

**A  
PROJECT REPORT  
ON  
Solidity CrowdFunding in Blockchain**

**SUBMITTED TO THE  
SAVITRIBAI PHULE PUNE UNIVERSITY, PUNE  
IN THE PARTIAL FULFILLMENT FOR THE AWARD OF  
THE DEGREE OF**

**”BACHELOR OF ENGINEERING IN  
INFORMATION TECHNOLOGY”  
BY**

<b>Janhavi Bhosale</b>	<b>B511013</b>
<b>Yash Chaudhari</b>	<b>B511017</b>
<b>Ravina Dhumal</b>	<b>B511027</b>
<b>Prathamesh Kale</b>	<b>B511059</b>

**UNDER THE GUIDANCE OF  
Dr.T.Praveen Blessington**



**Department Of Information Technology  
Zeal Education Society's  
ZEAL COLLEGE OF ENGINEERING RESEARCH  
Narhe, Pune-411041**

2022-2023



## CERTIFICATE

This is to certify that the project report entitles

**“Solidity Crowdfunding in Blockchain”**

Submitted by

<b>Janhavi Bhosale</b>	<b>B511013</b>
<b>Yash Chaudhari</b>	<b>B511017</b>
<b>Ravina Dhumal</b>	<b>B511027</b>
<b>Prathamesh Kale</b>	<b>B511059</b>

is a bonafide work carried out by them under the supervision of Prof. Amruta. V. Patil and it is approved for the partial fulfillment of the requirement of Savitribai Phule Pune University for the award of the Degree of Bachelor of Engineering (Information Technology). This Project report has not been earlier submitted to any other Institute or Uni-versity for the award of any degree or diploma.

Dr.T.Praveen.Blessington  
Internal Guide  
Department Of Information Technology

Prof.Balaji Chaugule  
Head Of Department  
Department Of Information Technology

External Examiner

Dr.A.M.Kate  
Principal  
Zeal College Of Engg. and Research

Date:  
Place:

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## **ABSTRACT**

Users who invest in crypto-currency often have little visibility of where the value of their investment went. There are no mathematical standards for crypto-currencies to evaluate value at this time, resulting in a lack of stabilization within the market. Currently, faster miners must limit themselves while mining some currencies to allow the market's hash rate to keep up, which dramatically increases spend or withdrawal time. This is why we've created CrowdCoin. CrowdCoin's mission is to stabilize the crypto-currency market with its new hash of proof algorithms. Much like Bitcoin, CrowdCoin can create more blocks and mine much faster, and it is capable of being mined similar to the processes of verifying Satoshi's or Ether's Finneys. Also, it can be mined by ASIC, Non-ASIC or cryptonote compliant hardware. Because of this new standard, all cryptocurrencies will be more spendable and have faster transaction time after the cryptocurrency market embraces CrowdCoin.

In this case, we use blockchain which enables cryptography and transaction security at every stage while maintaining transparency so that every transaction is backed up with proof of its authenticity. Hence, we present a framework that uses blockchain innovation and a full-proof fund transfer system. Blockchain contains growing list of records called blocks. Cryptographically hashed data, a timestamp, and recent transactions are included in each block. Smart contracts are resilient and highly secured applications deployed on the blockchain. We are going to build a smart campaign contracts used to crowdsource projects and keep track of the spending habit of the crowdsourcer.



## **Chapter 1 INTRODUCTION**

### **1.1 OVERVIEW**

Blockchain is one of the technologies that have created a disruptive change in several industries. Currently, Blockchain is getting used in numerous places and there are more applications of Blockchain yet to be discovered and implemented. Blockchain is characterized by its decentralized nature, the integrity of the information stored within the chain, and its openness. Due to these characteristics, another area in which Blockchain can be used is to release funds for government projects. Governments have to cater to an enormous number of responsibilities of a state. The working of state governments involves numerous transactions towards various operations that require to be applied throughout the state. This includes new projects, repair, and maintenance work, awarding contracts, paying off government employees, farmer schemes, and so on. A serious hurdle that the highest government faces is the low-level corruption that's sometimes impossible to trace, which deprives the state of progress. Tracking it's a really difficult task because of the present system. Blockchain is touted for its capability to reinforce the trust and ease of information-based exchanges among people and associations.

The innovation offers a guarantee when deliberately applied within the proper settings. Customarily, associations working their own, singular IT frameworks trying to group must pander to difficulties including compromise of data, recognizing a solitary wellspring of truth, and provoking establishment Blockchain innovation tends to those difficulties by giving a specialized establishment that underpins the execution of shared business forms, such that no single substance controls the complete framework. Government incorporates a characteristic need to assemble, support, and ensure open trust in data and frameworks. In such kinds of situations, blockchain may help to boost this trust.

## **1.2 Aim and Objective**

### **1.2.1 Aim**

To Increase Transparency and Prevent Fraudulent Activities that arise around the world of StartUps and Platforms that have till now been developed around it such as **Kickstarter**. Although stringent measures such as symmetric encryption are in place to make e-payment safe and secure, it is still vulnerable to hacking. Enterprises with in-house e-payment systems must incur additional costs in procuring, installing and maintaining sophisticated payment-security technologies. There is no guarantee that people who post projects on Kickstarter will deliver on their projects, use the money to implement their projects, or that the completed projects will meet backers' expectations. A mockup of Kick Starter built using smart contracts written in solidity. The app is built using Reactjs with the help of Nextjs.

### **1.2.2 Objectives**

Making transaction histories more transparent and secure through the use of blockchain technology. Because Blockchain is a type of distributed ledger, all network participants share the same documentation as opposed to individual copies. Contributors can decide Where to invest and can Acknowledge the requests for money made by the Project Creators through their votes. The creator can only use the money if a minimum number of contributors approve a certain request. It will make sure the money is used for Necessities rather than Luxuries.

## **1.3 Organization of project report**

Chapter 1 - INTRODUCTION: In this chapter as shown above is the introduction of Solidity Crowdfunding Project Using Blockchain as well as the study of scope and software development modules while doing the project work.

Chapter 2 - BACKGROUND: In this chapter study of literature survey and survey also.

Chapter 3- SPECIFICATION: - In this chapter introducing problem definition, Requirement Specification and software, hardware requirement

Chapter 4 & 5:- IMPLEMENTATION:- In this chapter introducing system architecture flow, ,algorithms as well as all working of each module related to the project.

Chapter 6:- RESULTS & EVALUATION :- In this chapter we explain the extent till which our project has achieved its goals.

Chapter 7:- CONCLUSIONS AND FUTURE WORK:- In this chapter conclusion of system and future work as well as limitation of project.

## REFERENCES

## **Chapter 2 BACKGROUND AND LITERATURE SURVEY**

### **2.1 Overview On smart contract:**

Smart contracts are simply programs stored on a blockchain that run when predetermined conditions are met. They typically are used to automate the execution of an agreement so that all participants can be immediately certain of the outcome, without any intermediary's involvement or time loss. They can also automate a workflow, triggering the next action when conditions are met.

It has properties Like : Speed, efficiency and accuracy

Once a condition is met, the contract is executed immediately. Because smart contracts are digital and automated, there's no paperwork to process and no time spent reconciling errors that often result from manually filling in documents.

#### **Trust and transparency:**

Because there's no third party involved, and because encrypted records of transactions are shared across participants, there's no need to question whether information has been altered for personal benefit.

#### **Security:**

Blockchain transaction records are encrypted, which makes them very hard to hack. Moreover, because each record is connected to the previous and subsequent records on a distributed ledger, hackers would have to alter the entire chain to change a single record.

#### **Savings:**

Smart contracts remove the need for intermediaries to handle transactions and, by extension, their associated time delays and fees.

## **2.2 How it works?**

Smart contracts work by following simple “if/when...then...” statements that are written into code on a blockchain. A network of computers executes the actions when predetermined conditions have been met and verified. These actions could include releasing funds to the appropriate parties, registering a vehicle, sending notifications, or issuing a ticket. The blockchain is then updated when the transaction is completed. That means the transaction cannot be changed, and only parties who have been granted permission can see the results. Within a smart contract, there can be as many stipulations as needed to satisfy the participants that the task will be completed satisfactorily. To establish the terms, participants must determine how transactions and their data are represented on the blockchain, agree on the “if/when...then...” rules that govern those transactions, explore all possible exceptions, and define a framework for resolving disputes. Then the smart contract can be programmed by a developer – although increasingly, organizations that use blockchain for business provide templates, web interfaces, and other online tools to simplify structuring smart contract.

## **2.3 Applications of Smart Contract:**

### **Regarding the efficacy of medications:**

Sonoco and IBM are working to reduce issues in the transport of lifesaving medications by increasing supply chain transparency. Powered by IBM Blockchain Transparent Supply, Pharma Portal is a blockchain-based platform that tracks temperature-controlled pharmaceuticals through the supply chain to provide trusted, reliable and accurate data across multiple parties.

### **Increasing trust in retailer-supplier relationships:**

The Home Depot uses smart contracts on blockchain to quickly resolve disputes with vendors. Through real-time communication and increased visibility into the supply chain, they are building stronger relationships with suppliers, resulting in more time for critical work and innovation.

