

1. INTRODUCTION

1.1 Brief information on statistics

Although it's tough to arrive at an accurate estimate, because of variables such as the weight of different kinds of wood, the size of trees, and the type of pulping process, etc but according to a survey held in 2014, The United States produced about 20,700,000 tons of this paper last year, which by reckoning takes 55 to 110 million trees, but we only recycle about 11,000,000 tons, or 53 percent, according to the American Forest and Paper Association. So in accordance with the report we can conclude one thing for sure that every year the paper that is being wasted is too much. So here we are with our app trying to solve this problem .of course, we cannot help it totally but yes on a small platform our app helps this problem by circulating books among students and those who cannot afford books at their MRP, for these students or app comes as a savior.

Worldwide consumption of paper has risen by 400% in the past 40 years, with 35% of harvested trees being used for paper manufacture. Much of the wood harvested in North America goes into lumber and other non-paper products. In the U.S., 36% of the annual timber harvest is used for paper and paperboard and in Canada 21% comes directly from harvested trees. The rest comes from sawmill residues (55%) and recycled paper (24%).Deforestation is often seen as a problem in developing countries but also occurs in the developed world. Wood chipping to produce paper pulp is a contentious environmental issue in Australia.In the 1990s, the New Zealand government stopped the export of woodchips from native forests after campaigning by environmentalists.

Over 6.5 million trees were cut down to make 16 billion paper cups used by US consumers only for coffee in 2006, using 4 billion US gallons (15,000,000 m3) of water and resulting in 253 million pounds of waste. Overall, North Americans use 58% of all paper cups, amounting to 130 billion cups.It takes an average of 5 liters of water to produce one piece of A4 paper. 93% of paper comes from trees.50% of the waste of businesses is composed of paper.

To print a Sunday edition of the New York Times requires 75,000 trees!Recycling 1 ton of paper saves around 682.5 gallons of oil, 26,500 liters of water and 17 trees.U.S offices use 12.1 trillion sheets of paper a year.

