

# SafeText (AES Implementation)

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## Constraints

1. Title of message has to be unique
2. password should be between 3-15 characters
3. Using Salt and IV for encryption instead of plain aes algorithm
4. Password should not be stored in database
5. None of the fields should be blank while saving message
6. User need to enter message title and message password to view his actual message

## Java files:

1. Home.java : This is the main file from where the execution begin(it contains the main function)
2. AddMessage.java: This module allows user to enter Title , Message and Password of that message
3. ShowMessage.java: This modules enable user to vie his secret message by entering its title and password
4. Databse.java: This class contains a methos getConn(); that return the database connection object
5. aesUtils.java: This class has the actual code for encryption and decryption of the text

## To run this application successfully in your system run the following SQL command

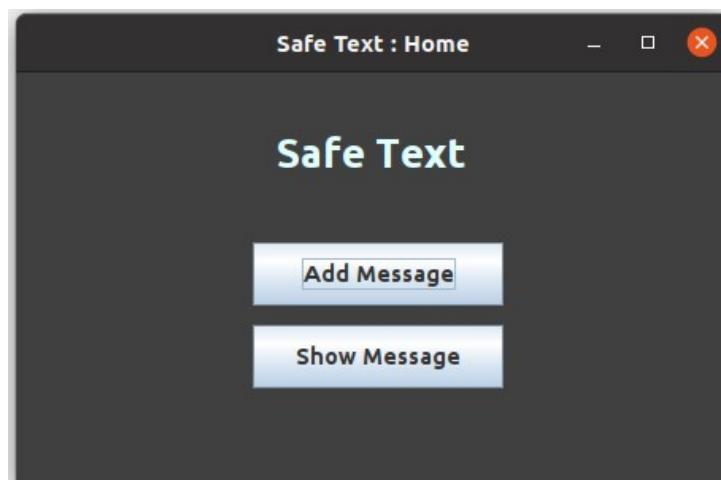
```
create database SafeText;
```

```
use SafeText;
```

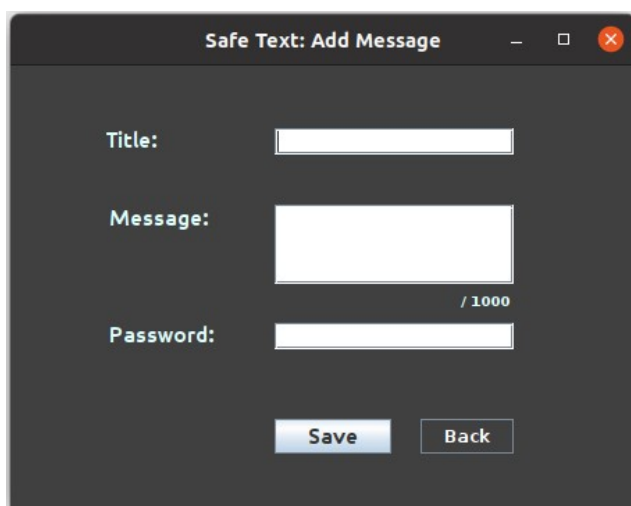
```
create table msg (  
    msgID int primary key not null auto_increment,  
    message varchar(1000),  
    iv varchar(100),  
    salt varchar(300),  
    msgTitle varchar(50)  
);
```

## Outputs:

### Home.java



### AddMessage.java



Safe Text: Add Message

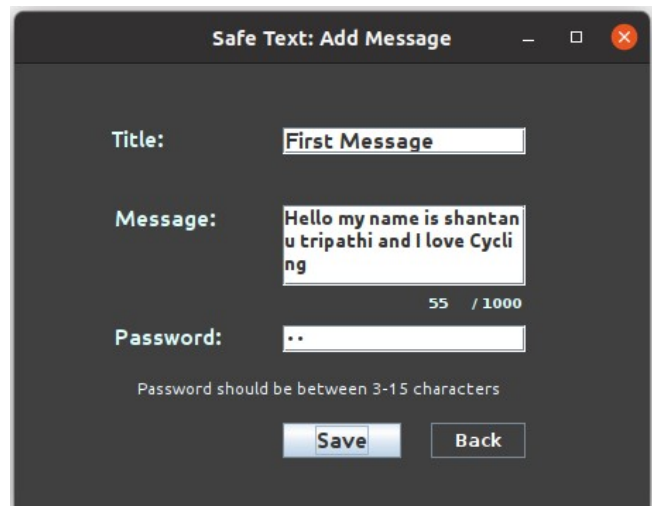
Title:

Message:

55 / 1000

Password:

Save Back



Safe Text: Add Message

Title:

Message:

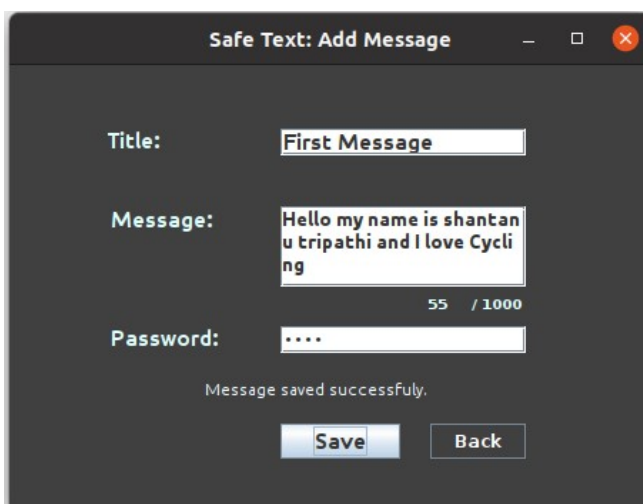
55 / 1000

Password:

Password should be between 3-15 characters

Save Back

When password constrain fails



Safe Text: Add Message

Title:

Message:

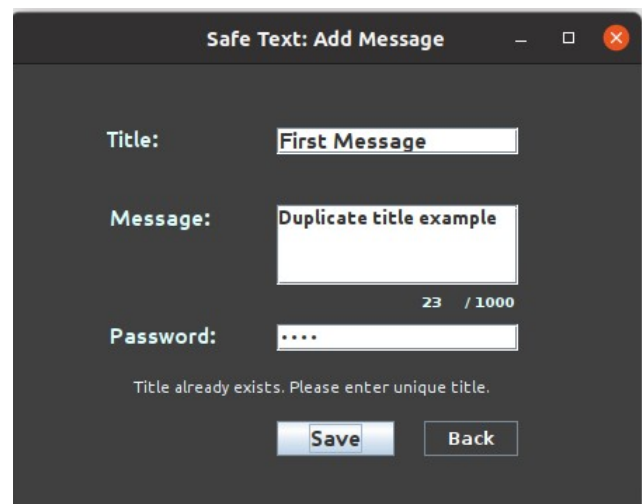
55 / 1000

Password:

Message saved successfully.

Save Back

When everything is correct message gets saved



Safe Text: Add Message

Title:

Message:

23 / 1000

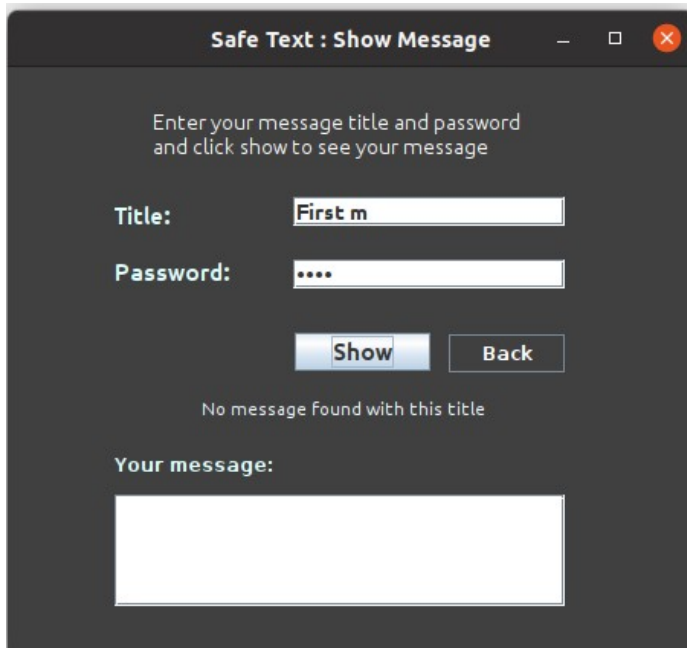
Password:

Title already exists. Please enter unique title.

Save Back

When Title constraint fails

## ShowMessage.java



Safe Text : Show Message

Enter your message title and password and click show to see your message

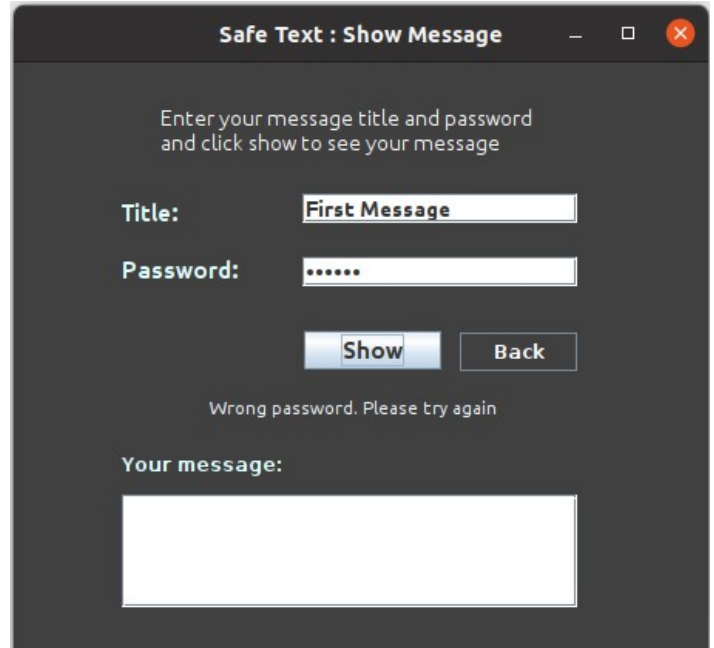
Title:

Password:

No message found with this title

Your message:

When there's no message with the given title



Safe Text : Show Message

Enter your message title and password and click show to see your message

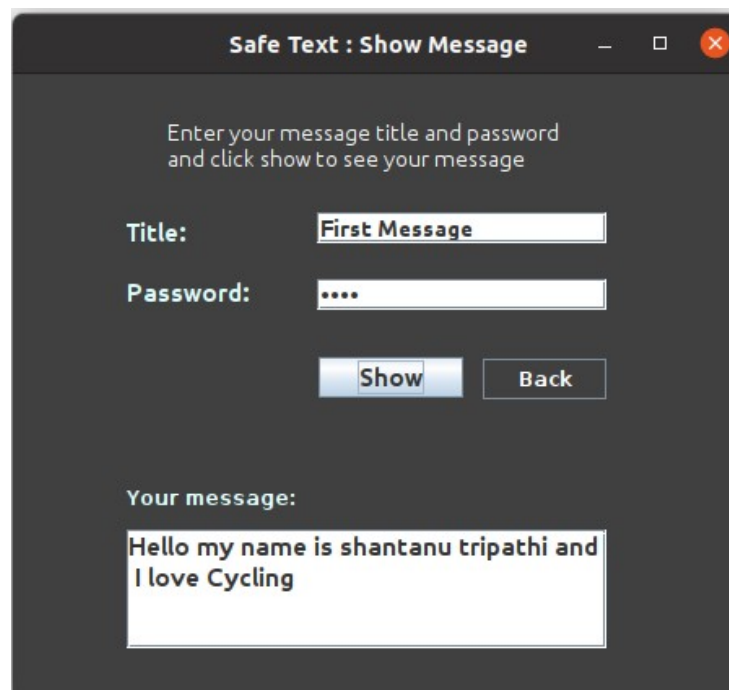
Title:

Password:

Wrong password. Please try again

Your message:

When title is correct but password is wrong



Safe Text : Show Message

Enter your message title and password and click show to see your message

Title:

Password:

Your message:

Hello my name is shantanu tripathi and I love Cycling

All constraints satisfied

# Database – SafeText

## Table -- msg

Table structure    Relation view

| #                        | Name | Type            | Collation     | Attributes         | Null | Default | Comments | Extra          | Action             |
|--------------------------|------|-----------------|---------------|--------------------|------|---------|----------|----------------|--------------------|
| <input type="checkbox"/> | 1    | <b>msgID</b>    | int(11)       |                    | No   | None    |          | AUTO_INCREMENT | Change  Drop  More |
| <input type="checkbox"/> | 2    | <b>message</b>  | varchar(1000) | utf8mb4_general_ci | Yes  | NULL    |          |                | Change  Drop  More |
| <input type="checkbox"/> | 3    | <b>iv</b>       | varchar(100)  | utf8mb4_general_ci | Yes  | NULL    |          |                | Change  Drop  More |
| <input type="checkbox"/> | 4    | <b>salt</b>     | varchar(500)  | utf8mb4_general_ci | Yes  | NULL    |          |                | Change  Drop  More |
| <input type="checkbox"/> | 5    | <b>msgTitle</b> | varchar(50)   | utf8mb4_general_ci | No   | None    |          |                | Change  Drop  More |

## Data inside the table

☐ Show all    Number of rows: 25    Filter rows: Search this table    Sort by key: None

+ Options

|                          |                    | msgID | message                    | iv                     | salt                   | msgTitle      |
|--------------------------|--------------------|-------|----------------------------|------------------------|------------------------|---------------|
| <input type="checkbox"/> | Edit  Copy  Delete | 1     | ujd6NnTqCHHNhCErj+zF85OA.  | 8aNEAmZZTEbkRFmriqlarA | zyBZZRQuIcYr2Lw3cOMOal | First Message |
| <input type="checkbox"/> | Edit  Copy  Delete | 2     | lrrBvE3qUj02BRWtdRRarV6bos | 2anzfRhsN3418ZF2xTAn6w | 9vHwhHqH2akoSSwwTh88r  | test          |