

HUMAN COMPUTER INTERACTION: PROJECT REPORT

Project title: CAMBUZZ

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WRITE UP ON “Cambuzz”

WHY DO YOU NEED “Cambuzz”?

Developing a mobile app for students is just one way for the university to stay current with the happenings within the campus, and also for students to help each other.

In the current scenario on campus, **students face many inconveniences:**

- They want to know about various campus events held by numerous clubs on campus. Sometimes the students want to participate, but aren't able to just because they did not know about the event.
- Students want to know reliable sources to seek academic material, don't know who to buy/sell books and other required items (Eg. Arduino boards),
- Students might have to travel alone by cab while going to different places- not only paying more for the travel but also having less security.
- Sometimes before exams and for project report print outs, students have to wait in long queues under the hot sun, expending both time and energy.
- On many occasions, students are working on excellent projects but are held up with work when they need help in domains that they do not have expertise in.
- Many a times, students go to meet faculty members at their cabins, only to find that the cabin is locked. They must now choose whether to wait there or come back again later- both leading to inefficient use of time.
- Students often have to repeatedly open FFCS or their images app to see the venue and time of the next class, or their attendance in various subjects.
- Students want to know as soon as their favorite food items arrive in VMart, or wish they had some tastier items to eat in the mess.
- Parents and students seeking admission in VIT also want to view the numerous facilities, labs and hostel amenities before taking admission. However, they have to rely on photos on the internet which are not really dependable.

Students didn't know that if we think through, something could be done about all these problems. Cambuzz will provide solutions to the above problems through a single application / website. The app will enable students on campus not only to how to get help fast, but it will also help them save valuable time and anxiety. The student will be able to be involved with different clubs and more extra-curricular activities, for the other campus related issues, he would have Cambuzz.

OBJECTIVES

CAMBUZZ should be a full student companion app. Developing a mobile app for students is just one way for university to stay current with the trends and digitalize the campus.

Various objectives of the app are:

- Create a unique user login exclusively for college student.
- Students should be able find the faulty cabins and can also track the presence of faculty in cabin with help of IOT sensor based notification system fitted in faculty cabin
- Students should be able buy and sell various items like books, project components, mattresses, lab coats etc., among themselves.
- The app should facilitate the college student to get printouts for notes during CAT-2 in campus itself, avoiding the long queues in shops by uploading the material for printout with the no. of printouts required.
- The app should allow campus clubs or organizations can create their own events with information like meeting times, dues, and upcoming events specifically tailored to the clubs' members
- Students should be able to view their current semester Time-Table. They should be able to monitor their attendance of each class and subject and an alert will be sent to student if their attendance goes below 75%.
- Student should be able to get all types of books on CAMBUZZ by searching the book by name/author/subject. All the available book should be shown with number of copies available.
- The student should be able use CAMBUZZ maps to get direction for different department buildings in campus. Also student should be able to view see the campus, hostel room, library etc in VR(Virtual Reality) mode
- The app should facilitate cab sharing among the campus student. It should also provide different cab options like OLA, UBER along with price comparison to choose the best suitable.
- The app should be able to solve the daily hassle faced by mess caterers of selecting the mess menu for students. The app should allow the selection of menu based on voting among the students using Machine learning algorithms.
- The app should allow students to search various projects ongoing on campus and collaborate with them based on subjects and topics of their interest.
- The app should move 'VMART' departmental store to be fully digital. The student should be able to track the stock available in store by just using the app and should also reserve the items needed using the app.

MODULE DESCRIPTIONS

MODULE 1: LOGIN INTO CAMBUZZ

The image is a hand-drawn wireframe of a login page for a web application named 'Cambuzz'. The page is titled 'Cambuzz - Login' in the browser's header. On the left side of the page, there is a hamburger menu icon (three horizontal lines). On the right side, there is a circular back arrow icon. The main content area is a central box titled 'Login'. Inside this box, there are two input fields: 'Username' and 'Password'. Below the password field, there is a checkbox labeled 'Remember me' which is checked, and a dark grey 'Sign in' button. Below these, there are two social login buttons: a blue button with the Facebook 'f' logo and the text 'Sign in with Facebook', and a blue button with the Google 'G' logo and the text 'Sign in with Google'.