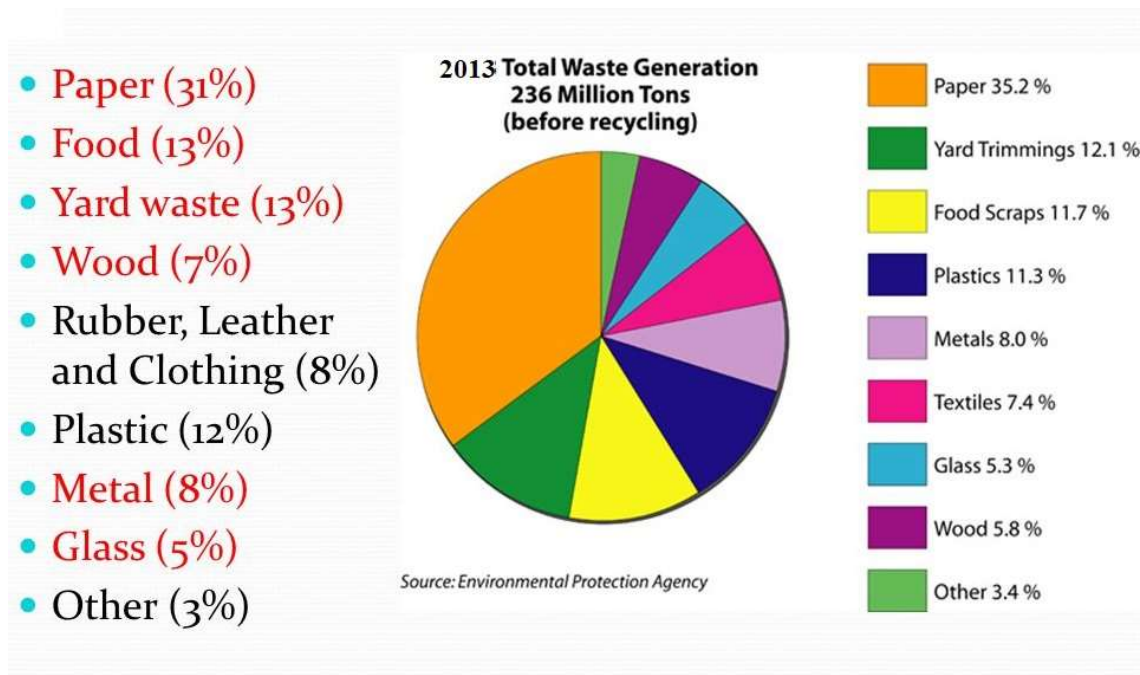


Fig1: Statistics

1.2 Aims and objective

Main focus of PHAB-store is college students and professors. As we know that every year there are new admissions so at the starting of the college every freshman needs some stuff and it sometimes becomes a very difficult task to go and buy these stuffs being unaware of the new city and at the same time some students are passing from college and students living far from college don't find it useful to take all their belongings back to home so they simply dump them, instead our helps to create a win- win situation for both the newbie's and the passing out students. The passing out students sell their belongings as the freshman can simply buy the useful things they need. In engineering, students also use the Xeroxed books and notes, once the semester passes they are of no use, they don't have a resale value and the shopkeepers don't even accept these Xeroxed material so these materials are then wasted.

But on PHAB-store you can sell at a low cost and earn money. Here even professors can also upload pdfs and notes & students can search professors by name & download their notes and this would be for free.

2. FEASIBILITY STUDY

A **Feasibility Analysis** is a formally documented output of feasibility study that summarizes results of the analysis and evaluations conducted to review the proposed solution and investigate project alternatives for the purpose of identifying if the project is really feasible, cost-effective and profitable. It describes and supports the most feasible solution applicable to the project.

We can define the feasibility analysis of phab in terms of -

2.1 ECONOMIC FEASIBILITY

Every day new apps are being developed and they are using new and expensive technologies which is not affordable by every consumer so we thought of making PHAB, useful and affordable from the consumer point of view. Hence, PHAB is not expensive as well as it is the most useful app in the market when it comes to a student's academic amenities. It refers to the benefits or outcomes we are deriving from the product as compared to the total cost we are spending for developing the benefits are more or less the same as the older system then it is not feasible to develop the product.

The product is economical feasible. It provides the following benefits -

- Reduces the processing time
- Reduces the work load
- Administrative will be effective

2.2 TECHNICAL FEASIBILITY

The system is self-explanting and does not need any entire sophisticated training. A system has been built by concentrating on the graphical uses interface concepts, the application can also be handled very easily with a novice uses. The overall time that a user needs to get trained is less than 15 minutes.

The system has been added with features of menu device and button interaction methods, which makes him the master as he starts working through the environment. As the software that were used as developing this application are very economical and are readily available in the market the only time that is lost by the customer is just installation time.

2.3 OPERATIONAL FEASIBILITY

The urgency of this app was seen while considering the wastage of books and harm given to trees for paper making that take place in the present scenario in which our app aims at reducing the paper wastage and ultimately helps in less cutting of trees. It refers to the feasibility of the product to be operational. Some products may work very well at the design and implementation but many fail in the real time environment. It introduces the study of human resources required and their technical expertise.

This product is operationally feasible as it is designed specifically for E-Governance. This provides consistent and integrated data management. It also provides information at all levels of people.

3. REQUIREMENT ANALYSIS

Requirements analysis encompasses those tasks that go into determining the needs or conditions to meet for a new or altered product or project. Requirement Analysis can be defined in three terms they are-

3.1 FUNCTIONAL REQUIREMENTS

- The app allows you to sell and buy new books as well as the old books.
- User can even upload and download pdfs.
- Admin can block any post which he finds inappropriate.
- User can search another user by title, description, city or name.
- For security reasons, the authentication of the user is done by sending OTP to registered mobile number.
- There is also a feature of forgot password.

