E-VOTING

A project Report
Submitted in partial fulfillment of
The requirements for the award of the

BACHELOR DEGREE
In
Computer Application
From
University of Calicut

Submitted By

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Carried out at

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Certificate

This is to certify that the project report entitled "**E-VOTING**" is a recordof theworkdone by **MOHAMMED SHAHEER.M(SFAWBCA015), MOHAMEDHASHIF.PV(SFAWBCA034), MOHAMMED JASIR.N(SFAWBCA011), ASHILAHAMAD.KC(SFAWBCA004)** under our supervision and guidance. Thereporthasbeen submitted in partial fulfillment of the requirement for the award of theBachelorDegree in Computer Application from the University of Calicut for the year 2025. Submitted for the University Exam on:

Head of the department: Project coordinator:Mrs. Asia. P Mr. Haneez Hussain. T

Submitted to the project and viva-voce examination held on -----/-----/----

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Date: 11/03/2025

CERTIFICATE

This is to certify that **ASHIL AHAMAD K C (SFAWBCA004), MOHAMMED JASIR N (SFAWBCA011), MOHAMMED SHAHEER.M (SFAWBCA015), MOHAMED HASHIF P V (SFAWBCA034),** students of **SAFA COLLEGE OF ARTS AND SCIENCE** has successfully completed their academic project entitled **"E VOTING"** in **PYTHON with FLUTTER** under the guidance of our senior developers during the period **JUNE 2024 to FEBRUARY 2025.**

During this period they were found hardworking, punctual & efficient. We wish them a successful future.

For RISS TECHNOLOGIES

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Declaration

I hereby declare that the project report entitled "**E-VOTING**" was carried out by me as theBachelor Degree Project in Computer Application under the guidance **Mr. HANEEZHUSSAIN .T** and supervision of **Mrs. ASIA.P** Head of Department of Computer Application, Safa College of Arts & Science and that, to the best of my knowledge and belief, it containsnomaterial previously published or written by another person nor material which has beenaccepted for the award of any other degree or diploma of the university or other instituteofhigher learning, except where due acknowledgement has been made in the text.

Date: Signature: Place

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Abstract

In today's world, security is a big concern, especially when it comes tosystemsthataffect our safety. One such system is **Electronic voting**, which aims to make votingeasier,safer, and more accessible. However, there are challenges in making sure thesesystemsmeetall the required standards for security and fairness, which has slowed their use.

Blockchain technology, known for being secure and decentralized, couldbeasolution.It works by creating transparent and tamper-proof records, which means that oncesomethingis recorded, it can't be easily changed or faked. This makes it a good choice for improvingelectronic voting, ensuring that votes are accurate and secure.

To make the voting system even more secure, **Facial Recognitiontechnology**isusedto verify voters' identities and ensure their votes are recorded correctly. Once votingiscomplete, the results are cleared, and the final list of nominees is published. Thisblockchain-based voting system is designed to improve election security, cut down on costs, andmakethe process more trustworthy. The paper also includes a case study of a national election,showing how blockchain can change the way elections are done and make themsaferandmore reliable for democracy.

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INTRODUCTION

In today's world, security is a big concern, especially when it comes tosystemsthat affect our safety. One such system is **Electronic voting**, whichaimstomakevoting easier, safer, and more accessible. However, there are challengesinmaking sure these systems meet all the required standards for securityandfairness, which has slowed their use.

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SYSTEM ANALYSIS

System study is done in order to understand the problem and emphasizewhat isneeded from the system. The information requirements of the user for theircompetitive world Require such system. The various techniques used inthis phaseare Observations, Interviews and Discussions. A complete understandingofsoftware requirements is essential to the success of a software development effort. System Analysis refers to an orderly structured process for identifying andsolvingproblems using a computer. It is the most essential part of the project development. It is the process of gathering and interpreting facts, diagnosing problems andusingthe information to recommend improvements to the system. Training, experienceand common sense are required for the collection of the information neededtodothe analysis.

EXISTING SYSTEM

1. Voting Methods

Elections are typically held in person, with voting done through paper ballots. **2.**

Campaigning

Candidates promote themselves through speeches, posters, social media campaigns,anddirect interactions with students to gain support.

3. Nomination Process

The process for nominating candidates is often unclear and slow,

leadingtoconfusion.**4. Election Oversight**

A student election commission or a designated committee monitors the electiontoensureit runs fairly and according to established rules.

DRAWBACKS OF THE EXISTINGSYSTEM

1. Manual Errors

In the case of paper ballots, mistakes in counting or tallying votes can occur, leadingtoinaccuracies.

2. Accessibility Issues

In-person voting may be difficult for students with busy schedules, disabilities, orthoseoff-campus during election time.

3. Nomination Process

The process for nominating candidates is unclear and slow, which leads toconfusionanddelays.

4. Weak Voter Verification

The methods used to confirm voters identities aren’t strong enough, allowingpeoplewhoshouldn’t vote to do so, which hurts fairness.

PROPOSED SYSTEM

1. Tamper-Resistant

Uses a safe and secure digital system (called blockchain) to make sure that votescan't be changed or messed with.

2. Clear Candidate Nomination Process

A transparent and simple system for nominating candidates in elections. **3. Better Voter Verification**

Uses facial recognition technology to confirm that only eligible voters are allowedto vote, ensuring fairness.

4. Transparency and Accountability

The final candidate list is public, and results are announced on time, buildingtrust. **5. Better Accessibility and Inclusion**

The system is secure and easy to use, making elections fairer and more inclusive.

MODULE DESCRIPTION

Main Modules: -

• ADMIN

• SUBADMIN

• ELECTION COORDINATOR

• STUDENT

• BLOCKCHAIN

• FACE RECOGNITION

ADMIN:

- Department management
- Course Management
- Sub Admin management
- Fix Election Date
- Assign Election coordinator
- View Nominees
- View Students and Staff
- View Complaints and Reply
- Publish Result
- Change Password

SUBADMIN: -

- View Profile
- Student management
- Staff Management
- View Election
- View Nominiee
- Scrutiny Process
- View Result
- Change Password

ELECTION COORDINATOR: - - View Profile

.Update Election Status

.View nominees and verify .Create block chain and

its nodes .View Voting results

.Send Result to Admin .Change Password

STUDENT: -

.View Profile

.View Election

.Send Nomination

.View Nomination

.Send Complaints and view Reply .Voting using block chain .

View Result

.Change Password

BLOCKCHAIN: -

1. Series of Records: A blockchain is a list of data records, each with a time stamp. 2.

Immutable: Once data is added, it can't be changed or erased.

3. Managed by Multiple Computers: Many computers work together to manage the blockchain, andno single entity owns it.

4. Secure Connections: Each data block is securely linked to the next one using special encryptionmethods (cryptography).

FACE RECOGNITION: -

1.OpenCV

Description: An open-source computer vision library that includes tools for image processingandfacial recognition.
Key Functions:
Face Detection: Uses pre-trained classifiers (e.g., Haar cascades) for detecting faces. Face Alignment: Provides functions for image transformation and alignment.

2. Dlib

Description: A C++ library with Python bindings, known for its robust facial landmarkdetectionandrecognition capabilities.
Key Functions:

Face Detection: Uses the Histogram of Oriented Gradients (HOG) and CNN-based methods. Face Landmark Detection: Provides accurate facial landmark points for alignment. Feature Extraction: Extracts 128-dimensional face descriptors for recognition.

3.Face_recognition

Description: A Python library built on top of dlib, providing simple APIs for face recognitiontasks.Key Functions:
Face Detection: Detects and locates faces in images.
Face Landmark Detection: Finds facial landmarks.
Feature Extraction: Generates face encodings.
Face Matching: Compares face encodings for recognition.

4.TensorFlow/Keras

Description: Deep learning libraries that can be used to build custom facial recognitionmodelsorleverage pre-trained models.
Key Functions:
Model Building: Design and train custom convolutional neural networks (CNNs) for facial recognition.
Transfer Learning: Use pre-trained models (e.g., MobileNet, Inception) fine-tuned for facial recognition tasks.

FEASIBILITY STUDY

A feasibility study is a preliminary study undertaken to determine and document a project'sviability. The results of this study are used to make a decision whether to proceed withtheproject. If it indeed leads to a project being approved, it will - before the real workof theproposed project starts - be used to ascertain the likelihood of the project's success. It isananalysis of possible alternative solutions to a problem and a recommendation on thebest alternative. It, for example, can decide whether an order processing be carried out byanewsystem more efficiently than the previous one. The feasibility study proposes one or moreconceptual solutions to the problem set for the project. The conceptual solution gives anideaof what the new system will look like. They define what will be done on the computer andwhat will remain manual. It also indicates what input will be needed by the systemandwhat outputs will be produced.
These solutions should be proven feasible, and a preferred solution is accepted.

1. Technical Feasibility

proposed system is technically feasible. Because This system is basically developedusingpythonand android, for which the development kit is easily available and free of cost. This involvesquestions such as whether the technology needed for the system exists, howdifficult it will betobuild, and whether the firm has enough experience using that technology.

2. Economic Feasibility

This project is economically feasible. Because there is no need for any external equipment torunorwork the project. This system is cost effective as well as time effective, therebymakingiteconomically feasible.

3. Operational Feasibility

The project is operationally feasible because, Operational feasibility is a measure of howwellaproposed system solves the problems. This reviews the willingness of the organizationtosupportthe proposed system.

SOFTWARE ENGINEERING PARADIGM

The software engineering paradigm which is also referred to as a software process model orSoftware Development Life Cycle (SDLC) model is the development strategythat encompasses the process, methods, and tools. SDLC describes the period that startswiththesoftware system being conceptualized.