DESCRIPTION

- Login page for Cambuzz- clean and simple.
- User can login using both Facebook and Google account

MODULE 2: LOGIN VALIDATION AND AUTHENTICATION

Hand-drawn sketch of the Cambuzz Login page. The page title is "Cambuzz - Login". It features a "Login" heading, a "Username" input field, a "Password" input field, and an "Invalid Username or Password" error message with an "OK" button. Below the error message are two buttons: "Sign in with Facebook" and "Sign in with Google".

A check is applied if Username or Password is invalid

MODULE 3: SIGN UP FOR CAMBUZZ

Hand-drawn sketch of the Cambuzz Sign Up page. The page title is "Cambuzz - Sign up". It features a "Sign Up for Cambuzz" heading, input fields for "First Name", "Last Name", "Email Address", "Phone No", and "Password", and a "Sign Me Up" button.

- The Sign Up page asks for information – First name, Last name, Email Id, Phone no., Password to be set for the account.
- To make it exclusive for a particular campus college Email Id can only be used.

MODULE 3 (CONTD.) VALIDATION FOR SIGN UP OF NEW USER ON CAMBUZZ

Sign Up for Cambuzz

First Name

Last Name

Any field cannot be empty

OK

Phone No

Password

Sign Me Up

- Check for validation (regular expressions) on fields and that each field must be filled.

MODULE 4: PRINTOUT OF NOTES MODULE

Notes Printout

VIT Student

Upload Files

Choose File

No of Copies: 5

Select date you want printouts on:

February 2017

Mo	Tu	We	Th	Fr	Sa	Su
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

OK

MODULE 4 (CONTD.) PRINTOUT OF NOTES MODULE

Cambuzz - Notes Printout

VIT Student

Files you have uploaded	No of copies
-----	2
-----	3
-----	4
-----	1
-----	1

Total Amount = 150 RS

Payment Method :

☒ Paytm

☐ ~~Tea~~

☐ Debit Card

☐ Cash on delivery

OK

DESCRIPTION

It facilitates the college student to get printouts for notes during CAT-2 in campus itself, avoiding the long queues in shops by uploading the material for printout with the no. of printouts required.

The total amount to be charged is shown immediately with different payment modes

- Paytm
- TEZ
- Debit card
- COD (cash on delivery)

MODULE 5: FACULTY SEARCH AND AVAILABILITY IN CABIN MODULE (APPLIED INTERNET OF THINGS)

Cambuzz - Faculty Track

VIT Student

Search by: ☒ Faculty Name ☐ Course Code ☐ Course Name

Go

Faculty Details:

Free Slots:

Cabin Info:

Email Id:

To avoid searching the faculty cabin, Cambuzz can be used to navigate faculty cabin with faculty info:

