

Automatization of Accounting and Payment release process of ESDM Scheme

Ch.Sekhar¹, A.Viswanath Sarma²

¹Department of Computer Science & Engineering
Vignan's Institute of Information Technology (A)
Visakhapatnam, AP, India

¹sekhar1203@gmail.com, ²allamrajuviswanath@gmail.com

Abstract

Block chain is one of the developing stages to execute a using a typical system, business accomplices can build up a forthright system of trust. At that point, using a record that is noticeable to all business parties, piece chain gives straightforwardness. At long last, using agreement from all gatherings as brilliant contracts (or chain code), there is responsibility. In this paper, we are going to after fruitful completion of ESDM examination, preparing accomplice brings charges up in physical claim design alongside printed copy SC/ST/EWS declaration and furthermore printed version ESDM testaments. All these printed version archives are physically examined and confirmed by specialists and a document is set up for installment which is exceedingly time-taking and bulky process. This installment document goes through various touch-focuses for check which at last defers installment process. Need process reengineering, trailed via computerization of work process.

Keywords: ESDM, Block chain, Accounting

1. Introduction

In the course of the most recent few decades India has been the epicenter of shopper request fuelled by a remarkable GDP development. While request expanded over all segments, interest for high innovation items, particularly electronic items has enlisted critical development and passing by current gauges, the interest for gadgets equipment in the nation is anticipated to increment from USD 45 billion out of 2009 to USD400 billion by 2020 (Source: Task Force Report) [2]. The assessed generation will achieve USD 104 billion by the year 2020, making a hole of USD 296 billion sought after and creation. This makes an exceptional open door for organizations in the ESDM (Electronic System Design and Manufacturing) area to take a gander at India as their next goal to take into account the household Indian request and in addition go about as a fares center point.

The abbreviation for ESDM is Electronics System Design and manufacturing scheme. The Scheme aims at enhancing the skilling capacities in ESDM sector through public and private sector for students/unemployed youth belonging to other disciplines by:

Utilizing the existing human resource that are undergoing studies in schools (IX standard onwards)/ITIs/Polytechnics/UG Colleges (non-engineering) and the school drop

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outs/unemployed youth by providing them with additional skills that are recognized by industry for employment in ESDM sector.

Encouraging new investments in training in ESDM sector by industry.

Facilitating evolving of process/norms for (i) certification of various courses; (ii) providing opportunities for moving up the value chain; and (iii) Recognition of institutions for conducting such courses, as per requirement of Industry in the ESDM sector.

The Scheme is proposed to target students studying at IX/X standard onwards, ITI, Polytechnic, under-graduate (non-engineering) and also unemployed youth who are school dropouts from 8th pass onwards, ITI Certificate or Diploma holders, graduates from non-engineering background, registrants in Employment Exchanges. The process of ESDM will under several steps to get the training fees paid back ones the examination got cleared. Since it involves verification of certificates like caste, education certificates and linked with many departments for verification the process gets delayed and it is very difficult to the end user to track the status of the application.

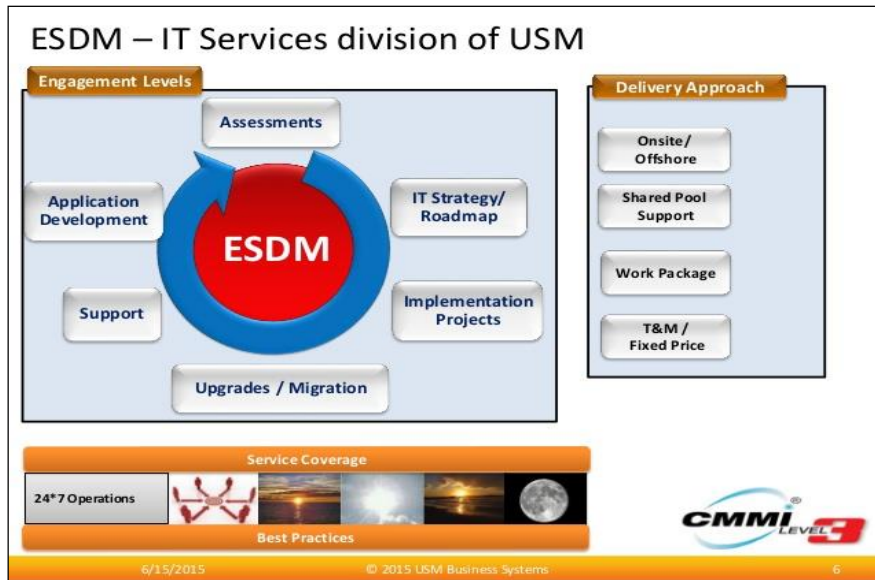


Figure 1. The following Architecture shows the steps involved in the ESDM process.