AGILE MODEL

The Agile methodology is a project management approach that involves breaking the project intophasesand emphasizing continuous collaboration and improvement. Teams follow a cycle of planning, executing, and evaluating.

ADVANTAGES

1. Software is produced early in the software life cycle.
2. Risk handling is one of important advantages of the agile model, it is best Development model to follow due to the risk analysis and risk handling at The whole phase.
3. It is good for large and complex projects.
4. Strong approval and documentation control.
5. Break down the project into multiple, manageable units.

In this project we used agile model for mainly handling the risks whentheproject is done. Due to this model, we can complete every single unit fully. This is a simple andadvancedmodelin software development. It is very effective in the case of large and complicated projects.

SYSTEM REQUIREMENTS SPECIFICATION

System Specification

Hardware and software requirements for the installation and smooth functioningof thisproduct could be configured based on the requirements needed by the component of theoperating environment that works as front-end system here we suggest minimumconfigurationfor both hardware and software components. Working off with this software is requirementsconcrete on system environments. It includes two phases.

- Hardware Specification
- Software Specification

Hardware Requirements

• Processor : **Intel Pentium Core i3 and above, 64 bits** • System Bus : 32Bit or 64Bit

• RAM : **4GB RAM and above** • Storage : 320 GB hard disk and above • Monitor : VGA Color Monitor • Keyboard : Windows compatible • Mouse : Windows compatible

Software Requirements

- Operating System : Windows 10 Any 32 bit or 64-bit platform
- Front End : **HTML, CSS, JAVASCRIPT, BOOTSTRAP**
- Back End : **Mysql**
- IDE used : **Jetbrains Pycharm, Android studio**

• Technology used : **PYTHON,FLUTTER**

SYSTEM DESIGN

System design is the first in the development phase for many engineered products or system. It may define the process of applying various techniques and principles for the purposeofdefining a device, a process or system in sufficient detail to permit its physical realization. This phase is the first step in moving from the problem domain to the solution domain. It isaniterative process through which requirements are transmitted into ―blue print‖ for constructingthe software initially. Blueprint depicts holistic new software. Some properties for the systemdesign are:

• Verifiability

• Completeness

• Efficiency

• Traceability

1. Input Design

The decisions made during the input design are:

• To provide cost effective method of input
• To achieve the highest possible level of accuracy

Input design is the process of converting user-designated inputs to a computerized format. Theinput data are collected and organized in to groups of similar data.

2. Output Design

Output design generally refers to the results and information that are generated by the system. The results are of in interactive mode. A common user can also use the application. Inoutput design the emphasis is given to the design of the hard copy and a soft copy of the informationneeded for the user.

3. Database Design

Database design is the process of producing a detailed data model of a database. This logical data model contains all the needed logical and physical design choices and physical storageparameters needed to generate a design in a data definition language, which can thenbeusedto create a database. The term database design can be used to describe many different partsofthe design of an overall database system. Principally, and most correctly, it can be thought ofas the logical design of the base data structures used to store the data. In the relational model these are the tables and views. In an object database the entities and relationships mapdirectlyto object classes and named relationships. However, the term database design couldalsobeused to apply to the overall process of designing, not just the base data structures, but alsotheforms and queries used as part of the overall database application within the databasemanagement system. The process of doing database design generally consists of a number ofsteps which will be carried out by the database designer. Usually, the designer must: Determine the relationships between the different data elements and superimpose a logical structure upon the data on the basis of these relationships.

Normalization

Normalization is the process of decomposing a set of relations with anomalies to producesmaller and well-structured relations that contain minimum redundancy. It is a formal processof deciding which attributes should be grouped together in a relation.

First Normal Form

First Normal form (1NF) is now considered to be part of the formal definition of relational model.1NF is designed to disallow multivalve attribute, composite attributes, andtheircombinations. It states that the domain of an attribute must include only atomic values. Adomain is atomic, if elements of the domain are considered to be indivisible units. We saythat a relational schema R is in 1NF if the domain of all attributes of _R 'is atomic.

Second Normal Form

The second Normal form (2NF) is based on the concept of functional dependency. ArelationR is in 2NF if it is in 1NF, and every non key attribute A of R is fully dependent on the primarykey. That is, relation is said to be in 2NF if each attribute An in R meets one of the followingcriteria:

(a) It appears in the primary key.

(b) It is fully functionally dependent on the primary key.

The tables designed in the proposed system contain a primary key for uniquely identifyingeach user.

Third Normal Form

Third Normal form (3NF) is based on the concept of transitive dependency. Arelationis saidto be in 3NF if it is in 2NF and has no transitive dependencies. That is all the nonkeyattributes should be functionally determined by the primary key. In the proposed systemall attributes of tables are fully depends on the primary key only that is all non-key attributes aremutually independent.

TABLES

A database is a collection of interrelated data stores with minimum redundancy to servemanyusers quickly and efficiently. The general objectives are to make information access easy, quick, inexpensive and flexible for the user. In a database environment, common data is availableinwhich several users can use. The concept behind a database is an integrated collectionof dataand provides a centralized access to the data from the program. The following tables areusedin this project.

Login table

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?	Zerofill?	On Update
id	int	11		☑	☑	☐	☑	☐	☐
username	varchar	100		☐	☑	☐	☐	☐	☐
password	varchar	100		☐	☑	☐	☐	☐	☐
type	varchar	100		☐	☑	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐

Student

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?	Zerofill?	On Update
id	int	11		☑	☑	☐	☑	☐	☐
student_name	varchar	100		☐	☑	☐	☐	☐	☐
email	varchar	100		☐	☑	☐	☐	☐	☐
contact	varchar	100		☐	☑	☐	☐	☐	☐
gender	varchar	100		☐	☑	☐	☐	☐	☐
photo	varchar	300		☐	☑	☐	☐	☐	☐
pin	varchar	100		☐	☑	☐	☐	☐	☐
place	varchar	100		☐	☑	☐	☐	☐	☐
post	varchar	100		☐	☑	☐	☐	☐	☐
city	varchar	100		☐	☑	☐	☐	☐	☐
state	varchar	100		☐	☑	☐	☐	☐	☐
status	varchar	100		☐	☑	☐	☐	☐	☐
COURSE_id	int	11		☐	☑	☐	☐	☐	☐
LOGIN_id	int	11		☐	☑	☐	☐	☐	☐
regno	varchar	100		☐	☑	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐

Staff

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?	Zerofill?	On Update
id	bigint	20		☑	☑	☐	☑	☐	☐
place	varchar	100		☐	☑	☐	☐	☐	☐
chairperson	varchar	100		☐	☑	☐	☐	☐	☐
details	varchar	100		☐	☑	☐	☐	☐	☐
branch	varchar	100		☐	☑	☐	☐	☐	☐
post	varchar	100		☐	☑	☐	☐	☐	☐
pin	varchar	100		☐	☑	☐	☐	☐	☐
district	varchar	100		☐	☑	☐	☐	☐	☐
since	varchar	100		☐	☑	☐	☐	☐	☐
photo	varchar	100		☐	☑	☐	☐	☐	☐
LOGIN_id	bigint	20		☐	☑	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐

Subadmin

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?	Zerofill?	On Update
id	int	11		☑	☑	☐	☑	☐	☐
name	varchar	100		☐	☑	☐	☐	☐	☐
email	varchar	100		☐	☑	☐	☐	☐	☐
contact	varchar	100		☐	☑	☐	☐	☐	☐
gender	varchar	100		☐	☑	☐	☐	☐	☐
photo	varchar	300		☐	☑	☐	☐	☐	☐
place	varchar	100		☐	☑	☐	☐	☐	☐
pin	varchar	100		☐	☑	☐	☐	☐	☐
post	varchar	100		☐	☑	☐	☐	☐	☐
city	varchar	100		☐	☑	☐	☐	☐	☐
state	varchar	100		☐	☑	☐	☐	☐	☐
LOGIN_id	int	11		☐	☑	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐

Department

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?	Zerofill?	On Update
id	int	11		☑	☑	☐	☑	☐	☐
department_name	varchar	100		☐	☑	☐	☐	☐	☐
year	varchar	100		☐	☑	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐

Course

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?	Zerofill?	On Update
id	int	11		☑	☑	☐	☑	☐	☐
course	varchar	100		☐	☑	☐	☐	☐	☐
sem	varchar	100		☐	☑	☐	☐	☐	☐
DEPARTMENT_id	int	11		☐	☑	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐

Election

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?	Zerofill?	On Update
id	int	11		☑	☑	☐	☑	☐	☐
date	date			☐	☑	☐	☐	☐	☐
election_name	varchar	100		☐	☑	☐	☐	☐	☐
election_date	date			☐	☑	☐	☐	☐	☐
election_type	varchar	100		☐	☑	☐	☐	☐	☐
status	varchar	100		☐	☑	☐	☐	☐	☐
nomineestatus	varchar	100		☐	☑	☐	☐	☐	☐
last_nominationda	date			☐	☑	☐	☐	☐	☐
year	int	11		☐	☑	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐

Election coordinator

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?	Zerofill?	On Update
id	int	11		☑	☑	☐	☑	☐	☐
ELECTION_id	int	11		☐	☑	☐	☐	☐	☐
STAFF_id	int	11		☐	☑	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐

Nominees

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?	Zerofill?	On Update
id	int	11		☑	☑	☐	☑	☐	☐
date	date			☐	☑	☐	☐	☐	☐
time	time	6		☐	☑	☐	☐	☐	☐
status	varchar	100		☐	☑	☐	☐	☐	☐
ELECTION_id	int	11		☐	☑	☐	☐	☐	☐
STUDENT_id	int	11		☐	☑	☐	☐	☐	☐
				☐	☐	☐	☐	☐	☐