- Faculty Email ID
- Free Slots

Cambuzz:Track Faculty

Enter Faculty name

FACULTY TIME-TABLE

NAME: XYZ
CABIN NO: 1st Floor, 123
MOBILE NO. : 9087654321
EMAIL ID: xyz@pqr

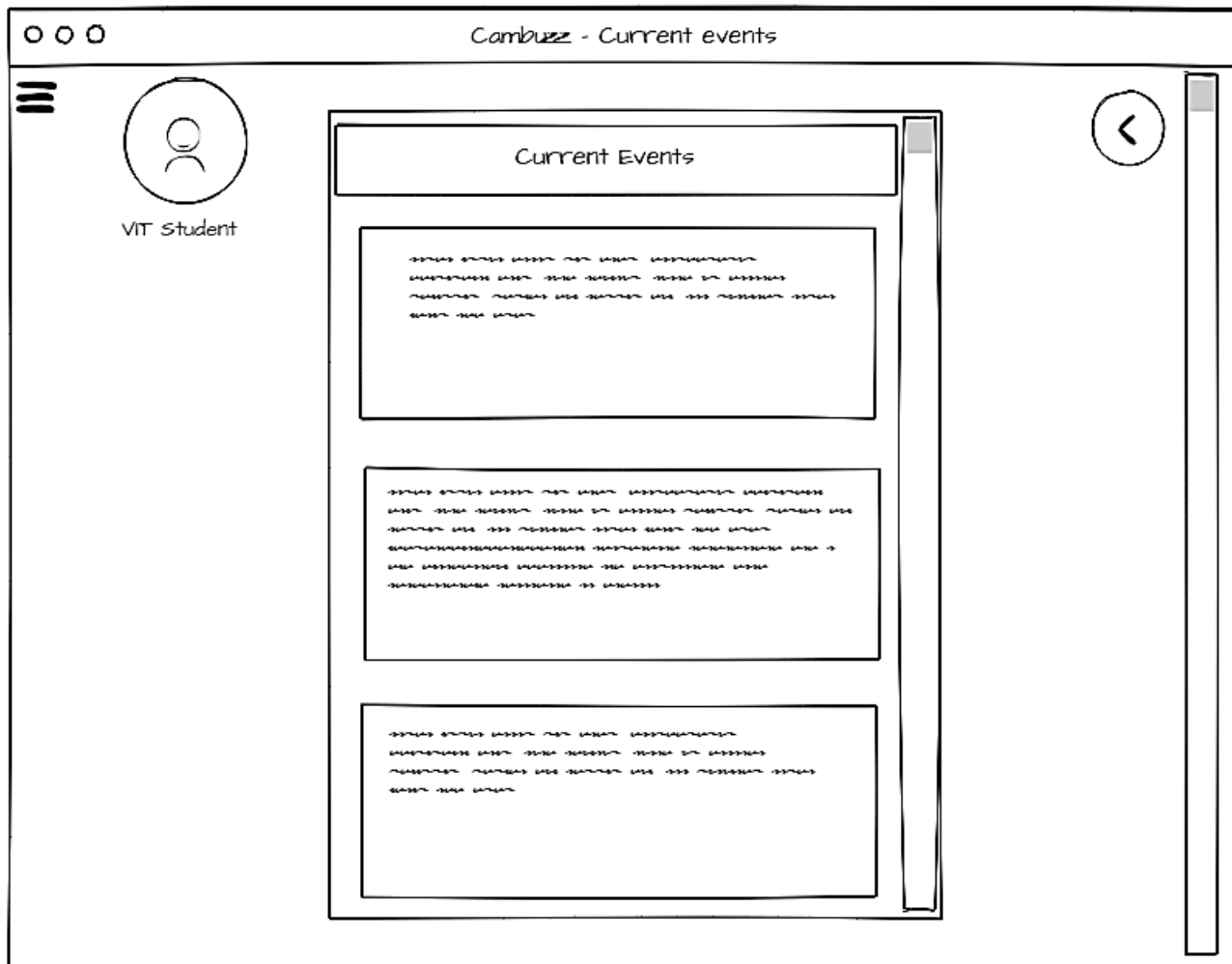
AVAILABLE

FREE HOURS

Message Faculty

It also tracks if faculty is available in cabin using IOT sensors attached to faculty cabin doors.

