A large graphic on the left side of the slide. It consists of a solid dark red circle. Overlaid on the left side of this circle is a white outline of a globe, showing latitude and longitude lines.

# Alinma Bank application

## Names:

Manar Mofid Zahid Yabarak  
Shouq Khalid Almutairi  
Noor Hossam Elmasry  
Reema Mohammed Aloqayli

## Emails:

mmzyabarak@sm.imamu.edu.sa  
skaalmutairi@sm.imamu.edu.sa  
nelmasry@sm.imamu.edu.sa  
rmnaloqayli@sm.imamu.edu.sa

Instruction: Dr. Lamees Alhazaa

# Introduction

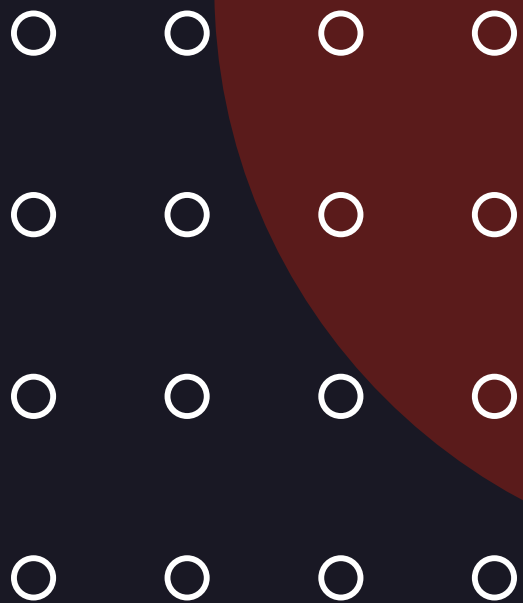
Analysis of Alinma Bank application.

Discussion of Clean Code, Code Documentation, Security and Design issues.

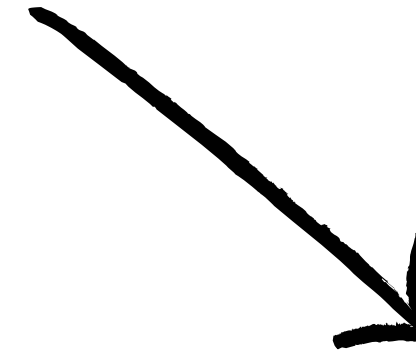
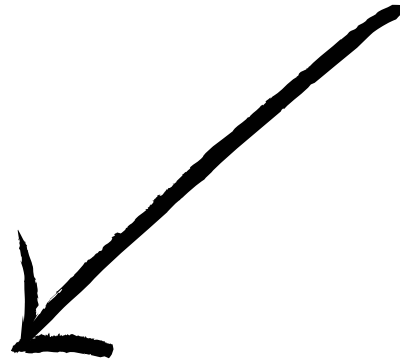
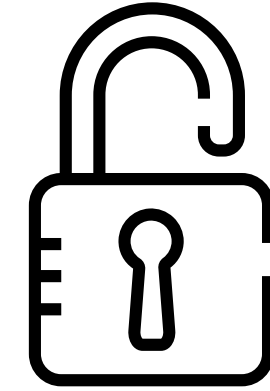


# *DISCUSSION*

## 1 - SECURITY ISSUES



# VULNERABILITY



1. Insecure SSL/TLS protocols should be avoided.

2. The Cipher Block Chaining IVs should be unpredictably unpredictable.

3. Insecure techniques of creating temporary files should not be employed.



# BUGS



1. Before assigning math operands, they should be cast.

2. Methods should not be named "toString", "hashCode" or "equal".

3. Variables should not be allocated to themselves.

4. Unary prefix operators should not be used more than once.





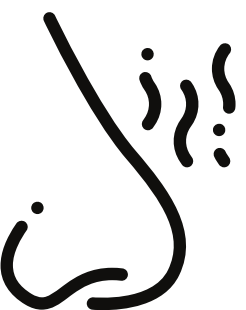
1. Methods should not be left blank.