3.2 HARDWARE REQUIREMENTS

The basic hardware requirements for our project are –

- Android Version 7.0 and above
- Smartphone with a camera
- Internet connectivity
- Storage space: 4Mb
- RAM required : 100Mb

3.3 LANGUAGE AND SOFTWARE REQUIREMENTS

The software requirements for the implementation of alpha are-

Language Required-

- PHP
- JAVA
- XML

Software Required-

- Android Studio
- PHP MYAdmin
- SQLyog
- Filezilla

4. DESIGN

4.1 HIGH LEVEL DESIGN

High-level design (HLD) provides an overview of an entire system, identifying the main components that would be developed for the product and their interfaces. The HLD uses possibly nontechnical to mildly technical terms that should be understandable to the administrators of the system.

Usecase diagram-

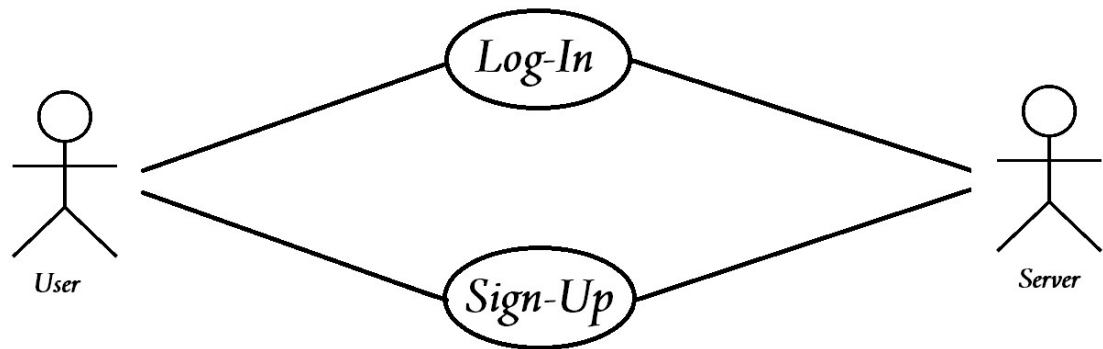


Fig2: User-server relationship

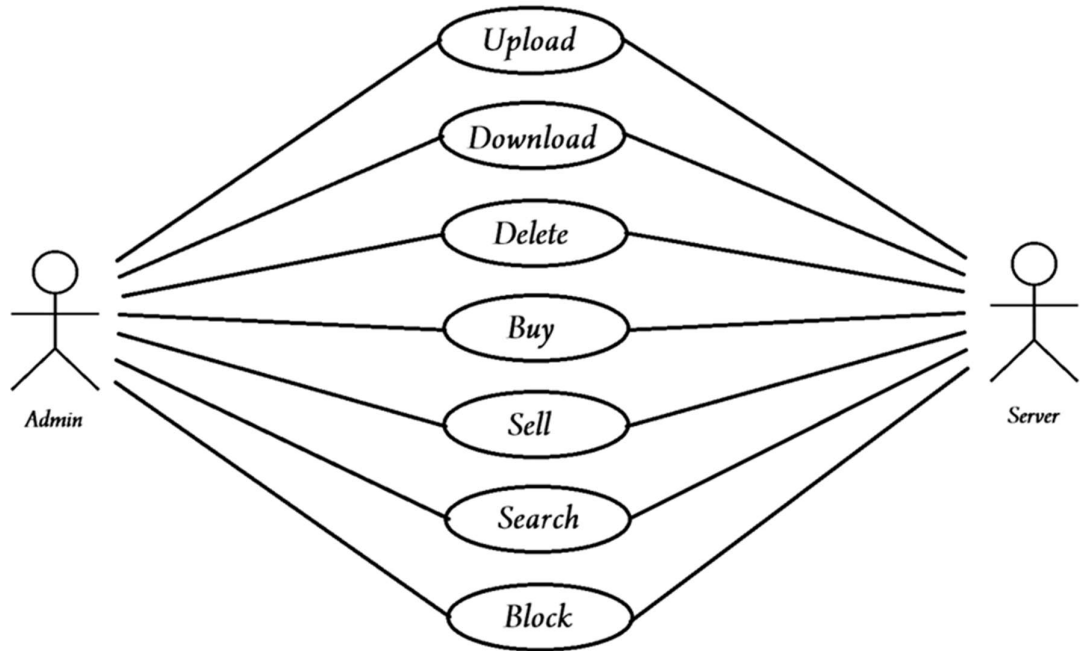


Fig3: Admin-Server relationship

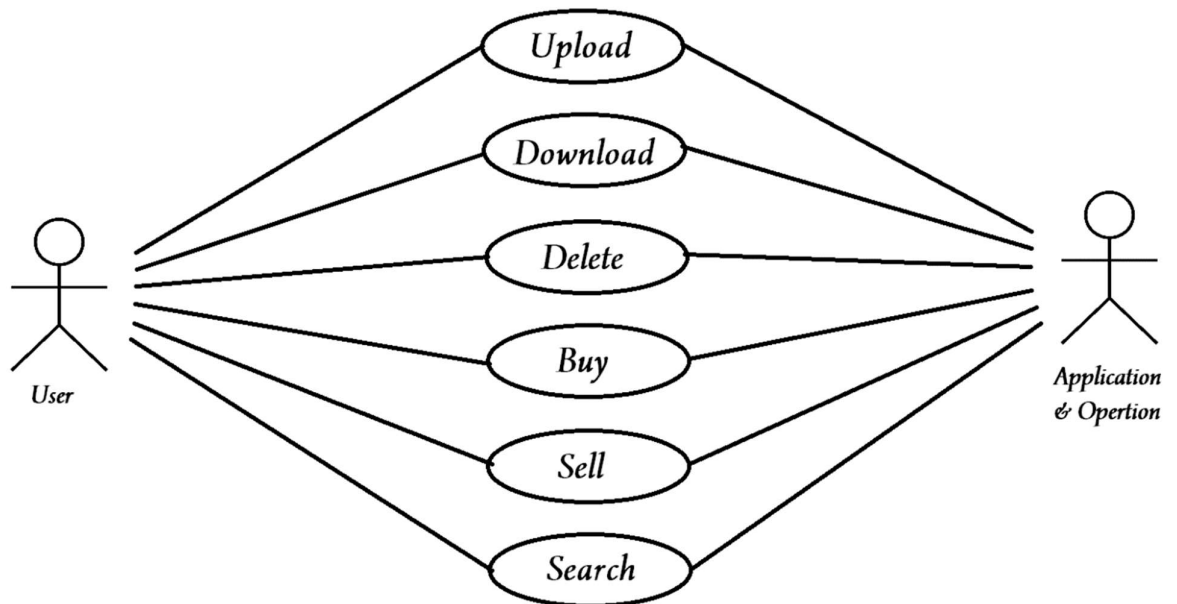


Fig4: User-Application relationship

Admin: admin is nothing but a super user . It can do everything that a normal seller or buyer can, but what differentiates admin from a normal user is that the admin can even block or delete any post or may be pdf that the admin finds inappropriate. the admin can keep an eye on the activity of every user that is posting.