### **Making international trade faster and more efficient:**

By joining we, trade the trade finance network convened by IBM Blockchain, businesses are creating an ecosystem of trust for global trade. As a blockchain-based platform, we trade uses standardized rules and simplified trading options to reduce friction and risk while easing the trading process and expanding trade opportunities for participating companies and banks.

## **2.4 What is Ethereum?**

At its core, Ethereum is a decentralized global software platform powered by blockchain technology. It is most commonly known for its native cryptocurrency, ether (ETH). Ethereum can be used by anyone to create any secured digital technology. It has a token designed to pay for work done supporting the blockchain, but participants can also use it to pay for tangible goods and services if accepted. Ethereum is designed to be scalable, programmable, secure, and decentralized. It is the blockchain of choice for developers and enterprises creating technology based upon it to change how many industries operate and how we go about our daily lives. It natively supports smart contracts, an essential tool behind decentralized applications. Many decentralized finance (DeFi) and other applications use smart contracts in conjunction with blockchain technology. Learn more about Ethereum, its token ETH, and how they are an integral part of non-fungible tokens, decentralized finance, decentralized autonomous organizations, and the metaverse.

## **2.5 How does Ethereum works?**

Vitalik Buterin, credited with conceiving Ethereum, published a white paper to introduce it in 2014. The Ethereum platform was launched in 2015 by Buterin and Joe Lubin, founder of the blockchain software company ConsenSys. The founders of Ethereum were among the first to consider the full potential of blockchain technology beyond just enabling the secure virtual payment method. Since the launch of Ethereum, ether as a cryptocurrency has risen to become the second-largest cryptocurrency by market value. It is outranked only by Bitcoin.

## **2.6 Blockchain Technology:**

Ethereum, like other cryptocurrencies, involves blockchain technology. Imagine a very long chain of blocks. All of the information contained in each block is added to every newly-created block with new data. Throughout the network, an identical copy of the blockchain is distributed. This blockchain is validated by a network of automated programs that reach a consensus on the validity of transaction information. No changes can be made to the blockchain unless the network reaches a consensus. This makes it very secure. Consensus is reached using an algorithm commonly called a consensus mechanism. Ethereum uses the proof-of-stake algorithm, where a network of participants called validators create new blocks and work together to verify the information they contain. The blocks contain information about the state of the blockchain.

## **2.7 Wallets:**

Ethereum owners use wallets to store their ether. A wallet is a digital interface that lets you access your ether stored on the blockchain. Your wallet has an address, which is similar to an email address in that it is where users send ether, much like they would an email. Ether is not actually stored in your wallet. Your wallet holds private keys you use as you would a password when you initiate a transaction. You receive a private key for each ether you own. This key is essential for accessing your ether. That's why you hear so much about securing keys using different storage methods.

## **2.8 Literature Survey:**

### **Paper 1:”Blockchain based Data Security for Financial Transaction System”**

**Authors - Sujatha Kumari;Sadaf Farheen**

**Year Published – 2020**

**Paper 2:”Enhancing the security of financial transactions in Blockchain by using machine learning techniques:towards a sophisticated security tool for banking and finance”**

**Authors -Dalila Boughaci;Abdullah A.K. Alkhawaldeh Year Published – 2020**

### **Paper 3:-“Blockchain for bank/organization fund tracking using Hyperledger“**

**Author:Apoorva Mohite, Ajay Acharya**

Description: This paper gives a description about a prototype which was developed using Hyperledger Composer. It then discusses the future development of this prototype and finally, concludes with the applicability of Blockchain.

### **Paper 4: “Bank Scheme and Funds Tracker using Blockchain“**

**Author:Abhishek Katore, Sanskar Choubey**

Description: It is also referred to as the Digital ledger, same as the ledger maintained by financial institutions for keeping the track of records. In similar fashion blockchain is essentially digital ledger which is maintained and distributed environment.

### **Paper 5:”Organization/Bank fund distribution and Tracking system using blockchain Technology”**

**Author:Sahil siddharth jambhulkar, vishakha prashant ratnaparkh**

Description: In this paper we propose a system to track funds allocated to the organization as they travel through the organization process at each stage using Key pair generation algorithm, Metadata file decryption and Data verification algorithms. This system uses block-chain technology to maintain the transparency security at every stage as the funds move ahead. This system allows us to maintain the crystalclear record with all users who are connected in the chain to transaction the data on a need to know basis. The system makes use of encryption to secure transactional data using hash values to maintain a blockchain manner, which is maintained verified by every node involved to verify the transaction and save the data in a transparent form within the organization/bank.



## CHAPTER 3 REQUIREMENT AND ANALYSIS

### 3.1 Problem Statement

Traditionally, banks and venture capital funds are the main way to fill the gap in funding chain. A startup founder would approach a bank or a venture capitalist with his project pitch for funding and if they are interested in the project then the bank or venture capitalist will fund it for some returns, such as equity in case of venture capitalist or loan interest amount in case of banks. However, this way of raising funds has limitations associated with it. This process of fundraising requires huge amount of time, money and valuable resources that project creators from developing countries or remote places do not have access. If we consider bank loan as the solution for funding a project then the bank might become a bottleneck in the project as a bank needs concrete proof of how the project generates revenue and also it requires the founder to provide a collateral for the amount loaned.

### 3.2 Requirement Specifications

#### 3.2.1 Functional Requirements

- System must be fast and efficient
- User friendly GUI
- Performance
- System Validation accounts

A functional requirement specifies how a software system should operate and respond to particular input accounts or circumstances. Calculations, data processing, and other functionality may be among them.

As for the **Project** contract, it is instantiated through the Crowdfunding contract, and handles all the methods that can be performed in every crowdfunding project, such as *contribute()*, *getRefund()*, etc..

Basically, each project will initially be in the Fundraising state, and will change states through the check If Funding Complete Or Expired() function from there. Every time someone contributes funds towards the project, the state will change depending on certain conditions such as “has the project goal amount been met” or “has the project exceeded set deadline”.

### 3.2.2 Non-Functional Requirements

#### Performance Requirements

In identifying and quantifying performance requirements, it is important to identify the reasoning behind a particular requirement. This is part of the general capacity planning process. Users might be basing their statements of requirements on assumptions about the logic of the program that do not match the programmer's assumptions. In order to assess the performance of a system the following must be clearly specified

**Response time-** Response time is for searching the text information is less as compare to existing system. View time for all information is also less. Fast classification

**Workload-** The workload is often described as the scenarios that the users are likely to execute. How much get user's review on different recipe also find out top recipe using ingredient on the basis of review in proposed system. Find out how much recipe information occurred in this system.

**Scalability-** In one respect scalability is simply specified as more recipe related review information as well as relevant information about the systems workload that the system should be able to process.

**Safety Requirement-** Software System Safety upgrades framework safety in the configuration, improvement, use and maintenance of software frameworks and their incorporation with security basic equipment frameworks in an operational. Only authorized admin, and user access this system. Software shall perform Automatic Failure detection, isolation and Recovery.

**Security Requirement-** Secure Functional Requirements; this is a security related description that is integrated into each functional requirement. Typically this also says what shall not happen. This requirement artifact can for example be derived from misuse cases. Only authorized user can use this system. Admin can send precaution file to authorized user only.

#### Software Quality Attribute

**Capacity:-** Capacity of project according to data it is very less.

**Availability:-** Proposed system will be available on java application.

**Reliability:-** System is reliable recommendation of Indian recipe using available ingredient.

**Maintainability:-** It is easy to maintain data or information of recipe.

### **3.3 Project requirement specification**

#### **3.3.1 Software Requirements**

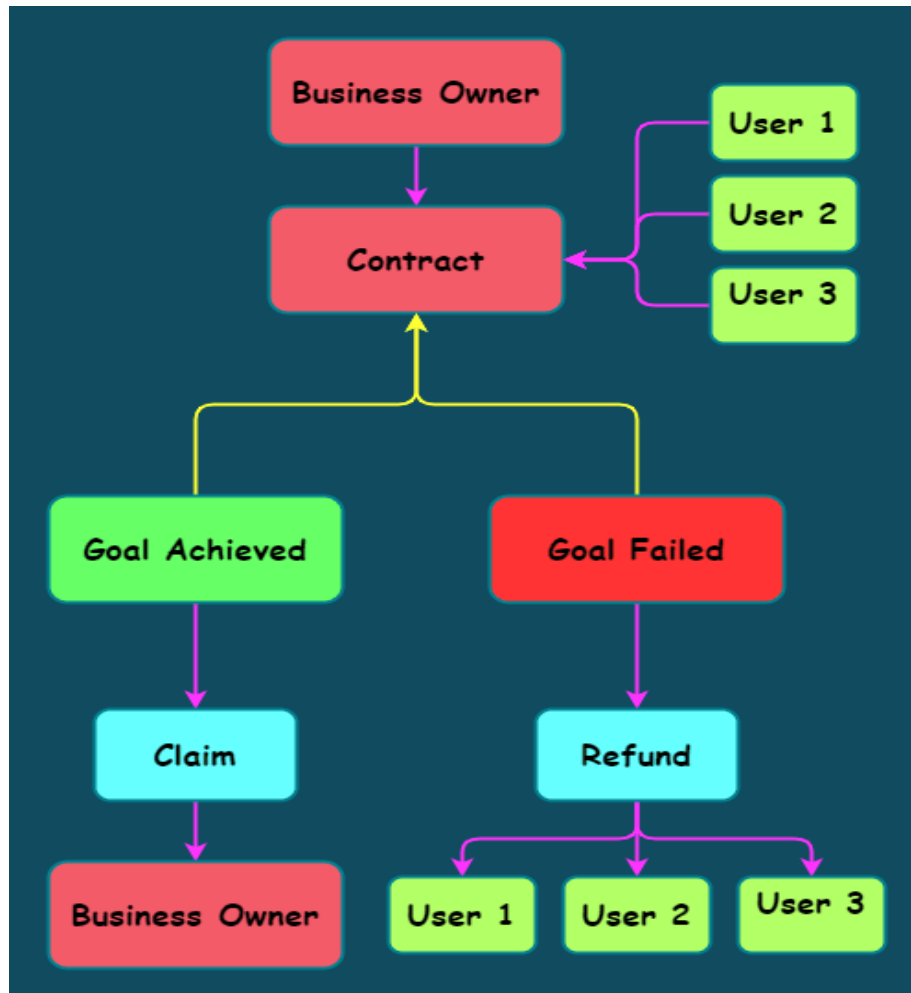
- Operating system: Windows XP/7 Higher
- Programming Language: JAVA/J2EE/
- Tools: Eclipse, Heidi SQL, JDK 1.7 or Higher
- Database: MySQL 5.1