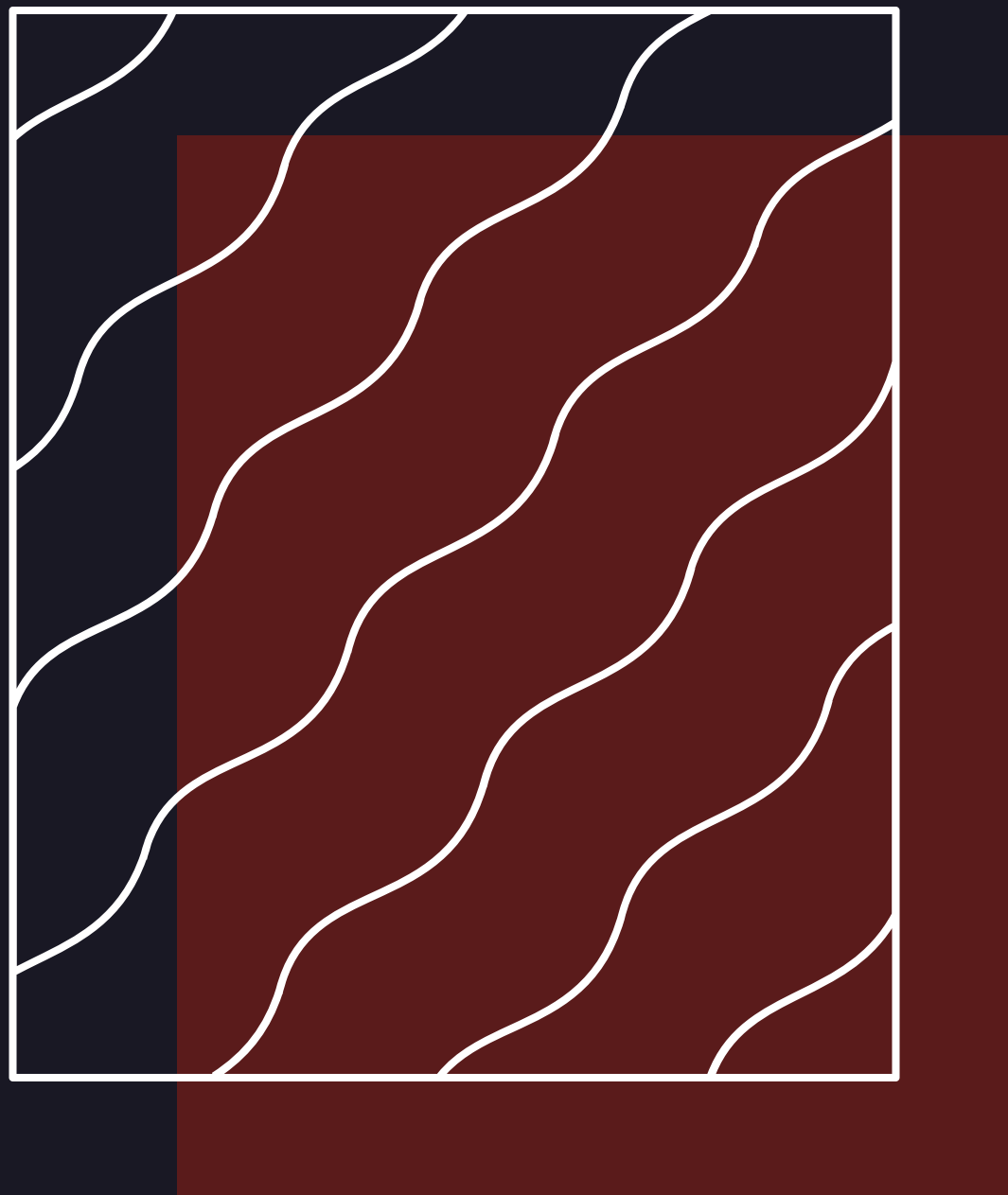
# CODE SMELLS

2. Modifiers must be declared in the proper sequence.

3. Instead of returning null, empty arrays and collections should be returned.

4. To check for emptiness, use `Collection.isEmpty()`.





# 2- CLEAN CODE

# CLEAN CODE



clean code is the code that any developer can read and change easily.

1. Use coherent indentation.

2. The identifier should be meaningful.

3. The class name should be meaningful.

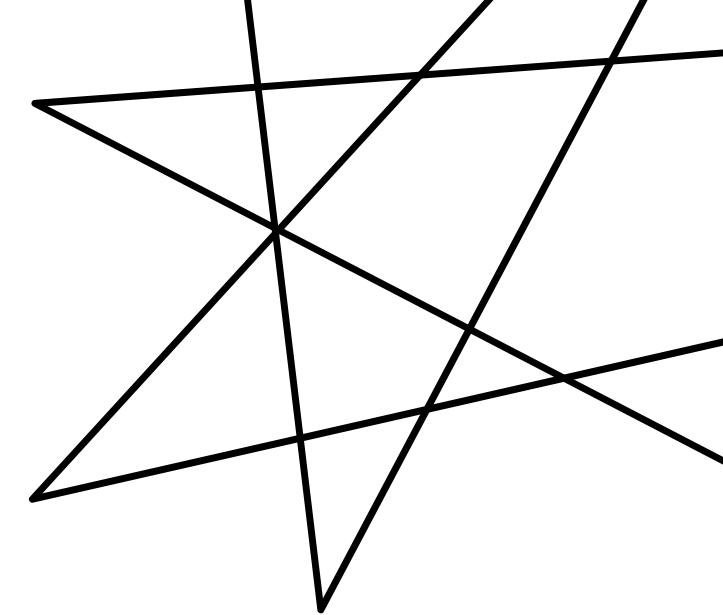
4. Vertical Density.

