



SE 201.3 - Systems Analysis and Design

Group Assignment

Fingerprint based ATM system with face unlock accessibility feature

Submission Date: 2022/13/3

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GITHUB Repository -
https://github.com/KavinduLakmal2000/SAD_Project

Overview

While a 4-digit PIN is the ultimate solution for ATM security, there are still several security flaws that thieves might use to steal consumer data and the 4-digit PIN itself. A fingerprint-based ATM is a desktop program that uses the users' fingerprint for authentication. Each human being's fingerprint minutiae elements are unique, allowing the user to be recognized. Fingerprint-based ATMs are safer and more secure than ATM cards. In this case we decide to add a facial recognition function to this system as an accessibility feature. In this system, to complete any banking transaction, the user can access to the system using his fingerprint or face identification. One option is enough to complete transaction. The pin code is compulsory to access into system, and it is set up by the bank during account creation. Money can be transferred between various accounts by the user. It is possible to see the balance in the user's account. The user will also be able to see the last five transactions in the system. The face unlock accessibility feature allows disabled people who don't have their hands to use the system.

Target of this system

- Best in safety and security.
- Users can be identified uniquely because each human being has unique fingerprints.
- Uses face unlocking as an accessibility feature.
- No need to worry about losing ATM card and no need to carry ATM cards inside the wallets.
- Ability to view account details.
- Ability to do banking transaction.
- Ability to withdraw money.
- Ability to complete transfer of money.
- Ability to view account balance of the user.

Advantages of this system: -

- The security of a fingerprint-based ATM system is superior than the ATM card.
- The user may conduct transactions using his fingerprint anywhere at any time, eliminating the need to carry an ATM card.
- No need to remember anything like pin code.
- Access to the system is quick and simple.
- Users have 3 options to access to the system.
 1. Fingerprint
 2. Face unlock accessibility feature
 3. Pin Code

Disadvantages of this system: -

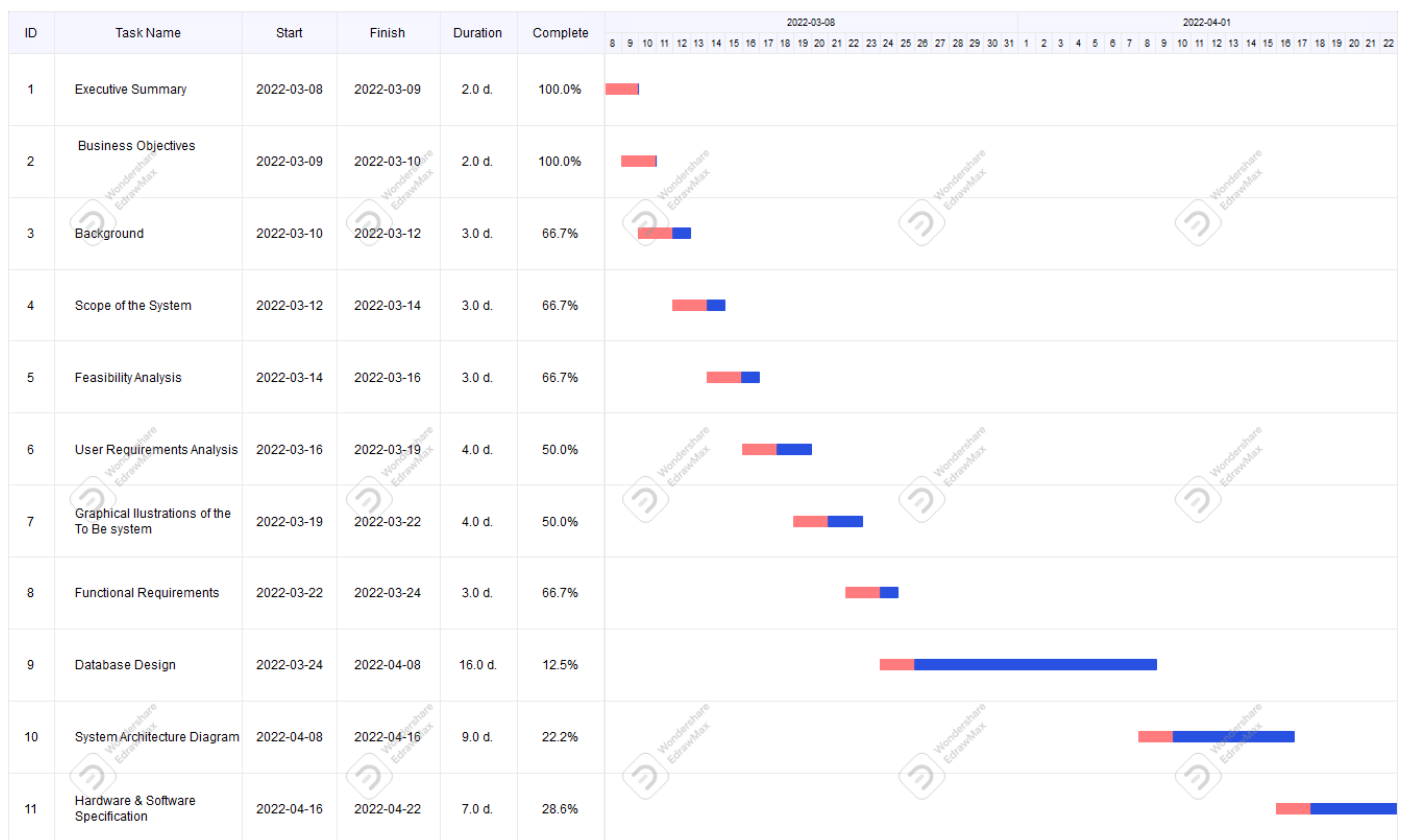
- The device may fail to recognize the user with injured or damaged finger.

Note:

To avoid this problem user can choose the other 2 options as a backup method to log in to the system.

1. Face unlock accessibility feature
2. Pin Code

Gantt chart



Note:

We create this Gantt chart by using “Wondershare EdrawMax” tool.