#### **3.3.2 Hardware Requirements**

- System : i5 2.7 GHz.
- Hard Disk : 300 GB
- Monitor : 15 VGA Color.
- Mouse : Logitech.
- Ram : 4 GB

## CHAPTER 4 SYSTEM ARCHITECTURE

### 4.1 System Flow Architecture

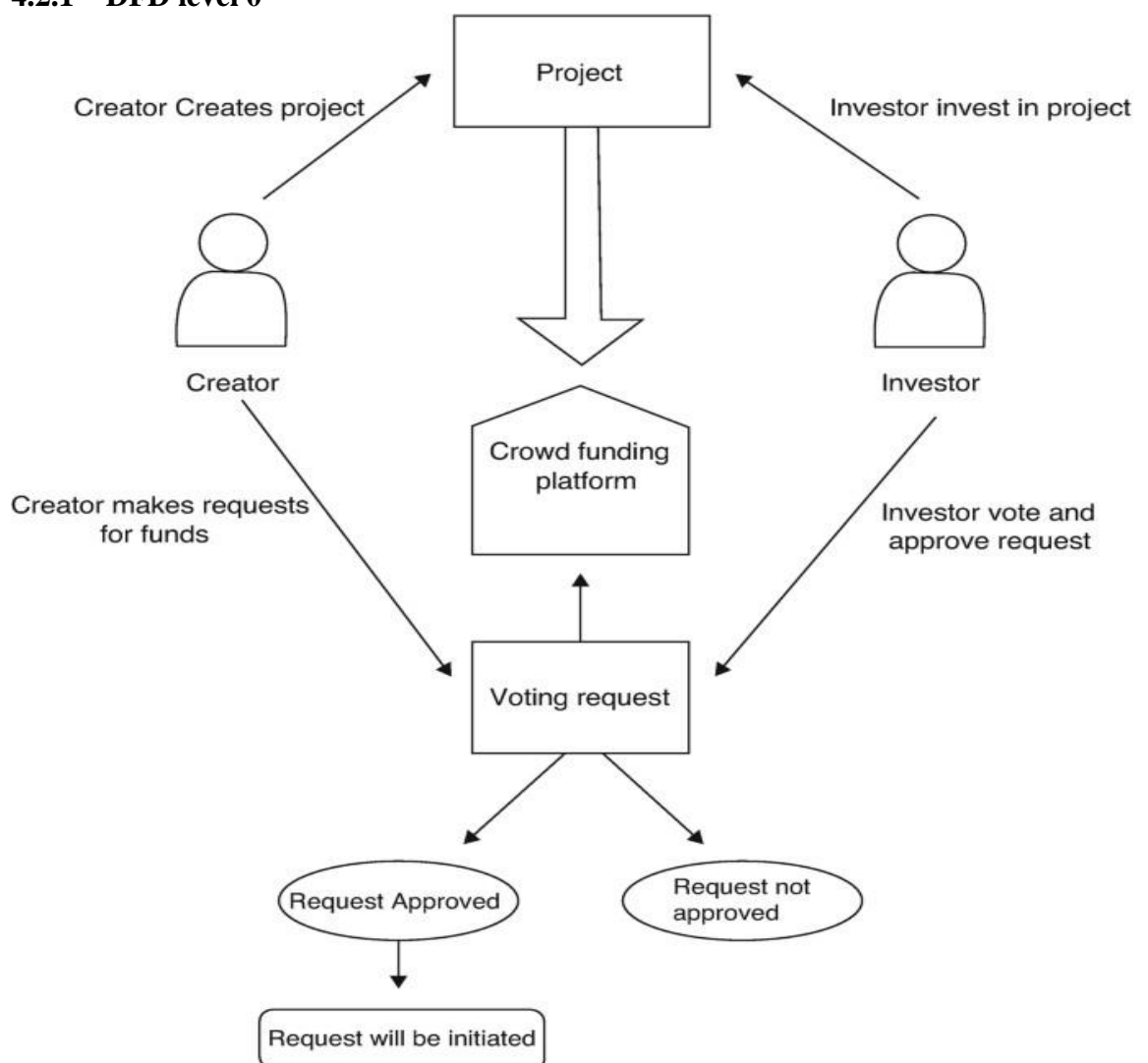


**Figure 4.1:** System Architecture

## 4.2 DFD Diagrams

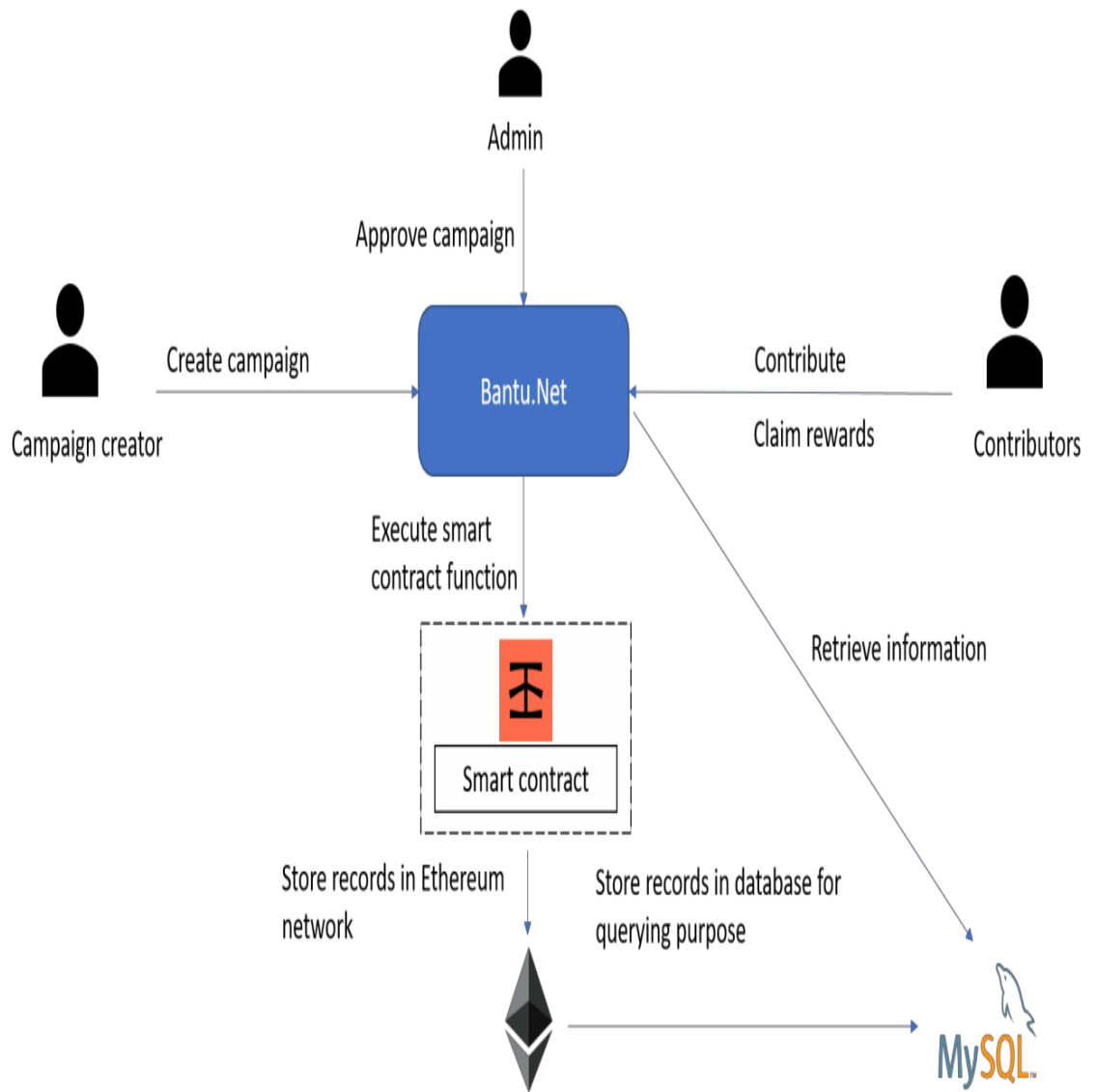
A data flow diagram (DFD) is a graphical representation of the "flow" of data through an information system, modeling its process aspects. A DFD is often used as a preliminary step to create an overview of the system without going into great detail, which can later be elaborated. DFDs can also be used for the visualization of data processing (structured design). A DFD shows what kind of information will be input to and output from the system, how the data will advance through the system, and where the data will be stored.