Fig5: Admin operations

Admin can block and unblock any user or any post that is not suitable from the app's point of view.



Fig6: Admin operations

User: User can be a buyer or a seller. the user can upload any book or any notes in pdf format. The user have to upload the front cover page of the book he is selling and also he can upload the selling price of the book that he wants to sell in the description section below.

In this the teacher even can upload the notes in the form of pdf and can be downloaded by the students. they can even search the uploaded notes of a particular teacher by searching by the name of the teacher.

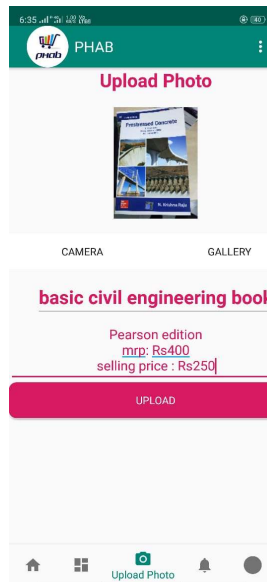


Fig7: Seller's price

Server: The server gets the uploaded information of every user . the server gets every photo and every detail of the book or pdf uploaded.

4.2 LOW LEVEL DESIGN

Low-level design (LLD) is a component-level design process that follows a step-by-step refinement process. This process can be used for designing data structures, required software architecture, source code and ultimately, performance algorithms .We divide LLD in three parts:-

book sell and buy

pdf upload and download

admin can delete/block irrelevant posts.