Rep & Sup

Column Name	Data Type	Length	Default	PK?	Not Null?	Unsigned?	Auto Incr?	Zerofill?	On Update
id	int	11		☑	☑	☐	☑	☐	☐
supportivename	varchar	100		☐	☑	☐	☐	☐	☐
supportiveemail	varchar	100		☐	☑	☐	☐	☐	☐
supportivephone	varchar	100		☐	☑	☐	☐	☐	☐
supportiveregno	varchar	100		☐	☑	☐	☐	☐	☐
supportivephoto	varchar	250		☐	☑	☐	☐	☐	☐
supportivename1	varchar	100		☐	☑	☐	☐	☐	☐
supportiveemail1	varchar	100		☐	☑	☐	☐	☐	☐
supportivephone1	varchar	100		☐	☑	☐	☐	☐	☐
supportiveregno1	varchar	100		☐	☑	☐	☐	☐	☐
supportivephoto1	varchar	250		☐	☑	☐	☐	☐	☐
NOMINEE_id	int	11		☐	☑	☐	☐	☐	☐
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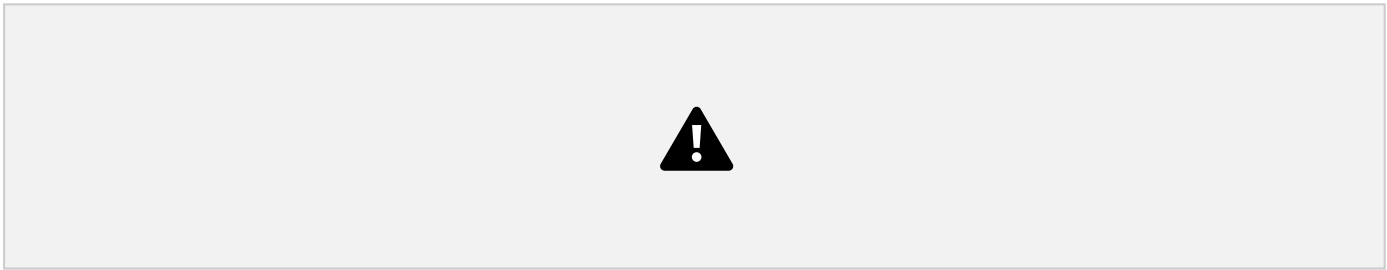
Result

Scrutiny

Complaint



ARCHITECTURE DIAGRAMS/DFD

Data flow diagram issued to define the flow of the system audits resources suchasinformation. Data flow diagrams represent one of the most ingenious tools usedforstructured analysis. A Dataflow diagram or DFD as it is shortly called is alsoknownasabubble chart. It is the major starting point in the design phase that functionallydecomposesthe requirement specifications

down to the lowest level of details. In the normal convention, A Data flow diagram has four major symbols.

1. Square: This defines source or destination of data

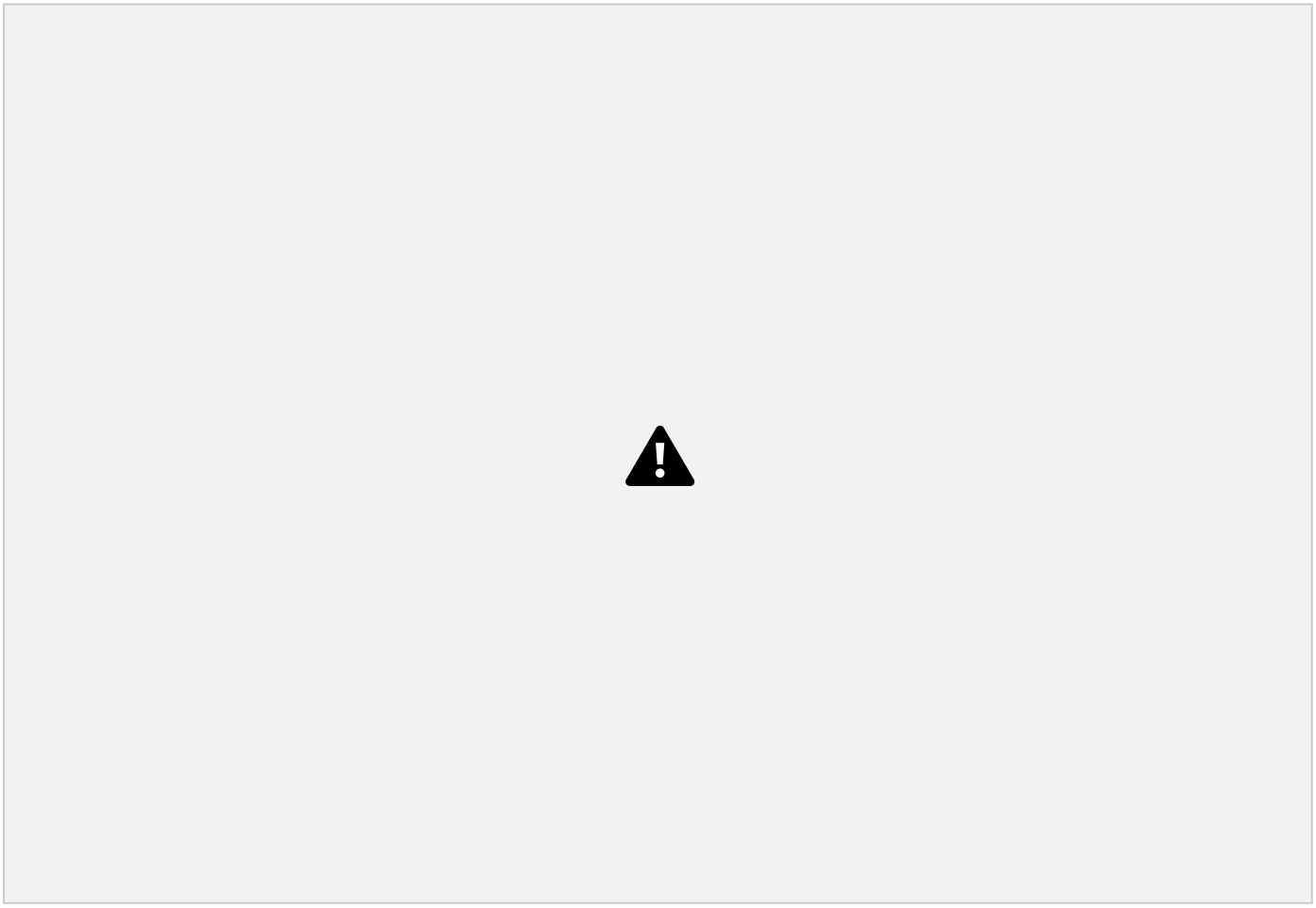
2. Arrow: which shows data flow

3. Circle: which represent a process that transforms incoming data into outgoing flow

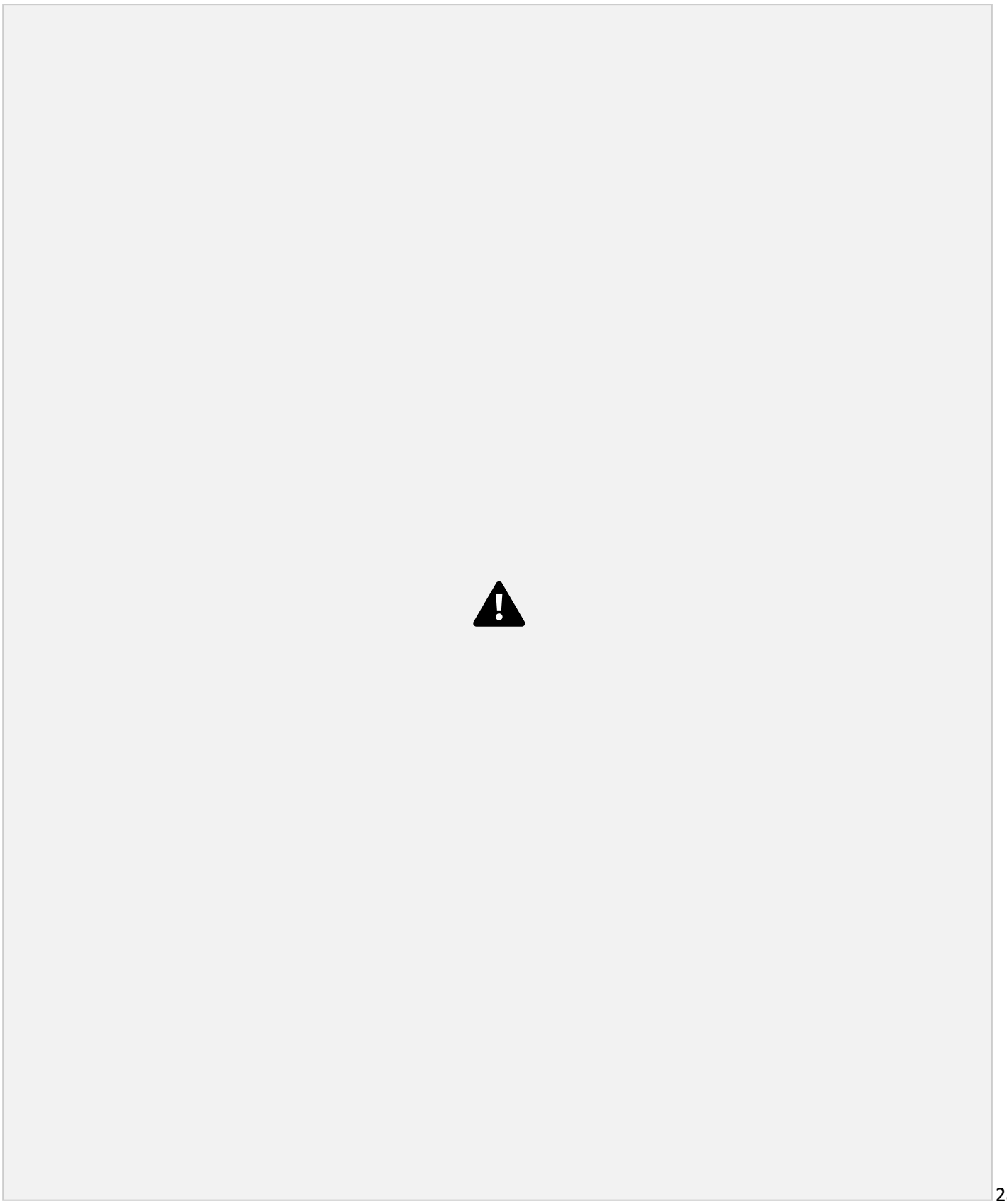
4. Open rectangle: which shows data store.