### 4.2.1 DFD level 0



**Figure 4.2.1:** DFD Level 0

#### 4.2.2 DFD level 1

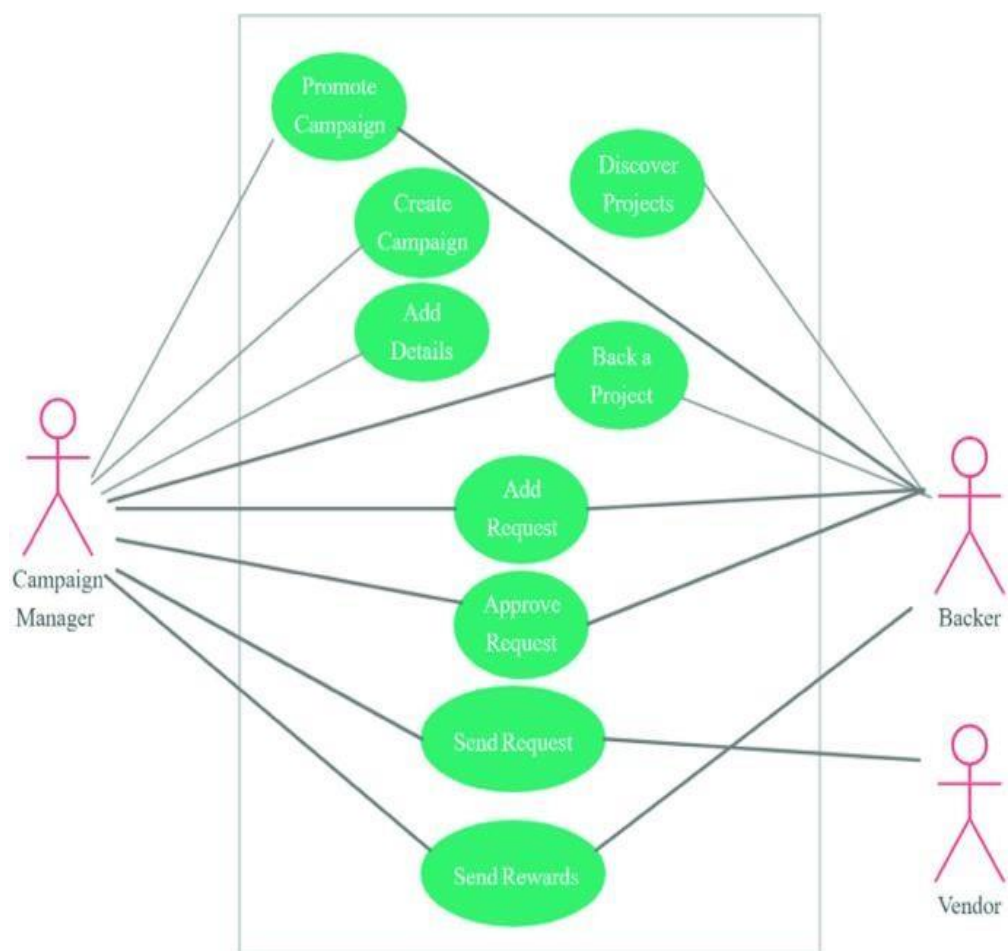


**Figure 4.2.2:** DFD Level 1

## CHAPTER 5 DESIGN

### 5.1 Use Case Diagram

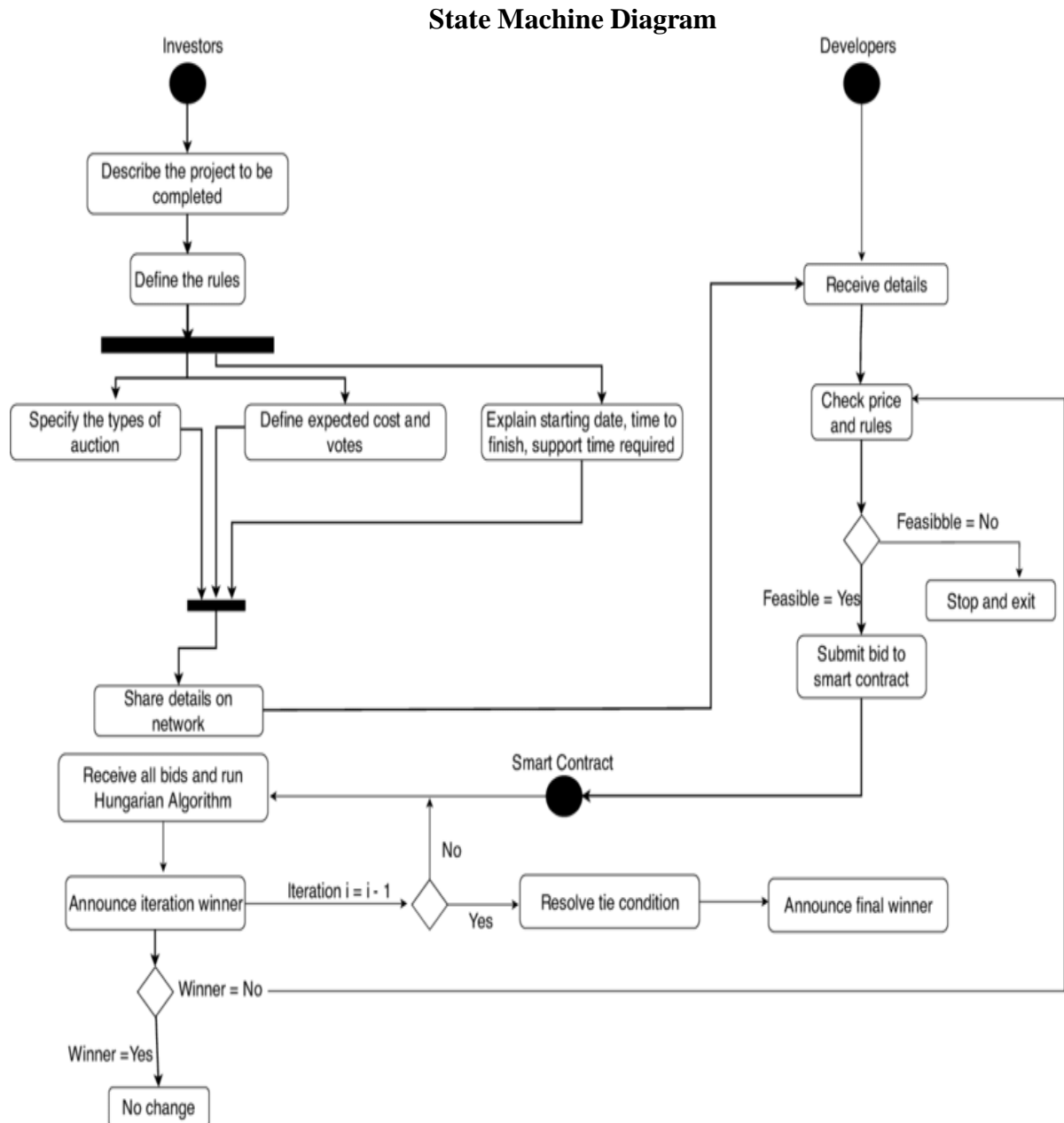
A use case diagram is a graphical representation of a user's interaction with the system and depicting the specifications of a use case. A use case diagram can show the different types of users of a system and the various ways in which they interact with the system. Use case diagrams are used to gather the requirements of a system including internal and external influences.



