and the bank customers are feel free from the password hacking problems. Once this system is deployed in web Server, all the computer in the network can able to access this application through browser without any software installation in their computer.

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