DATA FLOW DIAGRAM

Level 0



Level 1



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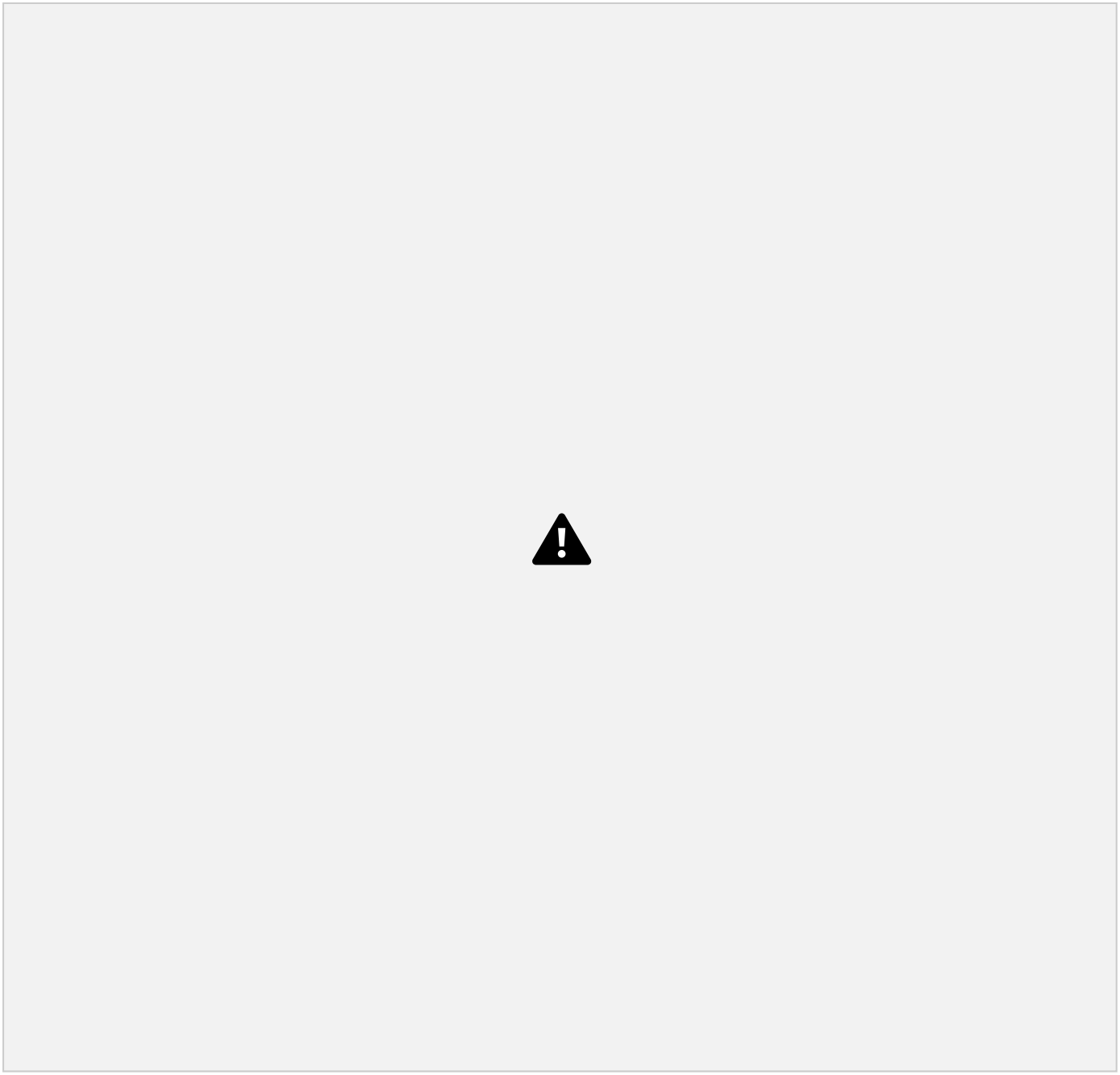

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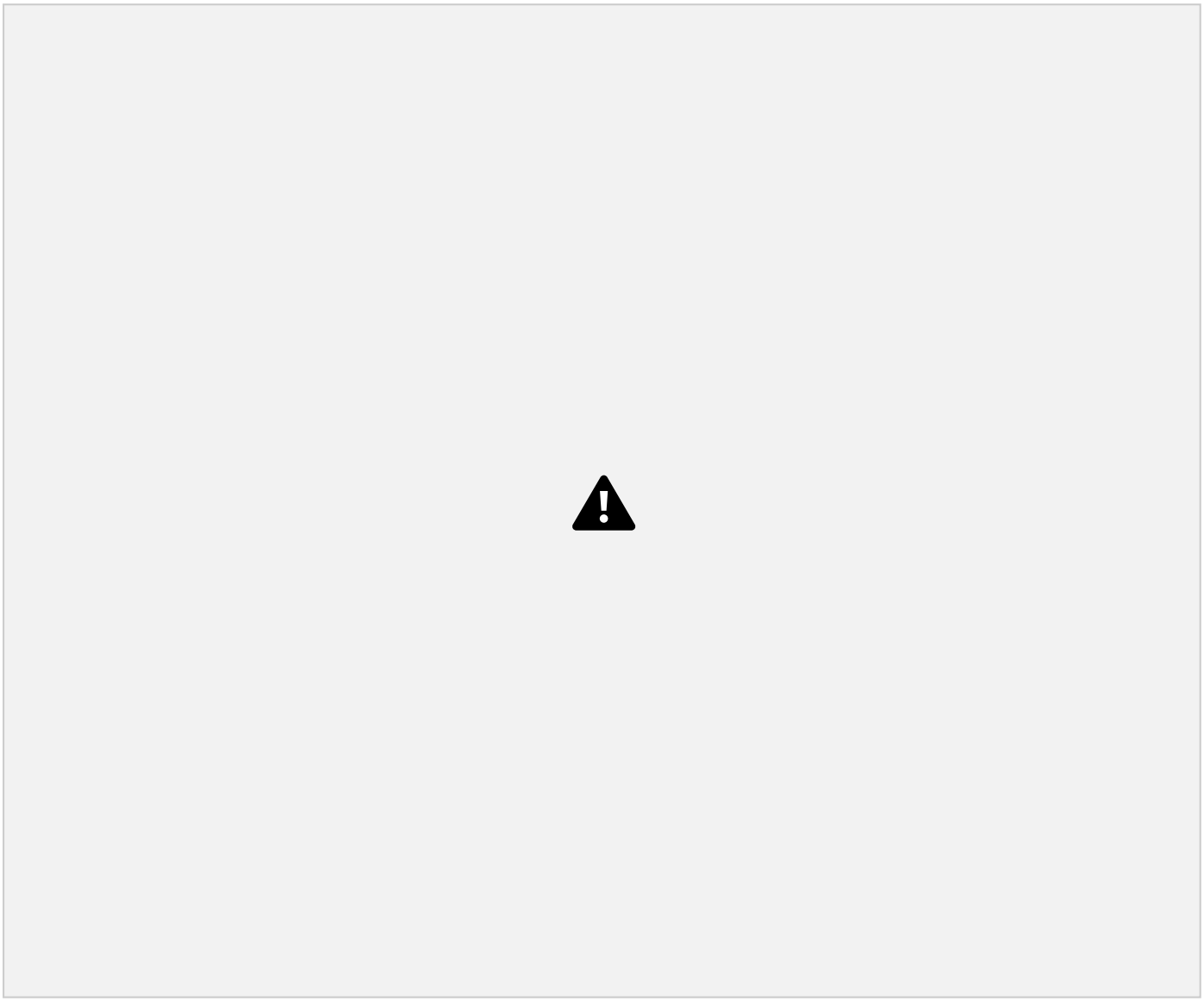