**Figure 5.1:** Use Case Diagram

## 5.2 Activity Diagram

Activity diagrams are graphical representations of workflows of step wise activities and actions with support for choice, iteration and concurrency. In the Unified Modeling Language, activity diagrams are intended to model both computational and organizational processes (i.e. workflows). Activity diagrams show the overall flow of control

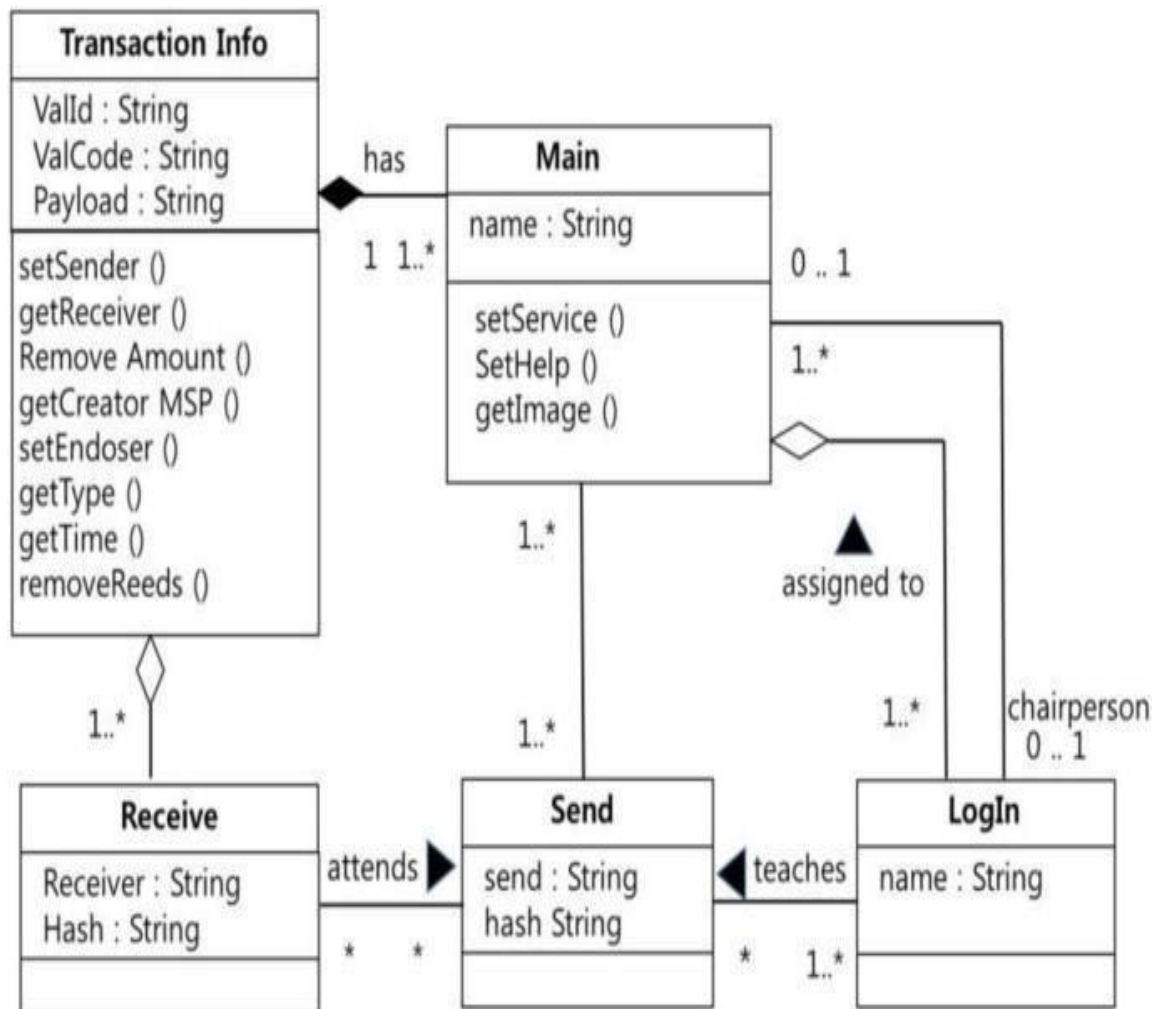


**Figure 5.2:** Admin Activity Diagram



### 5.3 Class Diagram

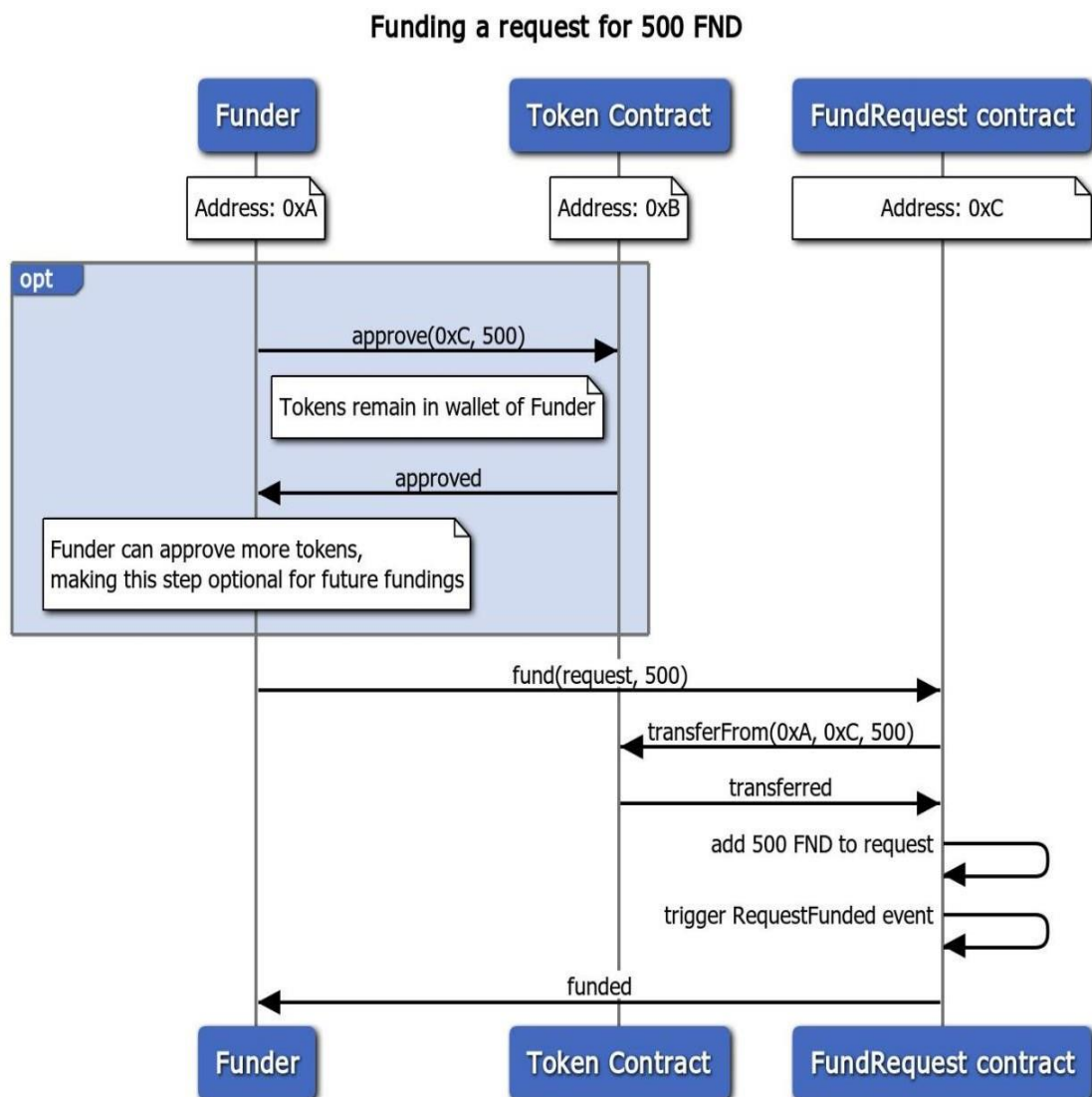
The class diagram is a static diagram. It represents the static view of an application. Class diagram is not only used for visualizing, describing and documenting different aspects of a system but also for constructing executable code of the software application. The class diagram describes the attributes and operations of a class and also the constraints imposed on the system.



**Figure 5.3:** Class Diagram

## 5.4 Sequence Diagram

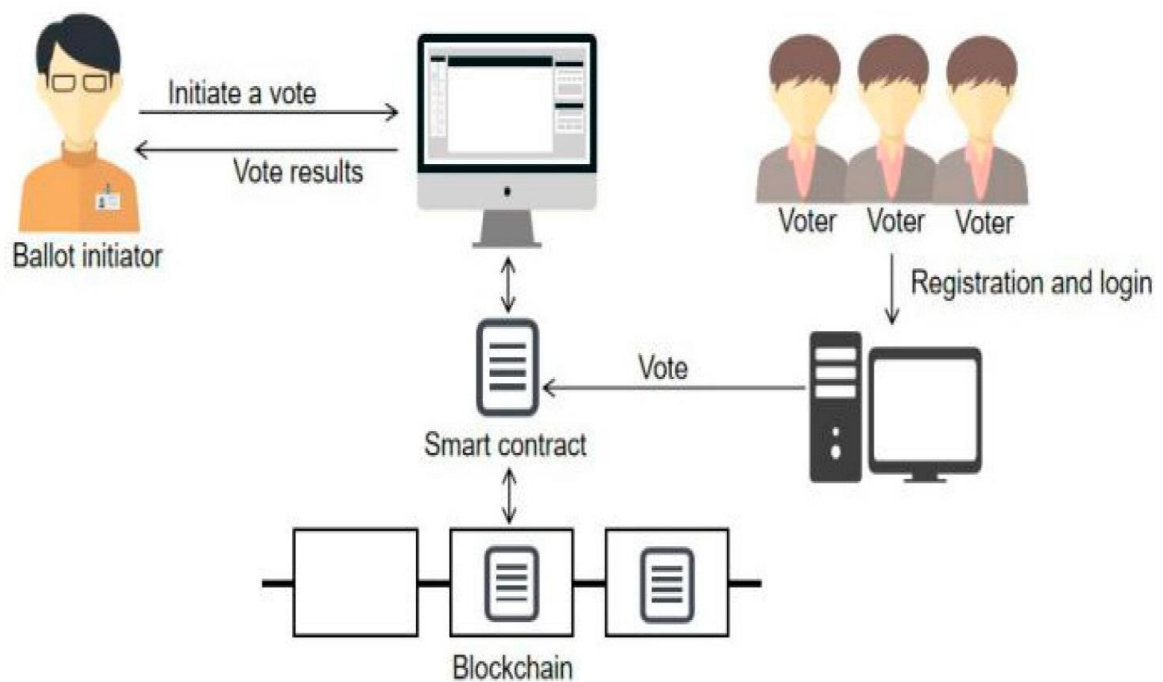
A Sequence diagram is an interaction diagram that shows how processes operate with one another and in what order. It is a construct of a Message Sequence Chart. A sequence diagram shows object interactions arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario



**Figure 5.4:** Sequence Diagram

### 5.5 Component Diagram:

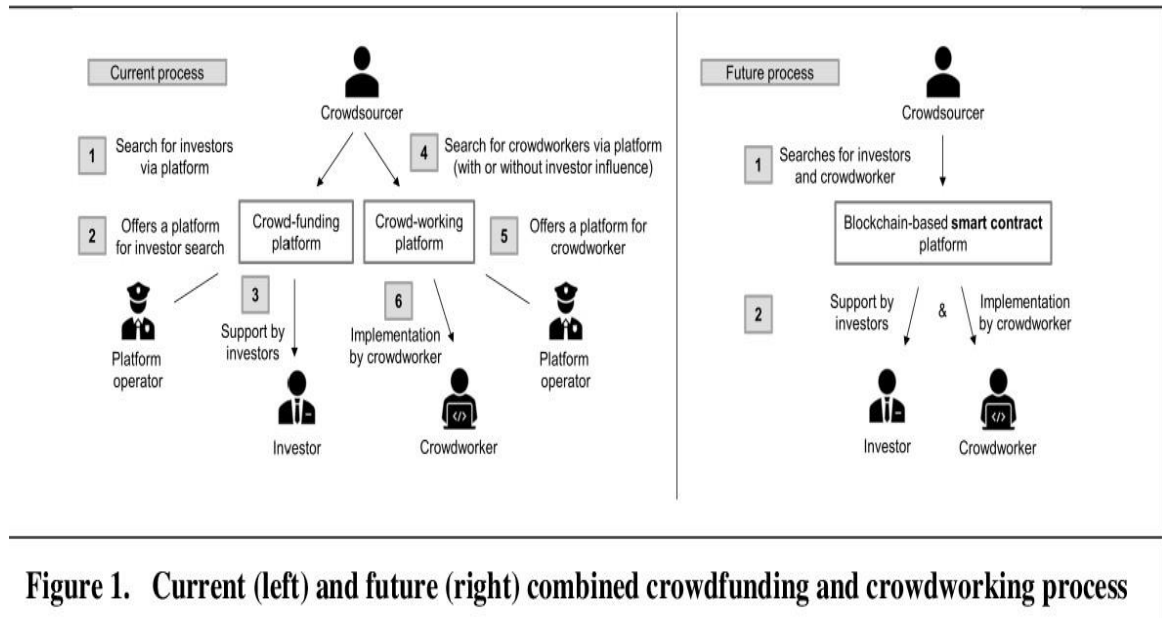
A Component Diagram displays the structural relationship of components of a software system. These are mostly used when working with complex systems that have many components. Components communicate with each other using interfaces. The interfaces are linked using connectors.



**Figure 5.5:** Component Diagram

## 5.6 Deployment Diagram

A deployment diagram is a diagram that shows the configuration of run time processing nodes and the components that live on them. Deployment diagrams is a kind of structure diagram used in modeling the physical aspects of an object-oriented system.



**Figure 5.6:** Deployment Diagram

## CHAPTER 6 IMPLEMENTATION

### 6.1 System Overview

#### **Secure Investment**

Information is stored across a network of computers instead of on a single server, makes it very difficult for hackers to compromise the transaction data.

#### **Voting Power for Investors**

The creator can only use the money if a minimum number of contributors approve a certain request. It will make sure the money is used for Necessities rather than Luxuries.

#### **Data Pre-processing:**

This step includes replacing the null and 0 values for yield by -1 so that it does not effect the overall prediction.

#### **Profit Distribution**

The owner of the start-up is required to periodically enter details about revenue generation. Any profit that is generated is automatically distributed among the investors providing investors with additional layer of security of interests of investors.

#### **Machine Learning**

Generating of finance related parameters such as gross profit, liquidity ratio, quick asset ratio etc. to produce a graph of these metrics and using Machine Learning Techniques(XGBoost, Random Forest Classification) to model performance of these Start-ups aiding them to make investment choices.

#### **Training ML model :**

After the pre-processing step we used the dataset to train different machine learning models like Random forest, Decision Tree, Support Vector Machine(SVM) and Logistic regression to attain accuracy as high as possible.

#### **Model Evaluation and Saving Model:**

All the ML models which are trained would be evaluated by comparing their performance(Evaluations Metrics) and Final efficient model is saved.

#### **Model Exportation and Integration with Web-app:**

The saved efficient ML model would be integrated with Flask Web Application which would further meant for prediction in user friendly web interface.

## 6.2 Algorithms

### **Decision Tree:**

A decision tree is a non-parametric supervised learning algorithm, which is utilized for both classification and regression tasks. It has a hierarchical, tree structure, which consists of a root node, branches, internal nodes and leaf nodes.

### **Logistic regression:**

This type of statistical model (also known as *logit model*) is often used for classification and predictive analytics. Logistic regression estimates the probability of an event occurring, such as voted or didn't vote, based on a given dataset of independent variables. Since the outcome is a probability, the dependent variable is bounded between 0 and 1. In logistic regression, a logit transformation is applied on the odds—that is, the probability of success divided by the probability of failure.

## **CHAPTER 7 RESULTS AND EVALUATION**

### **7.1 Results**

#### **Advantages**

- Making transaction histories more transparent and secure through the use of blockchain technology.
- Contributors can decide Where to invest and can Acknowledge the requests for money made by the Project Creators through their votes..
- It will decrease frauds in organization/bank production and optimize efforts and resources, cut down on consumption and waste, and increase transaction transparency.

#### **Limitations of Block-chain Technology**

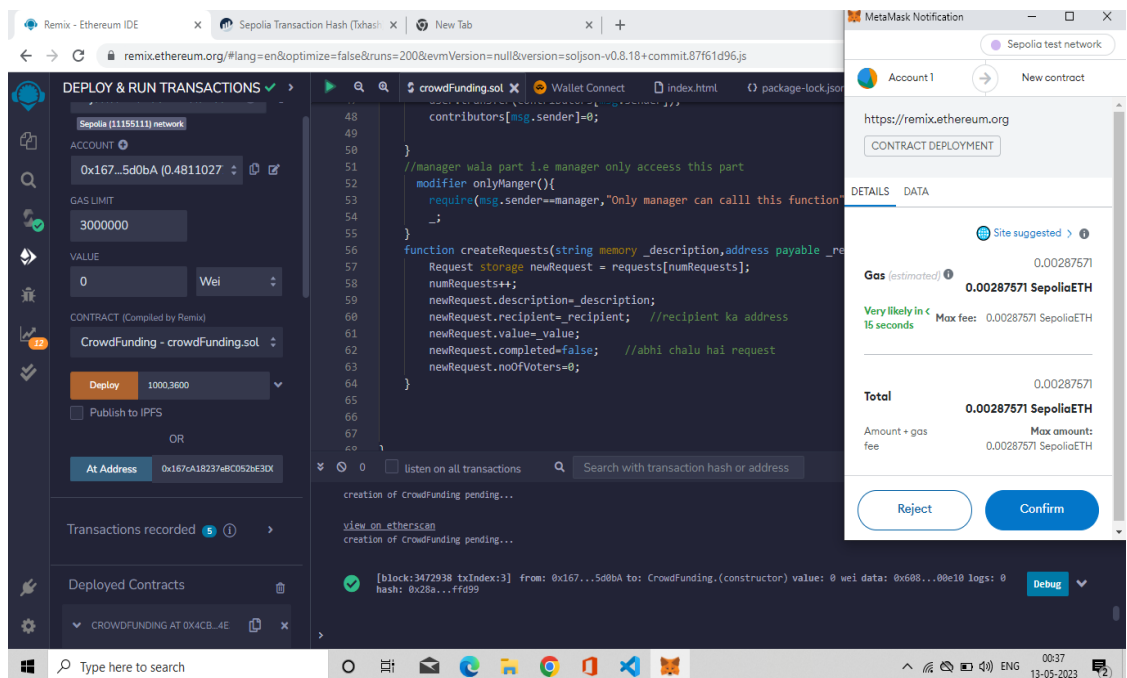
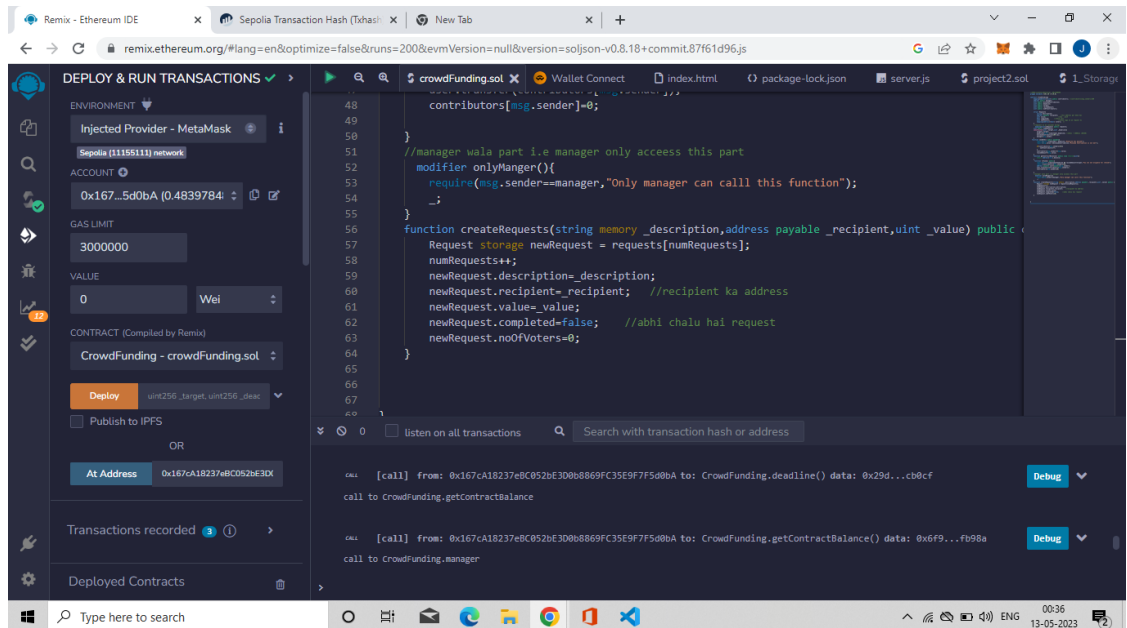
- Power use
- Cost consuming
- Legal Formality