5. The Law of Demeter.





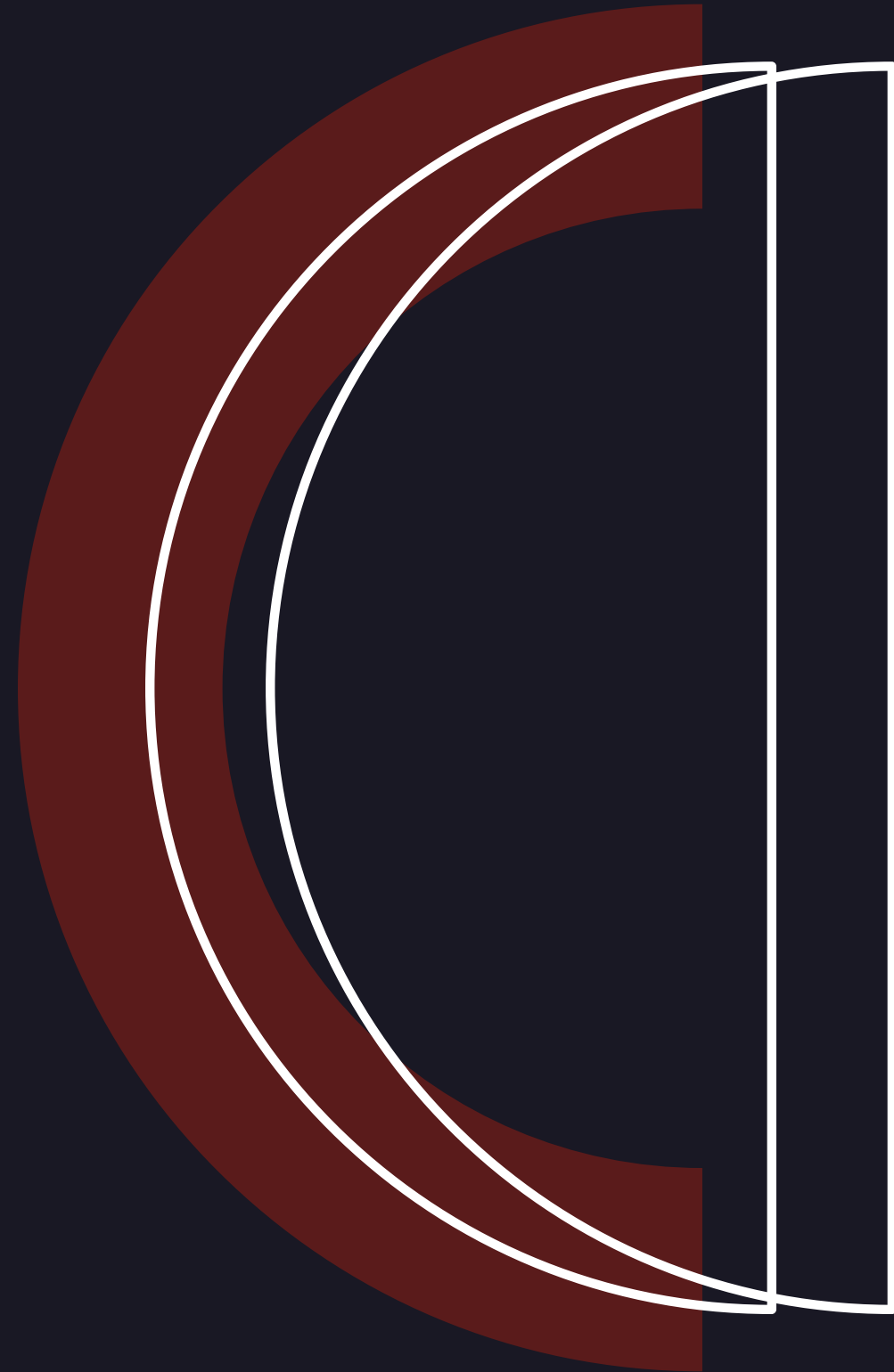
# 3- CODE DOCUMENTATION



# CODE DOCUMENTATION

Code documentation is the thing that helps a person to understand the code. And not refer to the comments on the code only, it can come as a separate file containing a description of the code, how code works, what the code constraints, what is the input and output and several examples about how to run it like README file.