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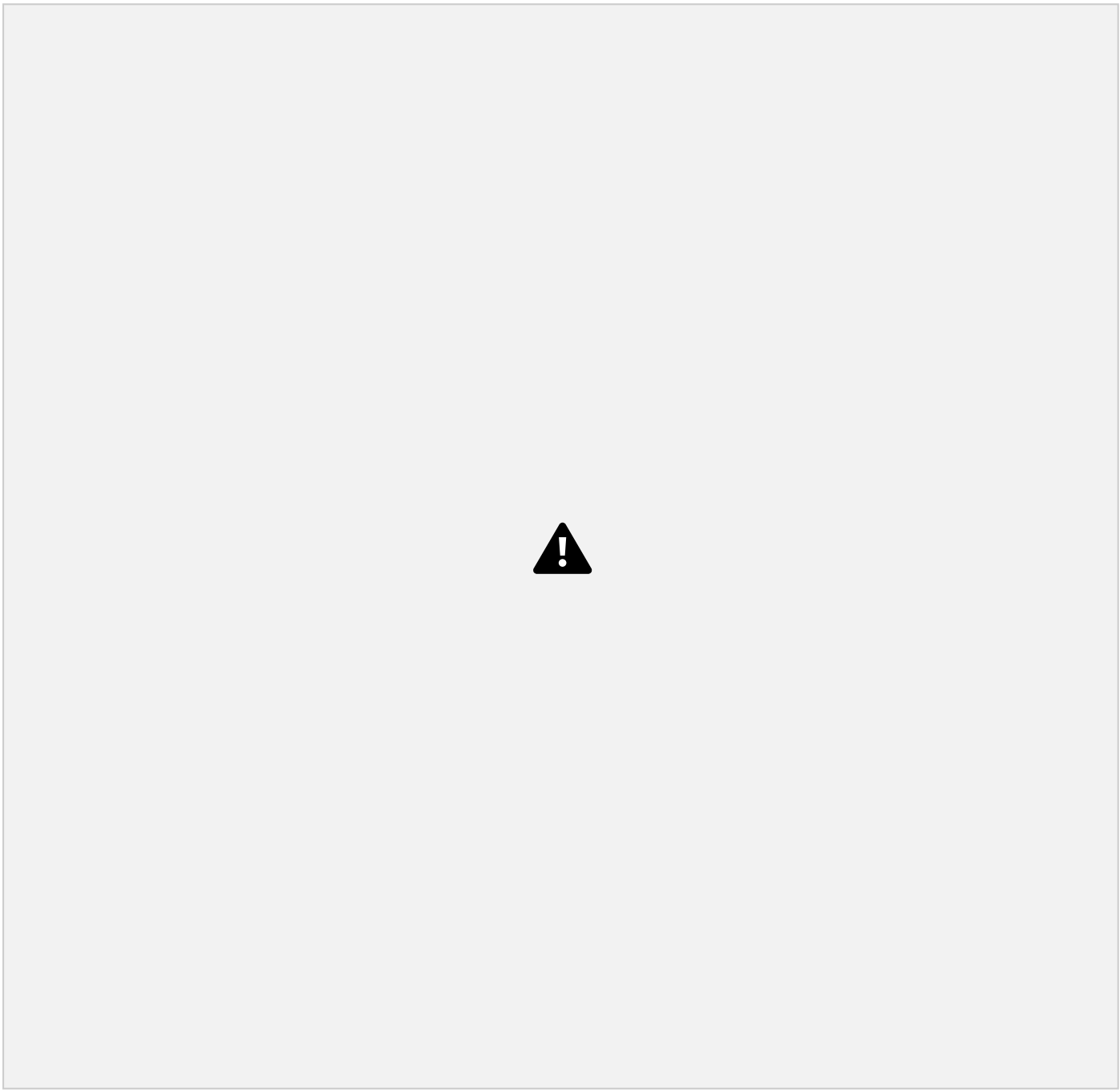

SYSTEM DEVELOPMENT

System development is a series of operations to manipulate data to produce output fromcomputer system. The principles activities performed during the development phase canbedivided into two major related sequences:

.

• External system development

• internal system development

CODING

A code is an ordered collection of symbols designed to provide unique identification of entityor an attribute. Code also shows interrelationship among different items. Codes are usedtoidentify, access, sort, matching records. The code ensures that only one value of code withasingle meaning is applied to give entity or attribute as described in various ways. **FRONT END:**

Python – An Overview

Python is an interpreter, object-oriented, high-level programming language with dynamicsemantics. Its high-level built-in data structures, combined with dynamic typing and dynamicbinding, Python's simple, easy to learn syntax emphasizes readability and therefore reduces the

Debugging Python programs is easy: a bug or bad input will never cause a segmentationfault. Instead, when the interpreter discovers an error, it raises an exception. Python is meant tobean easily readable language.

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BACK END:

MySQL Database

Microsoft SQL Server is a relational database management system developed by Microsoft. Asa database server, it is a software product with the primary function of storing and retrievingdata as requested by other software applications—which may run either on the same computeror on another computer across a network (including the Internet). Structured Query Languageis a domain-specific language used in programming and designed for managing data heldinarelational database management system (RDBMS), or

for stream processing in a relational data stream management system (RDSMS). The scope of SQL includes data insert, query, update and delete, schema creation and modification, and data access control SQLcommandsare grouped into four major categories depending on their functionality.

• **Data Definition Language (DDL)**

These SQL commands are used for creating, modifying, and
Dropping the structure of database objects. The commands are CREATE, ALTER, DROP, RENAME and TRUNCATE.

•**Data Manipulation Language (DML)**

These SQL commands are used for storing, retrieving, modifying, and deleting data. TheseDataManipulation Language commands are: SELECT, INSERT, DELETE AND UPDATE.

SYSTEM TESTING

Testing is an important step in the software engineering process that could viewrather thanconstructive. Testing is the process of executing a program with the intent of finding anerror. A good test is that has the probability to find an as yet undiscovered error. Software testingisacritical element of software quality assurance and represents the ultimate reviewofspecification, design and coding. **Testing Strategy:**

Unit Testing

Unit testing focused verification efforts on the smallest unit of software design, the module. This is also

known as ―module testing. The modules are tested separately. This testingiscarried out during the programming stage itself. In this testing step each module is foundtobeworking satisfactorily as regard to the expected output from the module.

Integration Testing

The integration testing is a systematic testing for constructing the program's structure, whileat the same time conducting tests to uncover errors associated within the interface. The objectiveis to take unit tested modules and build a program structure. All the modules are combinedandtested as a whole. Here correction is difficult because the vast expenses of the entire programcomplicate the isolation of causes.

System Testing

After performing the validation testing, the next step is output testing of the proposedsystemsince no system could be useful if it doesn 't produces the required data in the specific format. The output displayed or generated by the system under consideration is tested.

IMPLEMENTATION

Implementation is the stage of project, when theoretical design is turned into a workingsystem. The most crucial stage is achieving a successful system and confidence that the newsystemwill work effectively. Implementation means converting a new or revised systemdesignintoan operational one.

There are several activities involved while implementing a project:

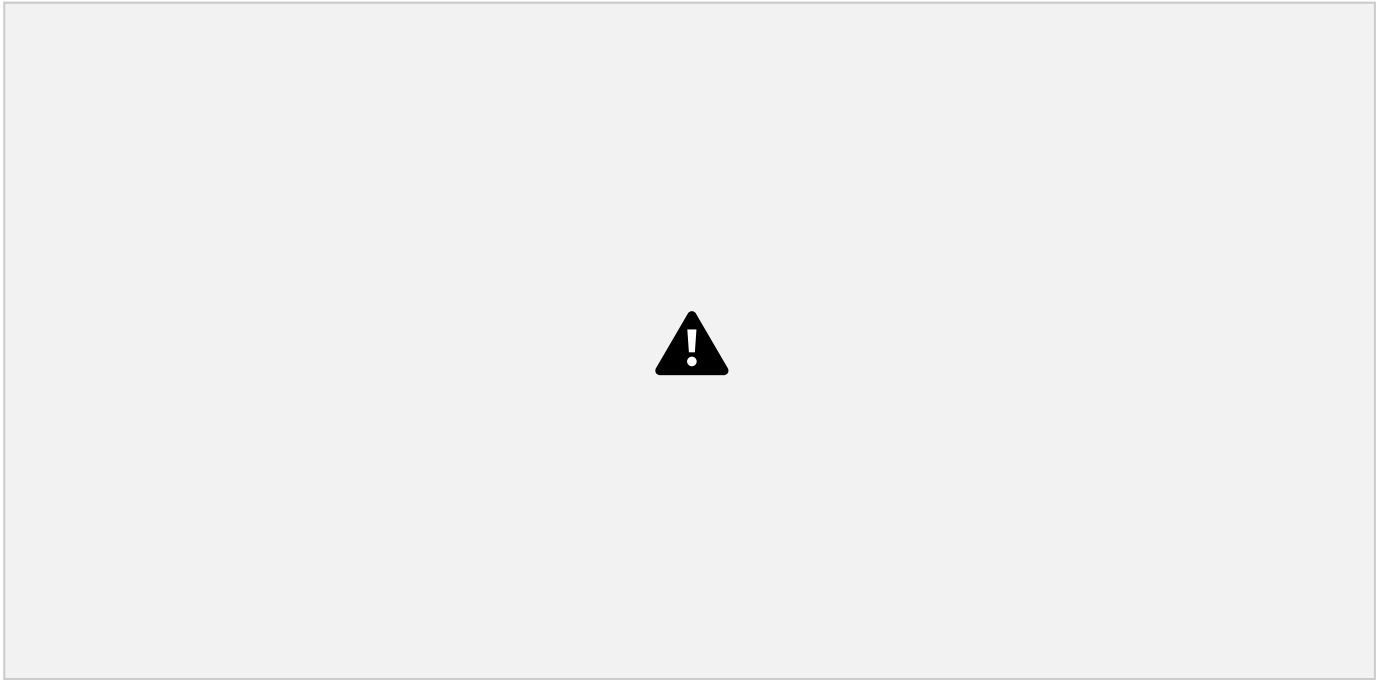
• Careful planning.
• Investigating the current system and its constraints on implementation. • Design methods to achieve the changeover.
• Training of the staff in the changeover procedure and evaluation of change over