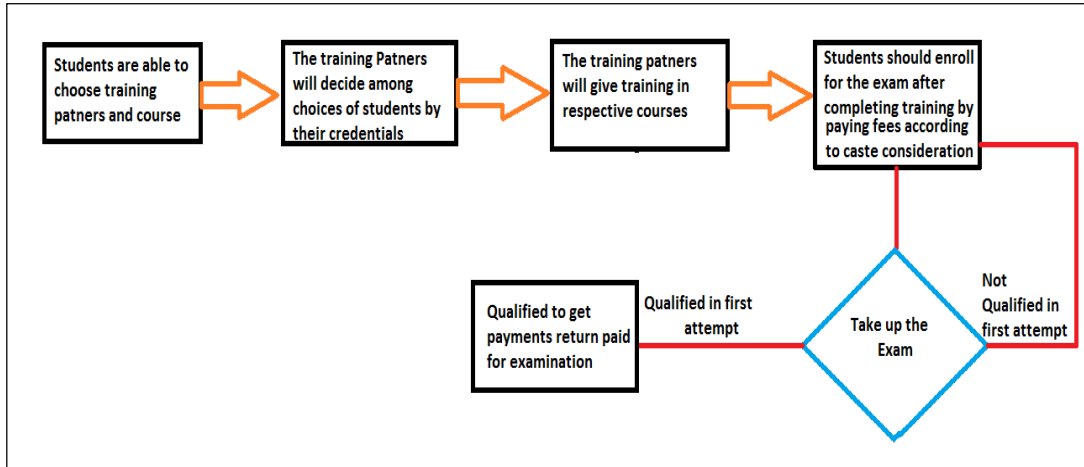


Figure 2. The following Architecture shows the steps involved in the ESDM process.

2. PROBLEM STATEMENT

The current existing process is manual verification of documents which involves manual transfer of all certificates from one point to another point between departments. The amount is added into student bank account after verification is done.

Explaining the general problem statement in simple terms:

Ones the candidate cleared the exam he/she should apply for the reimbursement of fee with certificate of ESDM and all the respected caste certificates.

The application for fees reimbursement is processed to various departments and finally the payment is done into the applicant account.

The process involves various departments like Education, Finance which involves physical transfer of certificates by attaching the proof of verification at each department.

The process takes time because of physical transfer and may loss of certificates during the process and very difficult for end users to track their payment status also.

3. Proposed Solutions and Methodology

As the world is revolving around the distributed databases which are Block-Chain which involves network of people where the operation done by one person in network will get registered among all people in network. Since the policy is to make the students skilled with less amount of money and guarantee the students on reimbursement of fees.

We are planning to make the current process gets completed in less time and enabling the transfer of certificates among departments digitally. As well as to make people track their application of fee reimbursement. To do this, we will make a permission Block-Chain which involves people of various departments involved in ESDM scheme and students.

All the documents required for applying ESDM examinations and certificate of ESDM after successful completion of exam are stored in Record Keeping system and the encrypted key is shared with the respective departments.

After successful verification of certificates the respective department will upload a certificate of verification with signature of officer and uploaded into same student folder.

The entry of this certificate from respective department will get recorded in ledger book which helps the other department to process the payment.

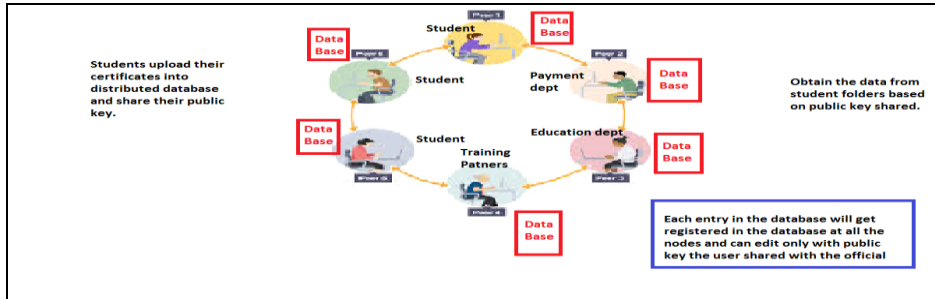


Figure 3. The Architecture of The System

4. Working Mechanism

The proposed working mechanism as follows step wise. With this methodology we can minimize the manual manpower and speed up the process of Accounting and Payment release process of ESDM Scheme.