5. IMPLEMENTATION

In this chapter, we describe in detail the work we have done for this project. We start from the first step of choosing available buyers and sellers for the use of our app, then we continue with the improvements made in each components of the proposed app.

The process that our app follows are broken into following steps-

- Registration- the first time user of this app has to register with the app.
- Authentication- once the user has logged in he/she will be authenticated by sending the OTP to his/her registered mobile number.
- Admin posts- in this section the admin can upload any news or any posts.
- User posts- The posts posted by the user are shown here and can be searched by the user by title, description, city or name.
- Upload PDFs- this section of the app is made for the user who wants to share the pdf of notes. the pdfs can even be downloaded by the students who need it.

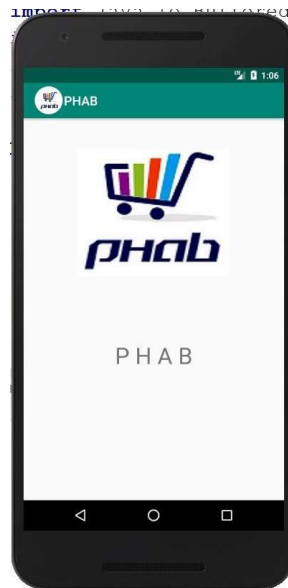


Fig8: Front Layout PHAB

5.1 REGISTRATION ON PHAB

- To make an account on Phab the user has to follow the following steps and they are as follows-
- **Step 1:** To use our app a user needs to sign up in it. Now there appears a form in which the user has to fill all the basic information about them like name, address, email id, password etc.

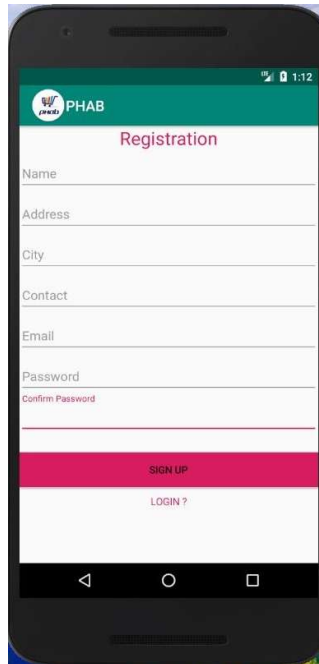
The image shows a smartphone screen displaying the 'PHAB' app's registration form. The app's header is green with a white logo and the text 'PHAB'. Below the header, the word 'Registration' is written in pink. The form consists of several white input fields with grey borders, labeled 'Name', 'Address', 'City', 'Contact', 'Email', 'Password', and 'Confirm Password'. At the bottom of the form, there are two buttons: a pink 'SIGN UP' button and a white 'LOGIN ?' button. The phone's status bar at the top shows the time as 1:12 and some signal icons. The bottom of the screen shows the standard Android navigation bar with back, home, and recent apps buttons.

Fig9: Registration form

- **Step 2:** once the user has registered with the Phab, the user needs to login in it. For the authentication of the user we have used One Time Password (OTP) service provider to verify whether the given number is of the same user or not.

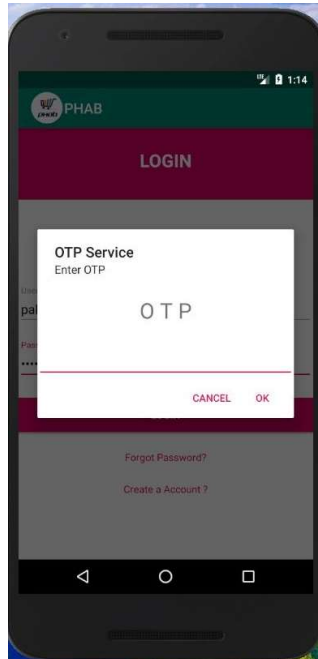


Fig10: OTP Verification

- **Step 3:** After that the main page of the Phab appears with the bottom navigation.