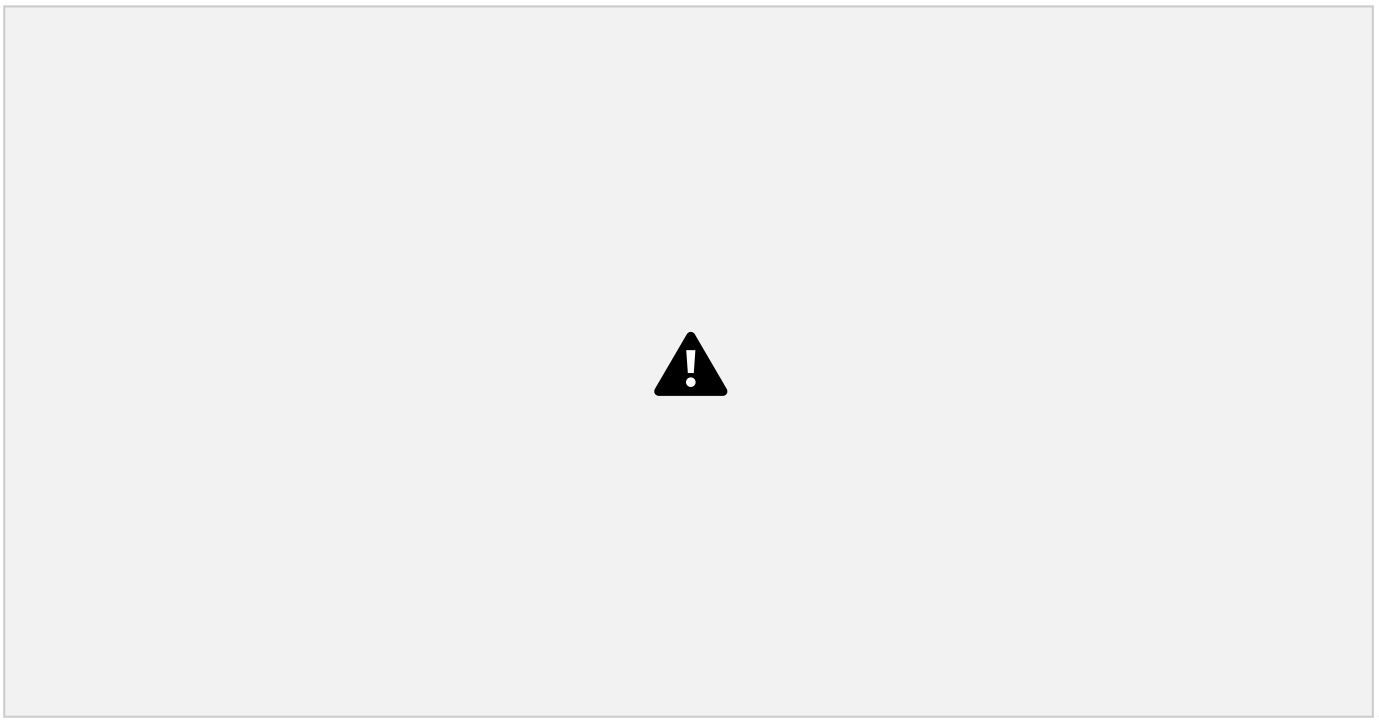
Method Implementation is the final stage, and it is an important phase. The first taskinimplementation

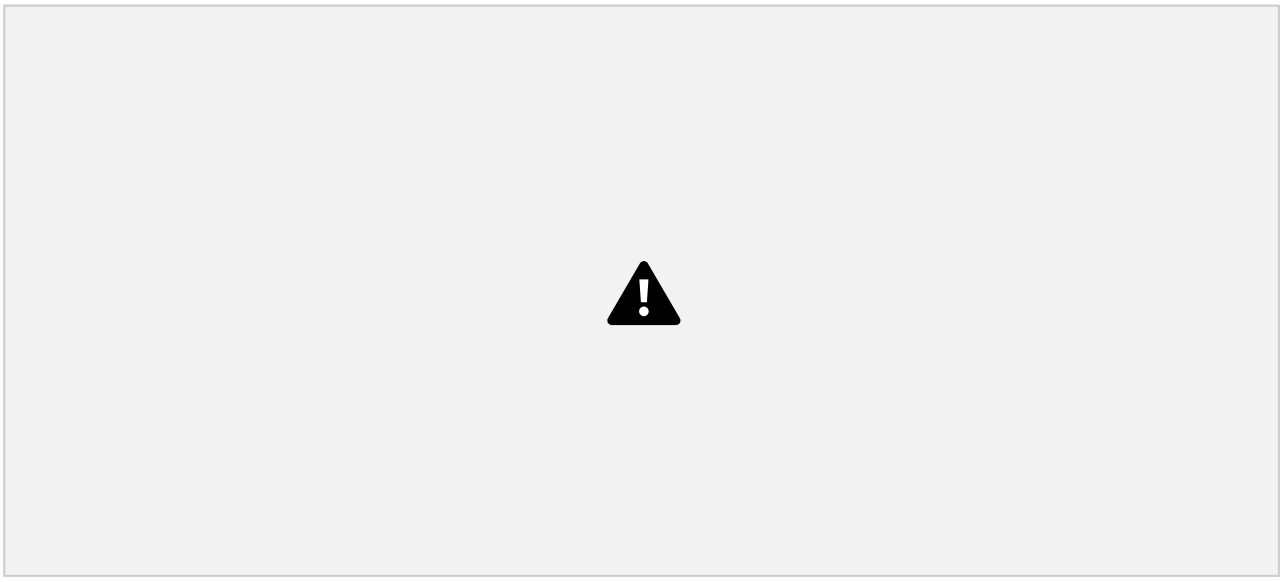
planning, which is deciding on methods to be adopted. After the systemwasimplemented successfully, training of the user was one of the most important sub tasks of thedeveloper.