- Step-1: Registered Students will login into their accounts
- Step-2: Students will select the course in which they want reimbursement of fees.
- Step-3: Students will upload necessary documents to be verified by government officials for reimbursement.
- Step-4: Students will share their respective locked key with both read and write permissions to the primary department for verification.
- Step-5: Students will logout from their session
- Step-6: Government officials will login to their account.
- Step-7: Verify the documents of student applied for reimbursement with the key.
- Step-8: Upload proof of the verification document and process the folder to next department involved in reimbursement procedure.
- Step-9: Continue process and reimbursement cheque is added into the locker and user students can withdraw amounts from banks.
- Step-10: End-Of-Process

The above step wise process easy and able to do work actively to speedup the billing process and storing the documents digitally.

The below diagram shows that workflow of the proposed system for Accounting and Payment Release Process of ESDM Scheme.

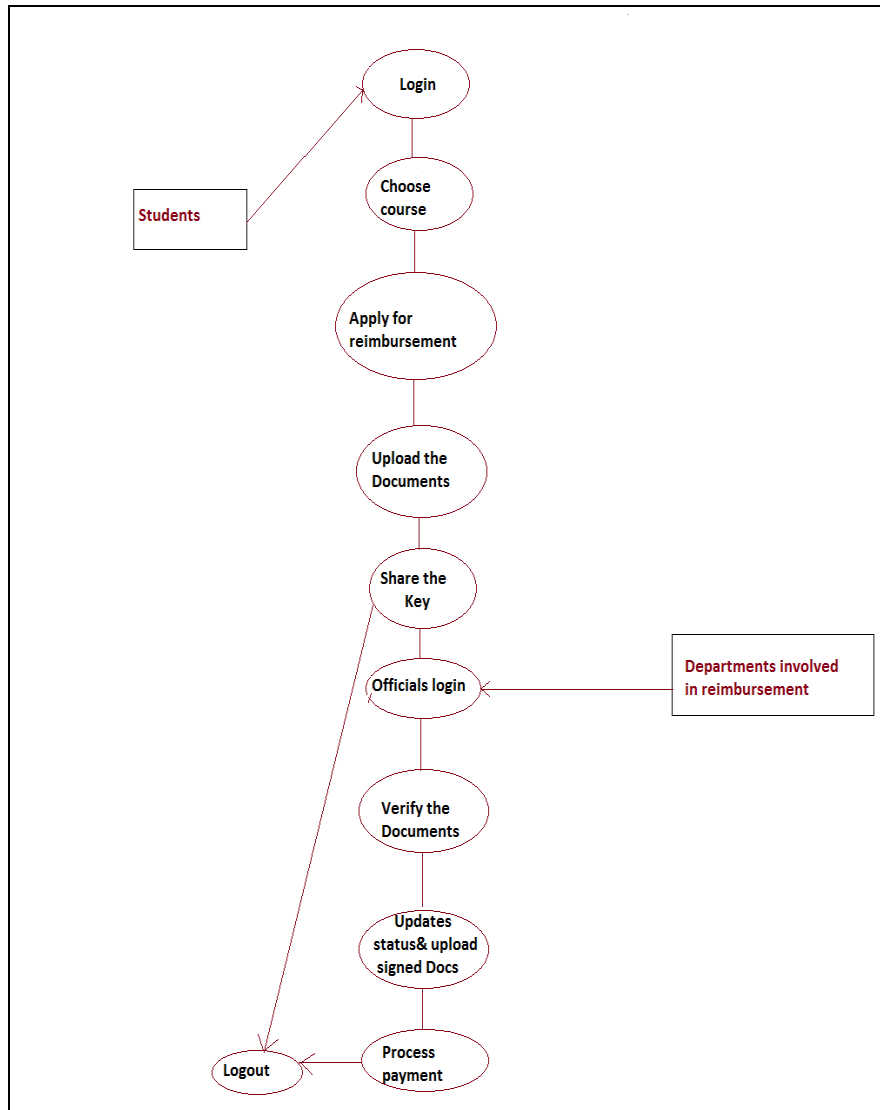


Figure 4. Use Case Diagram

5. About Block Chain

The blockchain started life in the psyche of Satoshi Nakamoto, the splendid, pseudonymous thus far unidentified maker of bitcoin—an "absolutely distributed variant of electronic money", as he placed it in a paper distributed in 2008. To fill in as money, bitcoin must have the capacity to change hands without being occupied into the wrong record and to be unequipped for being spent twice by a similar individual. To satisfy Mr Nakamoto's fantasy of a decentralized framework the shirking of such misuse must be accomplished without plan of action to any trusted outsider, for example, the banks which remain behind ordinary installment frameworks.