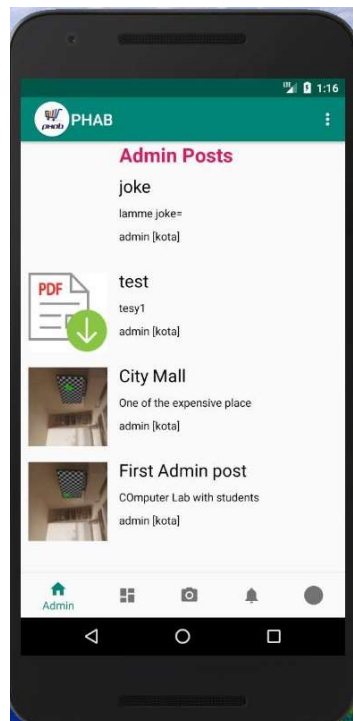


Fig11: Front page

- **Step 4:** Once you have signed up on this app you can now login to check your profile and there is also an option of editing.

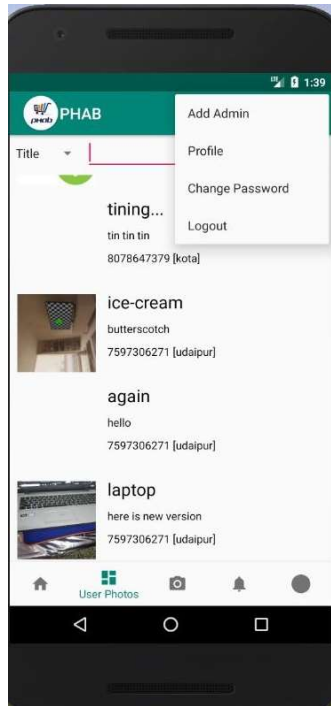


Fig12: Change profile

Now you have successfully registered yourself in Alpha.

5.2 AUTHENTICATION

Once the user registers with phab app, the user has to login using the email id and the password. And then the user will be sent the OTP verification code to the registered mobile number. The message that will be sent is shown below is the figure.

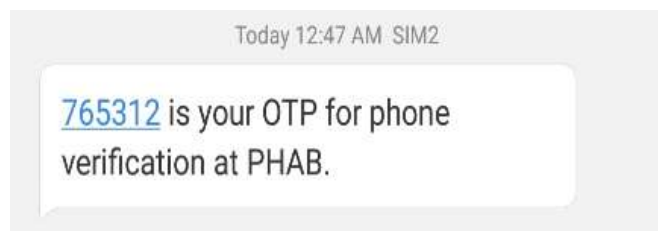


Fig13: OTP sent to the registered mobile number.

5.3 ADMIN POSTS

In this page of PHAB app the admin can upload any of his books and pdfs that he wants to sell and he can also suggests some of his trustworthy users and some updates.

5.4 USER PHOTOS

After Surfing on the admin post, user can slide to all the users post available for buying. He can scroll various books novels and notes available in the phab, the user can click on the post available he can view the further details of the post. He has a choice to search any post by name of the seller, or by title and description or by title of the users post.

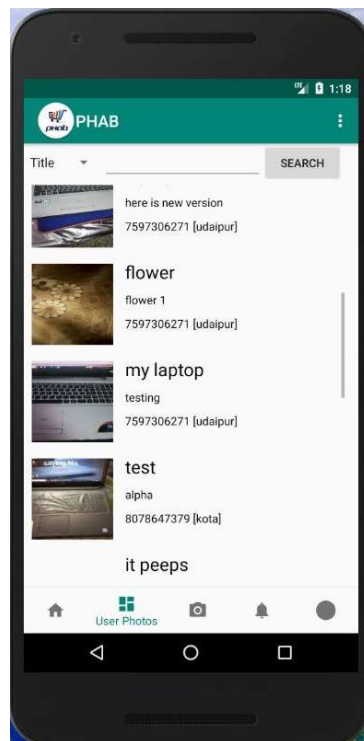


Fig14: User photos bar

5.5 UPLOAD PDF

This is one of the most exciting feature of phab, here in this section the user can upload his or her notes.