#### **Applications:**

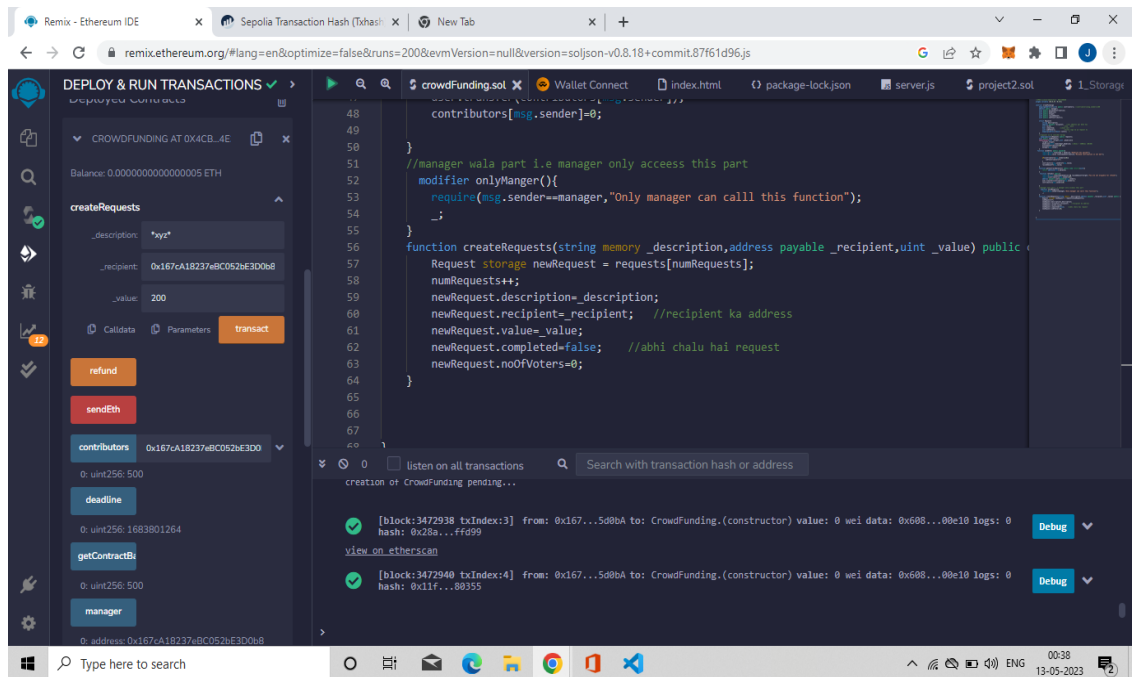
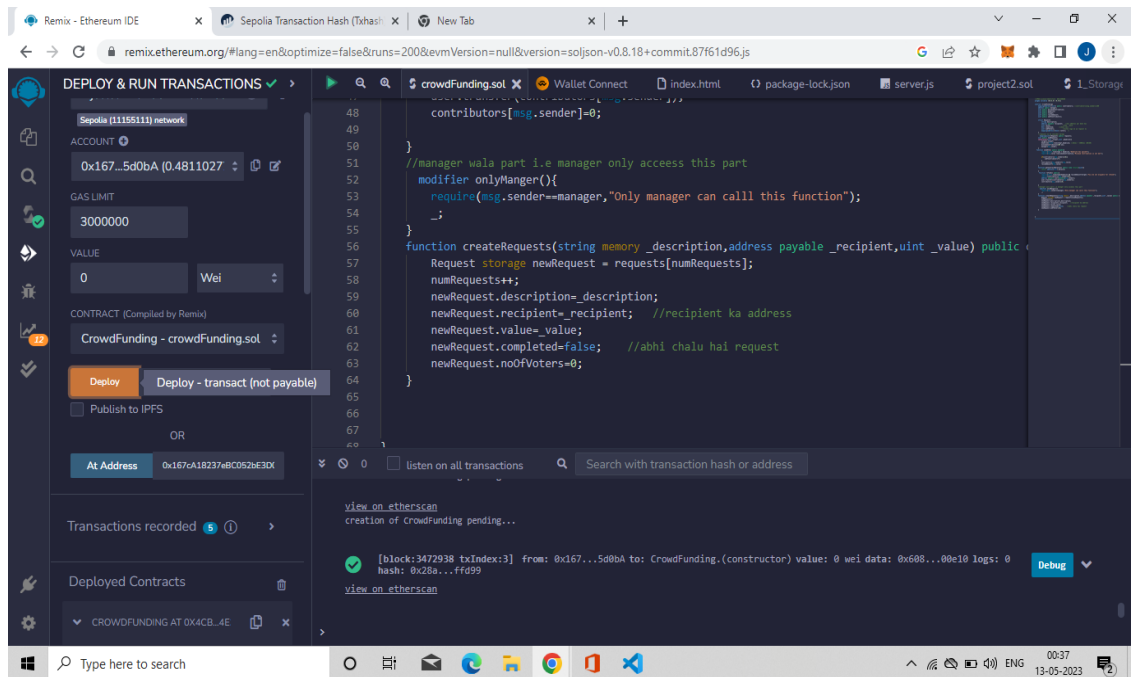
Examples of smart contract applications include financial purposes like Trading, investing, lending, and borrowing.

They can be used for applications in gaming, healthcare, and real estate and they can even be used to configure entire corporate structures.

## 7.2 Evaluation:







Remix - Ethereum IDE

Sepolia Transaction Hash (Txhash): X

New Tab

remix.ethereum.org/#lang=en&optimize=false&runs=200&evmVersion=null&version=soljson-v0.8.18+commit.87f61d96.js

MetaMask Notification

Sepolia test network

Account 1

0x4cb...E3E3

https://remix.ethereum.org

0x4cb...E3E3 CONTRACT INTERACTION

DETAILS DATA HEX

Site suggested

Gas (estimated) 0.00025639

Very likely in < 15 seconds

Max fee: 0.00025639 SepoliaETH

Total 0.00025639

Amount + gas fee 0.00025639 SepoliaETH

Max amount: 0.00025639 SepoliaETH

Debug

00:38 13-05-2023

DEPLOY & RUN TRANSACTIONS

CROWDFUNDING AT 0x4CB...4E

Balance: 0.000000000000000005 ETH

createRequests

\_description: "xyz"

\_recipient: 0x167cA18237dBC052bE3D0b8

\_value: 200

Calldata Parameters transact

refund

sendEth

contributors: 0x167cA18237dBC052bE3D0b8

deadline: 0: uint256: 500

0: uint256: 1683801264

getContractB

0: uint256: 500

manager

0: address: 0x167cA18237dBC052bE3D0b8

crowdFunding.sol

```
48 contributors[msg.sender]=0;
49
50
51 //manager wala part i.e manager only access this part
52 modifier onlyManger(){
53     require(msg.sender==manager,"Only manager can call this function");
54 }
55
56 function createRequests(string memory _description,address payable _recipient,uint256 _value){
57     Request storage newRequest = requests[numRequests];
58     numRequests++;
59     newRequest.description=_description;
60     newRequest.recipient=_recipient; //recipient ka address
61     newRequest.value=_value;
62     newRequest.completed=false; //abhi chalu hai request
63     newRequest.noOfVoters=0;
64 }
65
66
67
68
```

listen on all transactions

Search with transaction hash or address

[block:3472938 txIndex:3] from: 0x167...5d8bA to: CrowdFunding.(constructor) value: 0 wei data: 0x688...00e10 logs: 0

hash: 0x26a...ff499

view on etherscan

[block:3472940 txIndex:4] from: 0x167...5d8bA to: CrowdFunding.(constructor) value: 0 wei data: 0x688...00e10 logs: 0

hash: 0x11f...80355

transact to CrowdFunding.createRequests pending ...