It is the blockchain that replaces this trusted outsider. A database that contains the installment history of each bitcoin available for use, the blockchain gives confirmation of who possesses what at any given crossroads[5]. This appropriated record is repeated

on a huge number of PCs—bitcoin's "hubs"— around the globe and is freely accessible. Be that as it may, for all its transparency it is additionally reliable and secure. This is ensured by the blend of scientific nuance and computational savage power incorporated with its "accord component"— the procedure by which the hubs concur on the best way to refresh the blockchain in the light of bitcoin exchanges starting with one individual then onto the next.

Give us a chance to state that Alice needs to pay Bob for administrations rendered. Both have bitcoin "wallets"— programming which gets to the blockchain rather as a program gets to the web, however does not recognize the client to the framework. The exchange begins with Alice's wallet recommending that the blockchain be changed in order to demonstrate Alice's wallet somewhat emptier and Bob's somewhat more full.

The system experiences various strides to affirm this change. As the proposition spreads over the system the different hubs check, by investigating the record, regardless of whether Alice really has the bitcoin she now needs to spend. In the case of everything looks fit, particular hubs called diggers will package Alice's proposition with other comparably respectable exchanges to make another square for the blockchain.

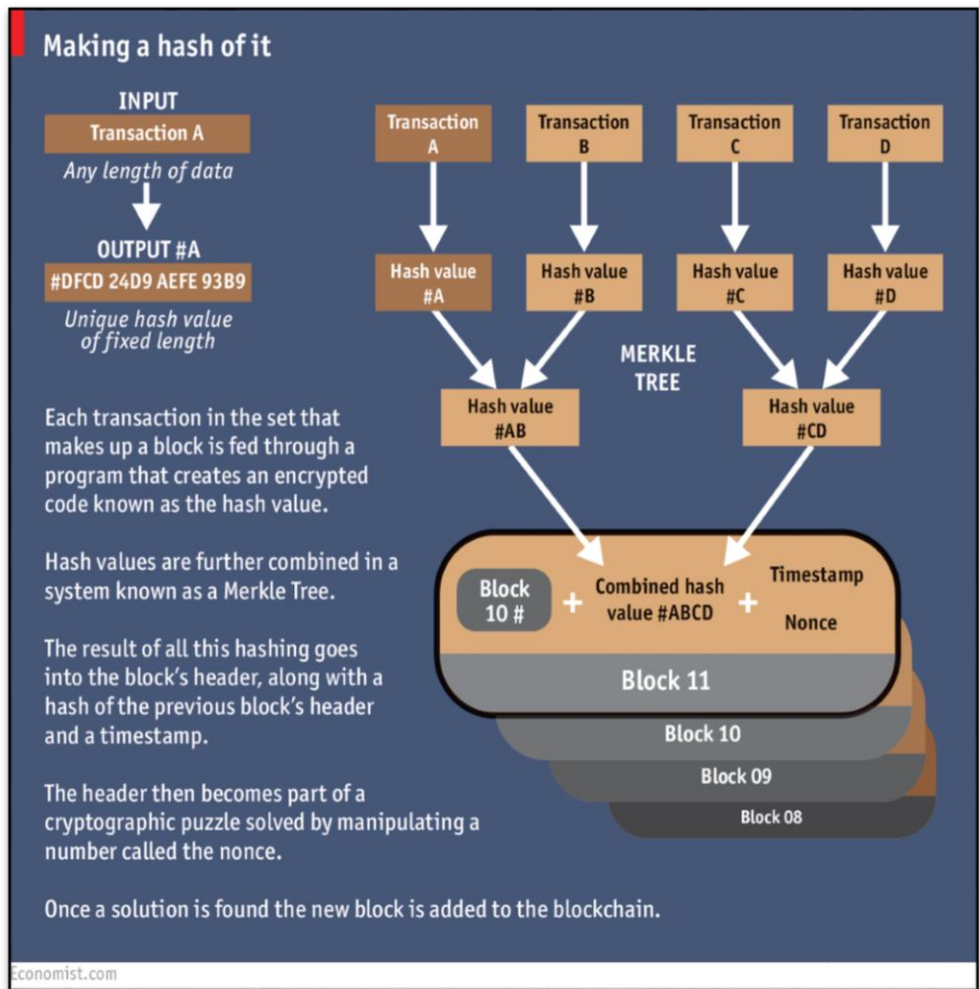


Figure 5. Block Chain Process

6. Results Discussion

The proposed solution functions in the way of a record keeping system in which we can store the documents and share the key with the permissions necessary in which all the files who been accessed are noticed by every people in the network. So, Here we upload the documents required for reimbursement of fees paid for ESDM are uploaded into the system with full permissions including write permissions. The reason for including the write permissions is that in many of the government organizations the process will not be processed until and unless there is an approval from previous department. So here if we induce write permissions, once the previous department finishes verification they are going to upload proof of verification with the stamp so that next department can check the proof of approval and each change in the folder is visible to every people in the network there will be no chance to change the proofs submitted by the users. If changed then definitely they are going to get recorded. By doing the verification based on this system it allows users to share digital documents which is safer and the proceedings are done much faster and the status can be known by users.

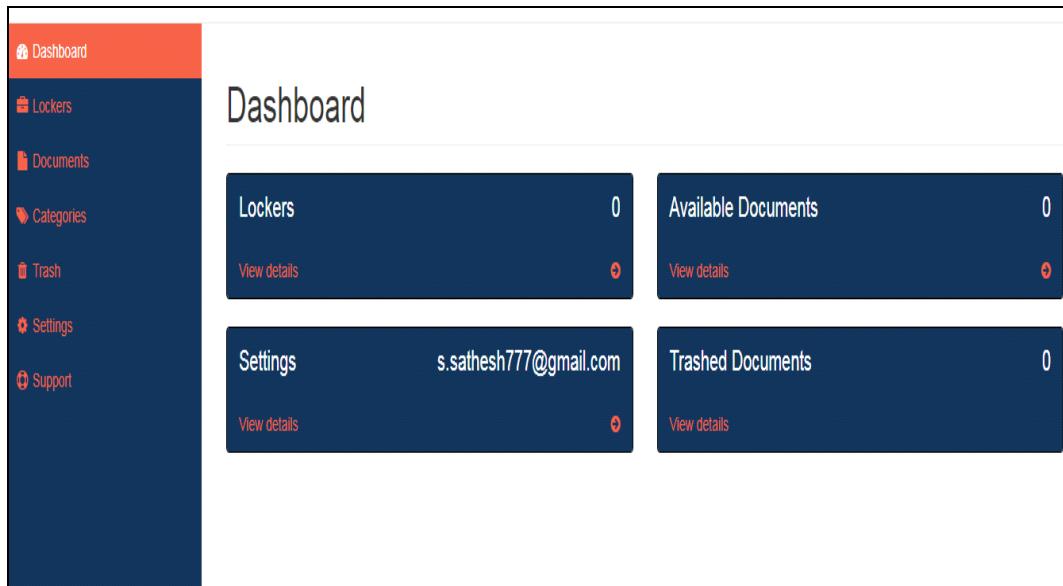


Figure.6. Dash board of Atomization of Accounting and Payment release process of ESDM Scheme