The steps to upload the pdfs are:

First the user should select the pdf from the device by clicking on the pdf icon and then add a title and description of the pdf the finally clicking on upload button.

Now the viewer can see the post in the users post section, by clicking on the users post button present in the bottom navigation bar.

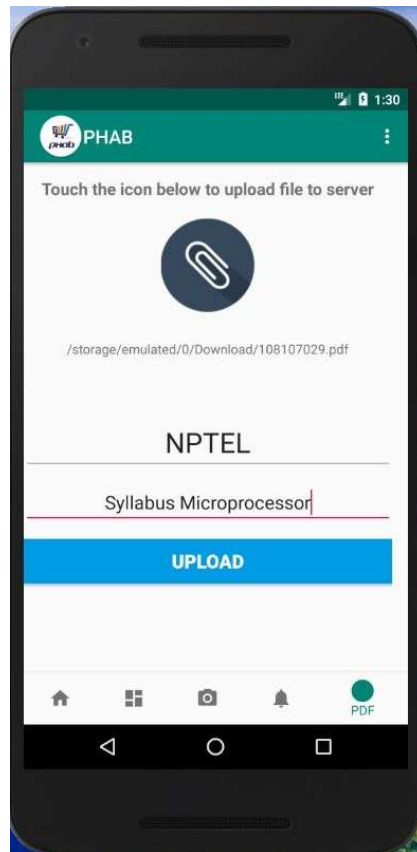


Fig15: pdf upload section

6. INSTALLATION AND TESTING

6.1 INSTALLATION

To use this application , user first download the application named as PHAB, from google play store for android phones. User must have minimum android version 7.0.0 that is nougat in their phones to run application smoothly.

6.1.1 REGISTRATION

For new user , user has to register himself on the app by filling genuine details like name ,address email id, phone no. and password. After registration, OTP is sent to user's phone number for authentication. After the registration process the user needs to login through the login section.

6.1.2 LOGIN

For first time login user, the user will first enter email id and password then they have to click on the login button further a new pop-up will appear in which the user needs to enter the OTP that they have received after registration process. For already login user , they can login by simply entering email id and password .If user forget password then there is option to recover password by simply entering registered email id and phone no, user receive his/her registered email and password on his phone and mail.

6.2 TESTING

For Seller: user can upload photo of book with details like title and description of book that contain MRP, cost, and condition of book. User can also upload pdf which is free for every one as, anyone can download it. User cannot sell illegal things, as if anyone posted anything wrong admin has power to block the post and delete the pdf . After sell out his items user have to delete its post from My Post section, simply by a single click on the post present in the my post tab, delete option appears.

For Buyer: user can see the uploaded post by seller's in user's post panel and search book with specific title , description , and with city as well .Pdf 's are also there in search result , and these are free of cost anyone can download it from anywhere on single click.

7. CONCLUSION

We concluded our project as an app in which a user can upload their old books, notes, pdf. The user can recover his account from the authenticate OTP verification feature, for security features we have the admin, who has right to delete any inappropriate pdf or image. Admin has also got the right to add more admins to the app, he can also post any news, information, books, novels or notice in the form of photos or pdf. He has the right to block or unblock any post of the user which is inappropriate.

Our app can be used by any teaching institute, by the teachers to distribute any notes, information in the form of notice. Students can search through various filter options like names, titles, description and even city wise.

Photos can be uploaded through the user's choice either through gallery and camera. The user can even see his/her post, the blocked post by the admin are seen in different colour and the blocked posts are not visible to any other user. The user can even change his/her profile entries.

8. FUTURE SCOPE

In future we hire delivery boys, after which there is no direct contact between seller and buyer as they pick the parcel from seller and deliver to buyer's address with a minimal delivery charge.

User who want to sell his/her pdf's they can also do that as we are integrating Payment method in our app

We are also thinking for uploading library books data after taking permissions from colleges, as students has doubt that particular book is available to library or not, so by simple searching on PHAB he/she can get to know about the book that is it available or not.

We sorted the students according to their colleges so, it is convenient to search in there surrounding and first in their particular colleges, then after nearby colleges or area.

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