Type here to search

## **CHAPTER 8 CONCLUSION**

This paper proposes a blockchain-based framework for implementing insurance transaction processes as smart contracts. Experiments conducted to study the scalability clearly showed the parameters used during blockchain creation should be chosen carefully, as they have a direct effect on the network latency. Though the database is currently not encrypted, it can be encrypted with ne-grained access control. In our model, each smart contract has its own set of endorsing peers, and this can be extended even to the transaction level, to enable separate set of endorsing peers for each transaction.

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## **PUBLICATION DETAILS**

Sr.No	Name of Journal	Date
1	International Journal of Innovative Research in Computer and Communication Engineering	31/03/2023

**Table 1:** Publication Details

## APPENDIX A

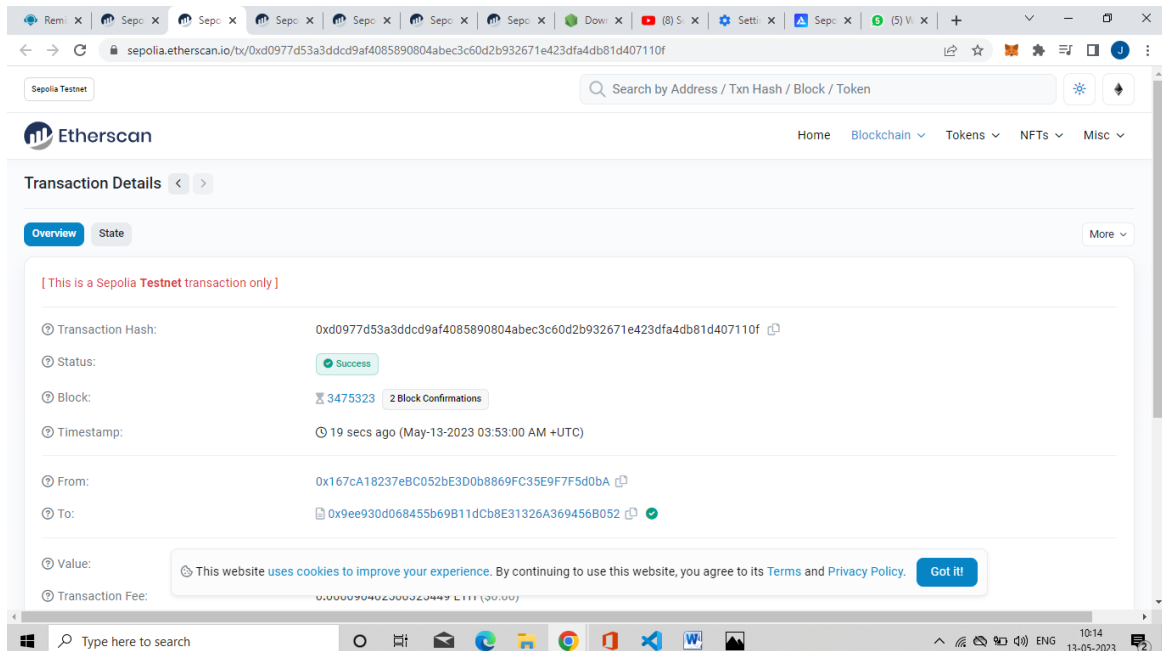
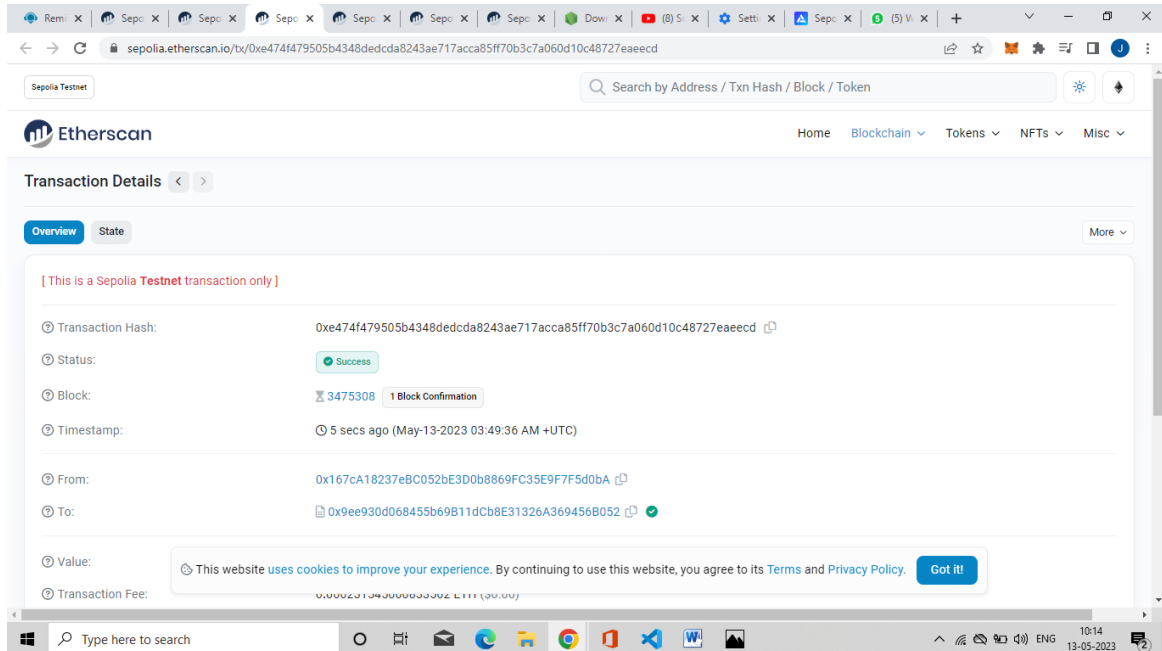
### Plagiarism Report

Sr. No	Chapter Name	Plagiarism Percentage
1.	Introduction	1%
2.	Background and Literature Survey	4%
3.	Requirement Analysis	0%
4.	System Architecture	0%
5.	Design	0%
6.	Implementation	0%
7.	Results and Evaluation	1%
	Conclusion	1%

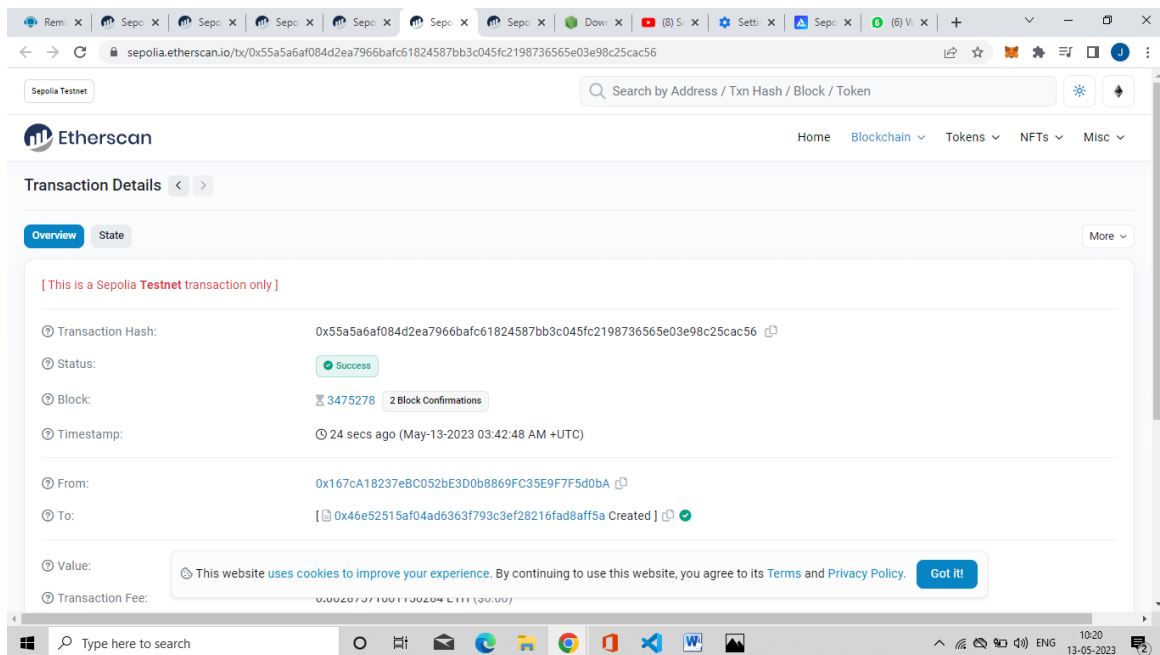
**Table 2:** Plagiarism Report

# APPENDIX B

## Screen-shots







# Appendix C

## Published Papers

**JANHAVI BHOSALE**

- Research Paper



## YASH CHAUDHARI

- Research Paper



## PRATHAMESH KALE

- Research Paper



## RAVINA DHUMAL

- Research Paper





**DR.T.PRAVEEN.BLESSINGTON**

- Research Paper