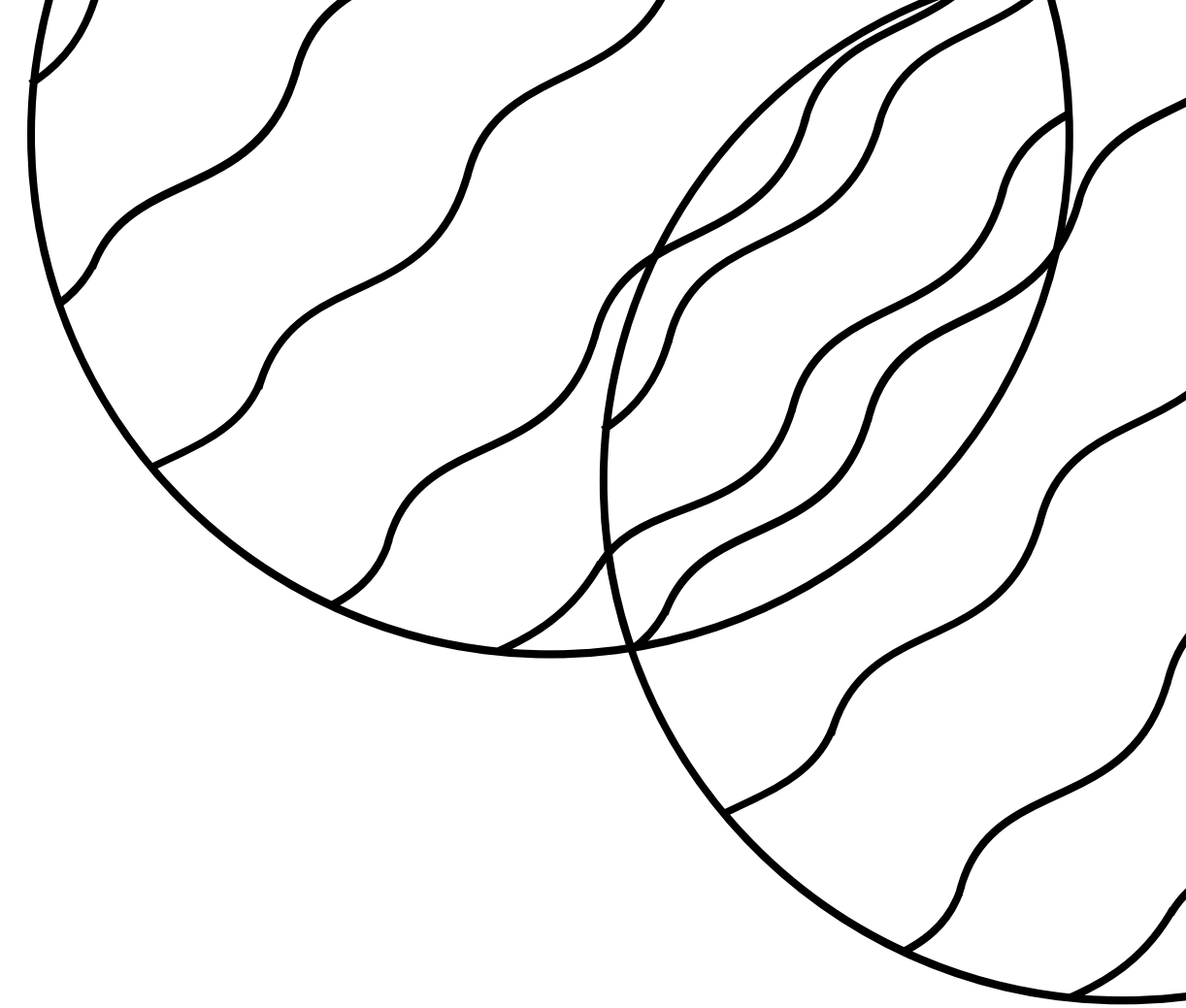
# 4- DESIGN ANALYSIS



# EXTERNAL DESIGN



A user's experience depends on the design of the interface, navigation, and features of an app.



Low Coupling

High Cohesion

**INTERNAL DESIGN**

thank  
you