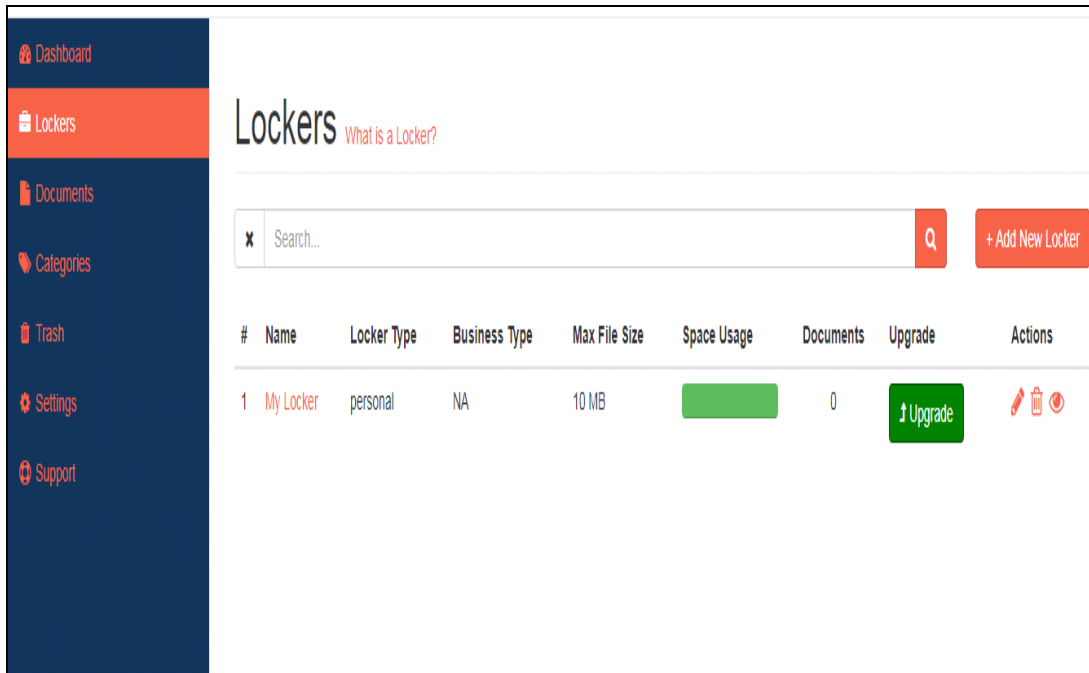


Figure 7. Locker Page of Atomization of Accounting and Payment release process of ESDM Scheme

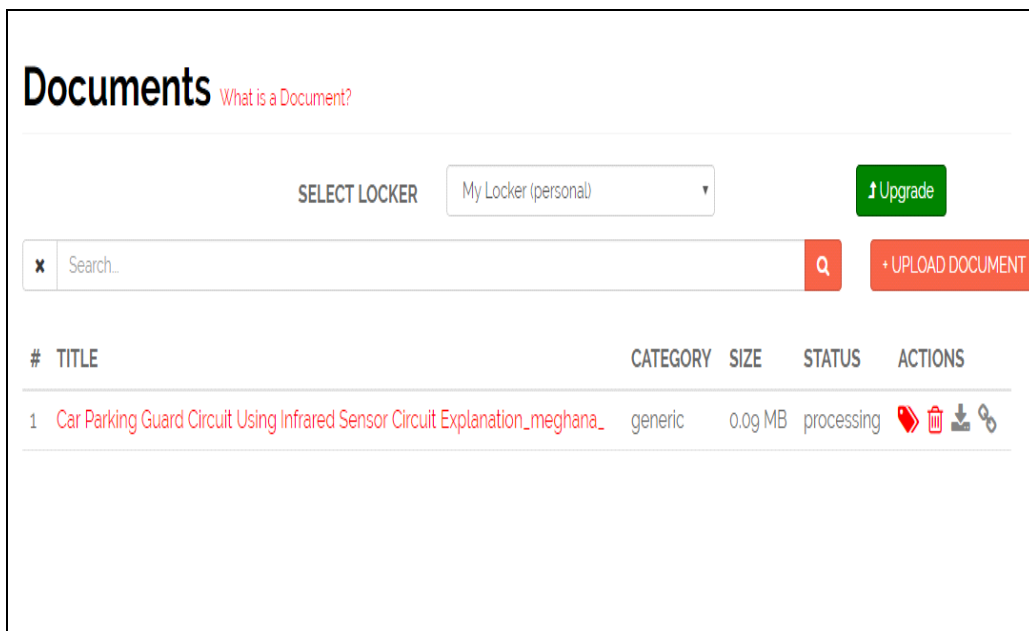


Figure 8. Document uploading process

7. CONCLUSION

In this Paper we design the Atomization of Accounting and Payment release process of ESDM Scheme the proposed arrangement works in the method for a record keeping

framework in which we can store the reports and offer the key with the consents vital in which every one of the documents who been gotten to are seen by each in the system. Along these lines, here we transfer the archives required for repayment of charges paid for ESDM are transferred into the framework with full consents including compose authorizations. The purpose behind including the compose consents is that in a significant number of the administration associations the procedure won't be prepared until and unless there is an endorsement from past office. So here on the off chance that we instigate compose consents, once the past office completes confirmation they will transfer evidence of check with the stamp so that next office can check the verification of endorsement and each adjustment in the envelope is noticeable to each in the system there will be no possibility to change the evidences presented by the clients. On the off chance that changed then unquestionably they will get recorded. By doing the check in view of this framework it enables clients to share advanced reports which is more secure and the procedures are done substantially speedier and the status can be known by clients.

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