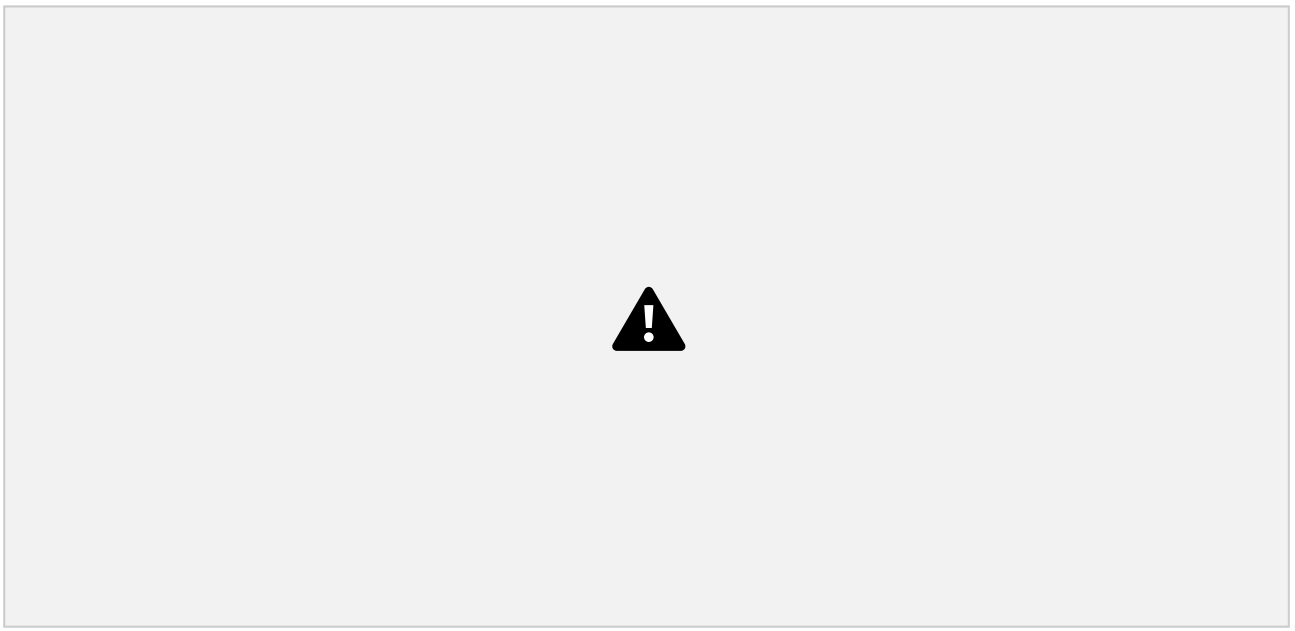
APPENDIX

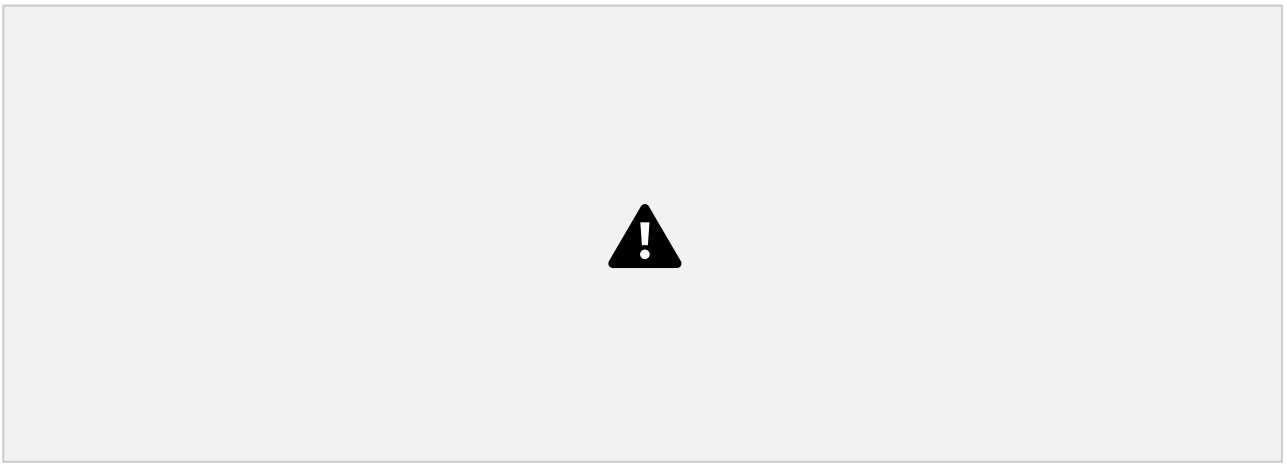
WEB APPLICATION SCREEN SAMPLES

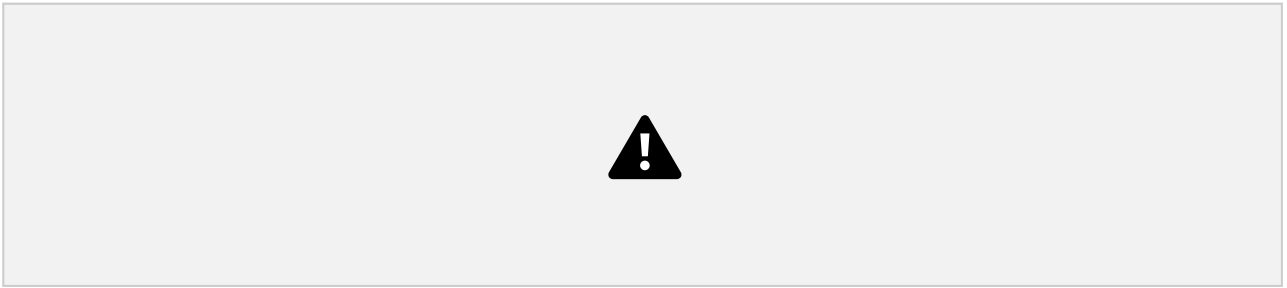


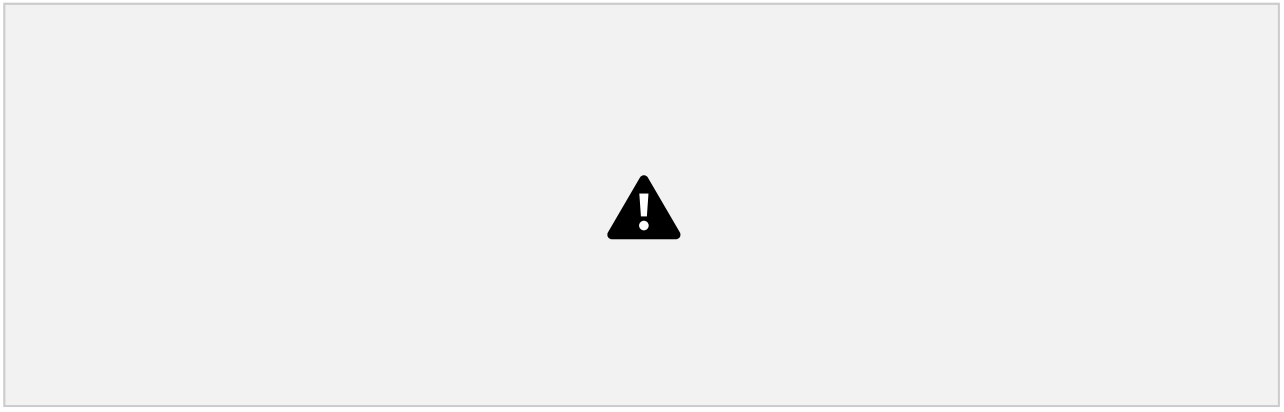


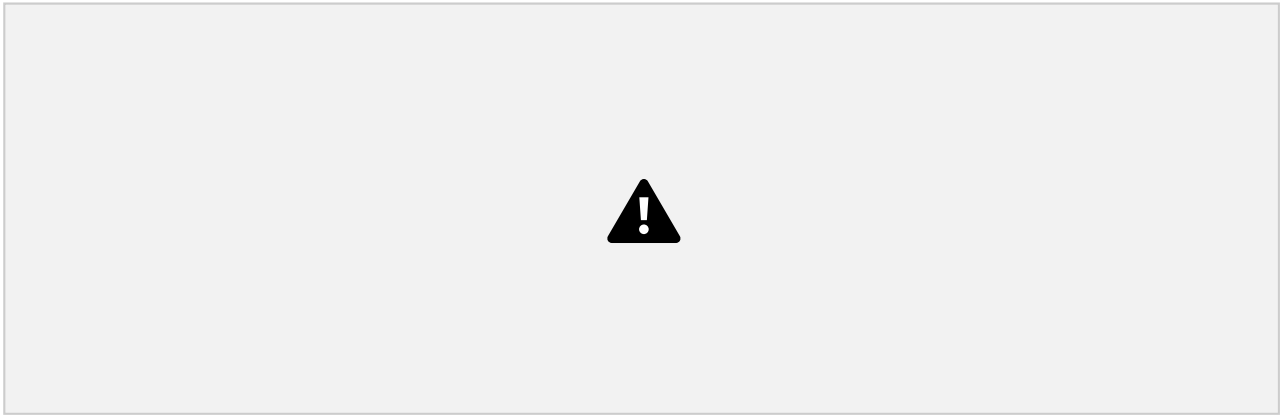


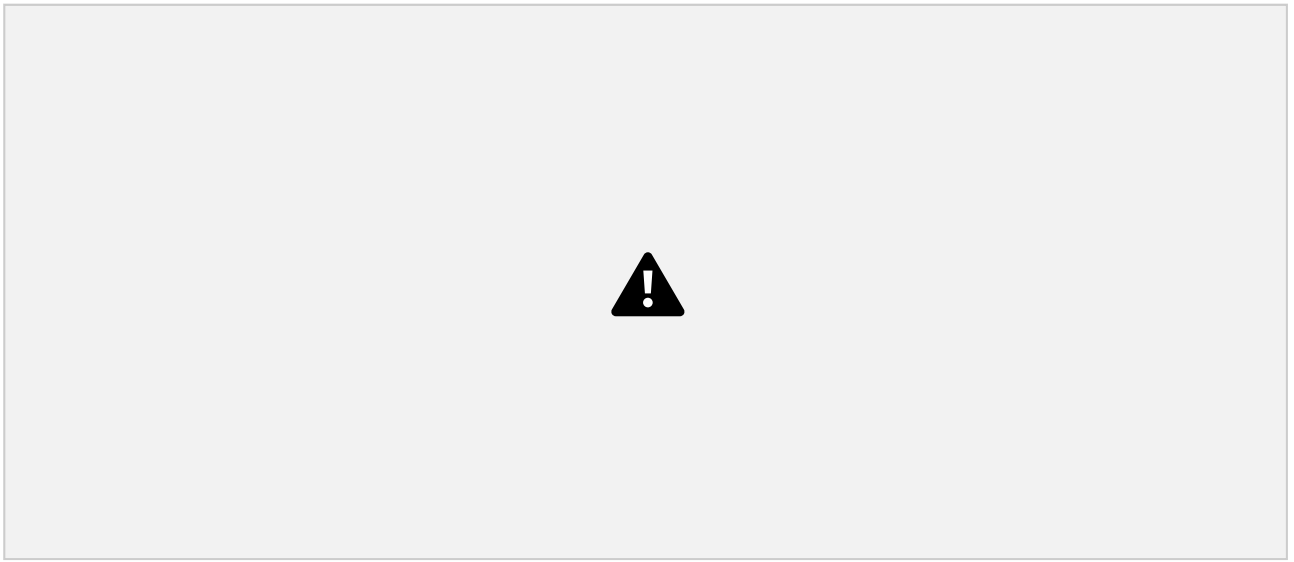


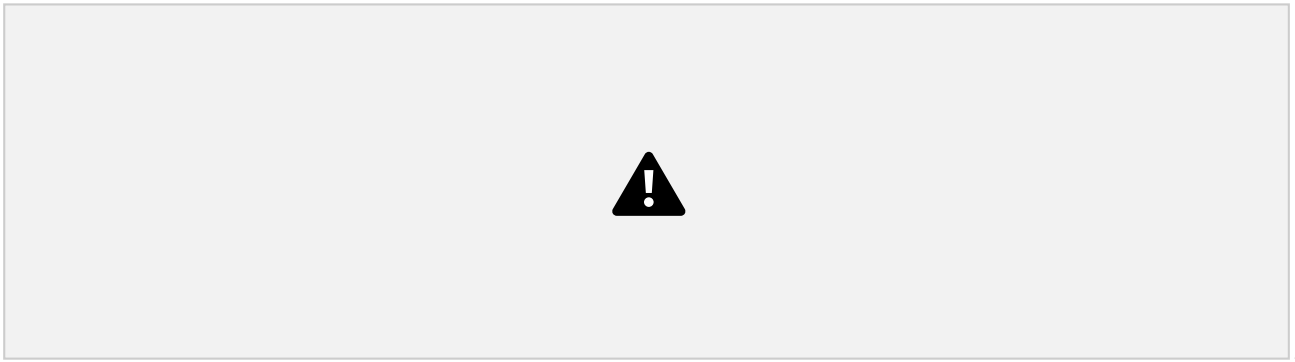


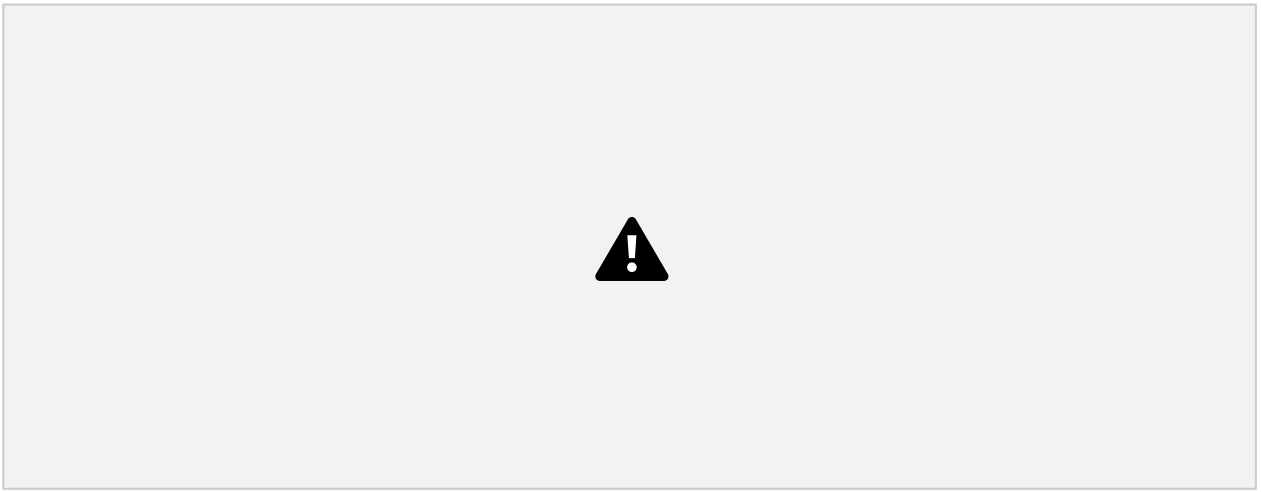


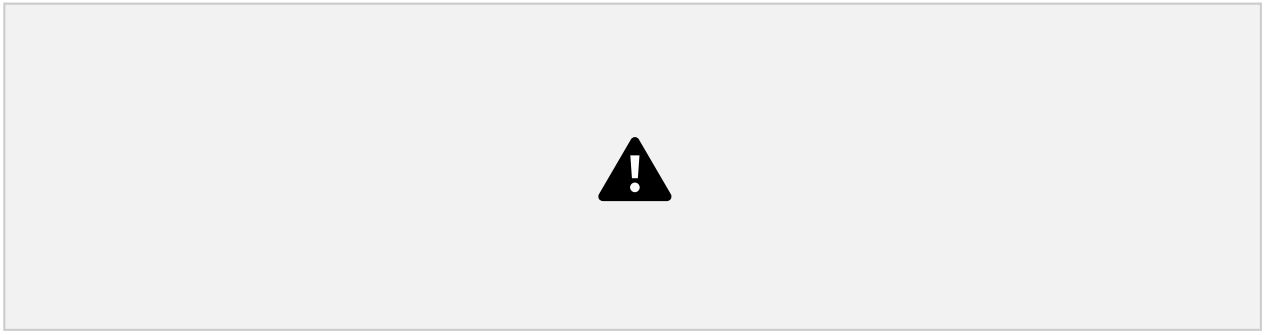




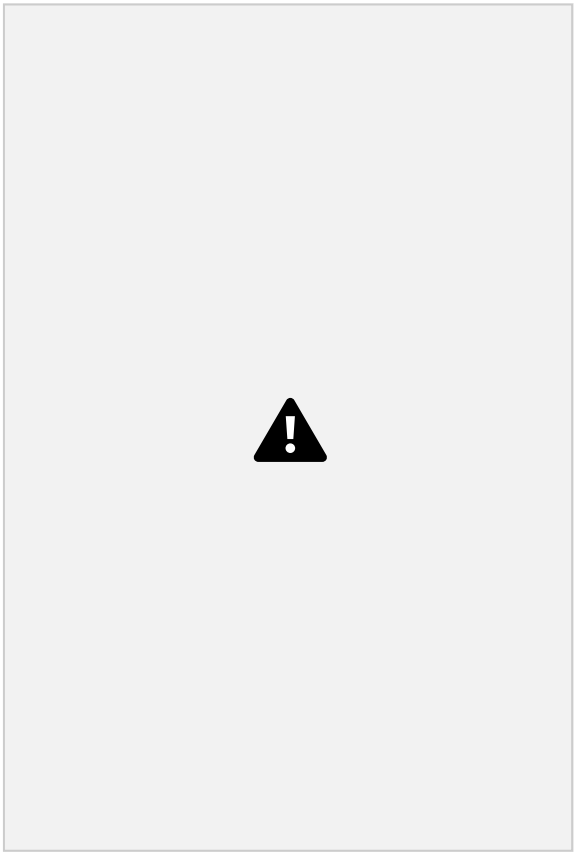


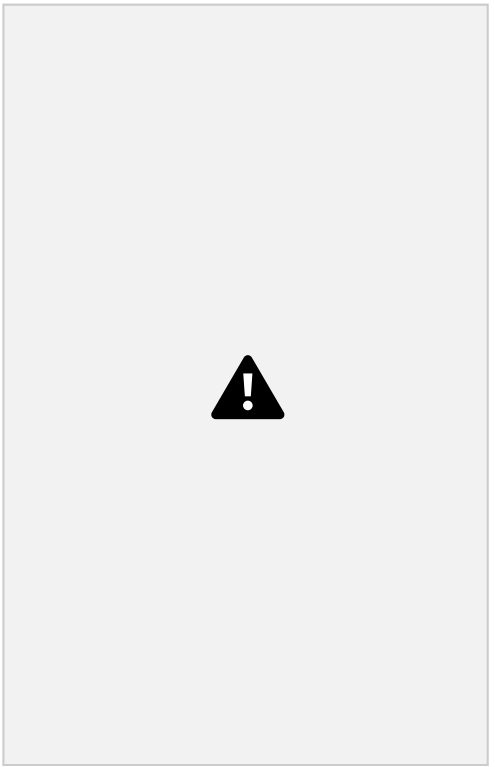


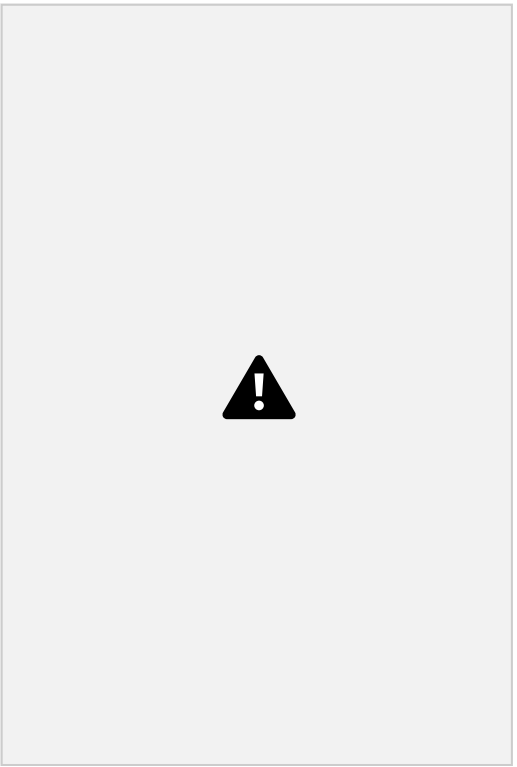


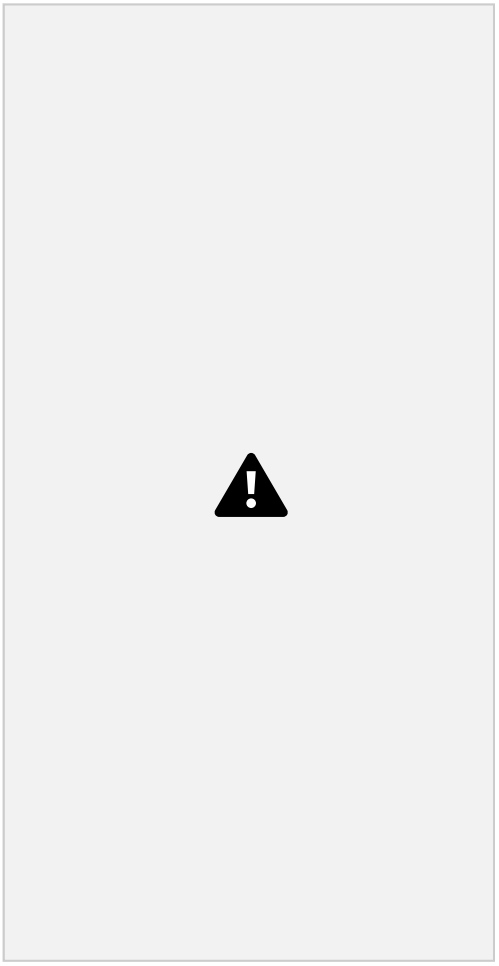


ANDROID APPLICATION SCREENSAMPLE









FUTURE ENHANCEMENT

Technology is updating day by day so it sure that we add more features or enhancesoftware and user experience. There are some ideas which we had in our mindbutcouldn’t do (required more hardwires).

Multi-Factor Authentication: Combine facial recognition with additional verificationmethods like OTPs or biometrics.

AI to Spot Fraud: Use AI to find any suspicious voting behavior or fraud.

Voter Privacy: Give voters more control over their personal data with secureidentitysystems.

Multi-Type Election: Add Parliamentary-Type Election and Presidential-TypeElection.

CONCLUSION

In conclusion, The proposed blockchain-based electronic voting systemaddresseskeychallenges of traditional voting, particularly in security, accessibility, and fairness. Byleveraging blockchain's tamper-proof records and transparency, the systemensuresthatvotescannot be altered or manipulated. The integration of facial recognition technologystrengthensvoter verification, ensuring that only eligible voters can cast their ballots, preventingfraud.Additionally, the clear and transparent candidate nomination process reduces confusionanddelays, promoting fairness in the election procedure.

The system’s accessibility features make it easier for all students, includingthosewithdisabilities or off-campus, to vote. This ensures a more democratic and fair electionprocess.By implementing this system, the election process would be faster, more trustworthy, andcost-effective. Blockchain technology could transform elections worldwide byprovidingasecure and transparent way to vote.

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