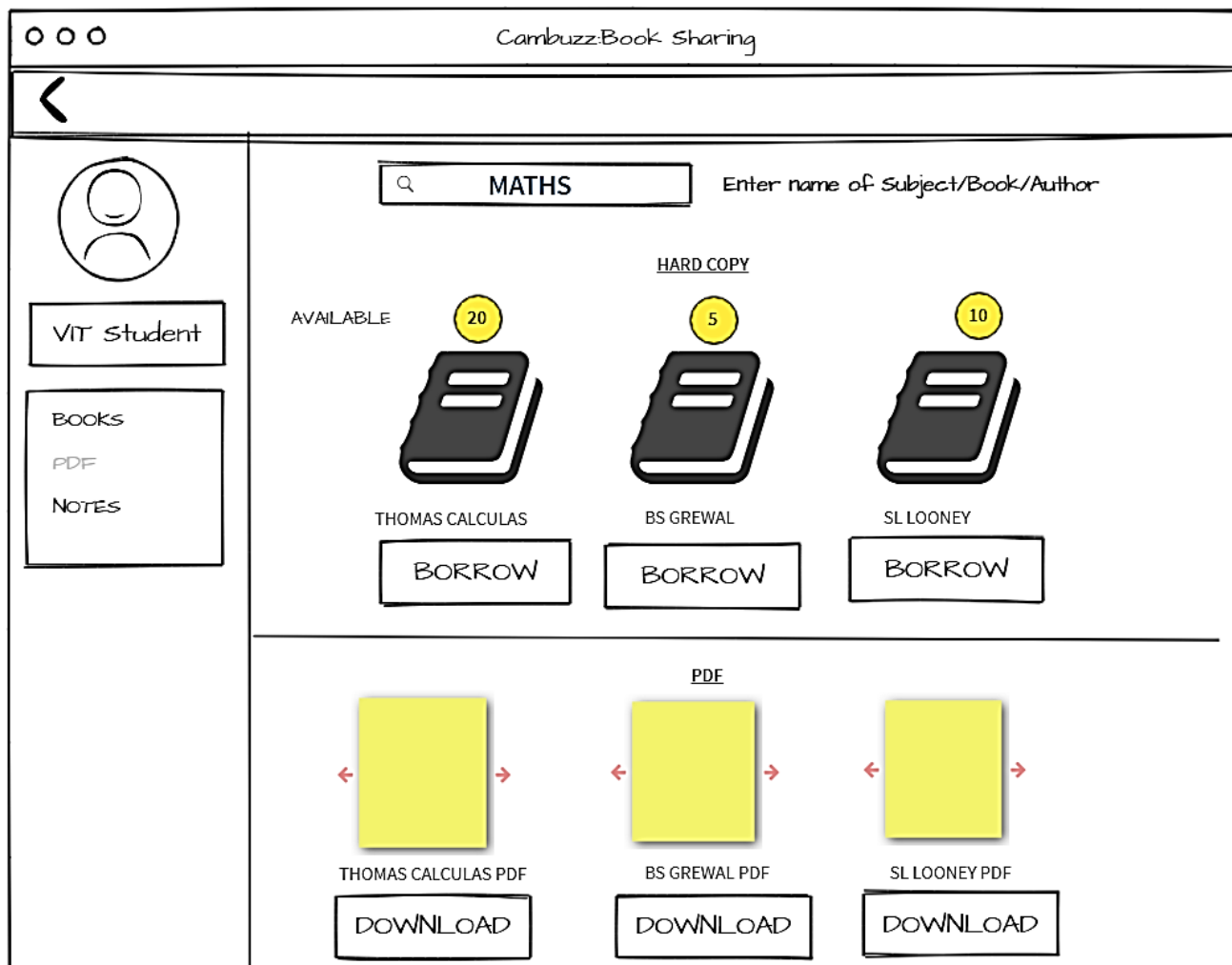
MODULE 6: CURRENT EVENTS ON CAMPUS



DESCRIPTION

- Different campus clubs or organizations can create their own events with information like meeting times, dues, and upcoming events specifically tailored to the clubs' members.
- Performance groups in theater, music, or dance can create event notification to let people know about performance locations and times, as well as ticket availability and pricing.

MODULE 8: BOOK SHARING WITH OTHER STUDENTS



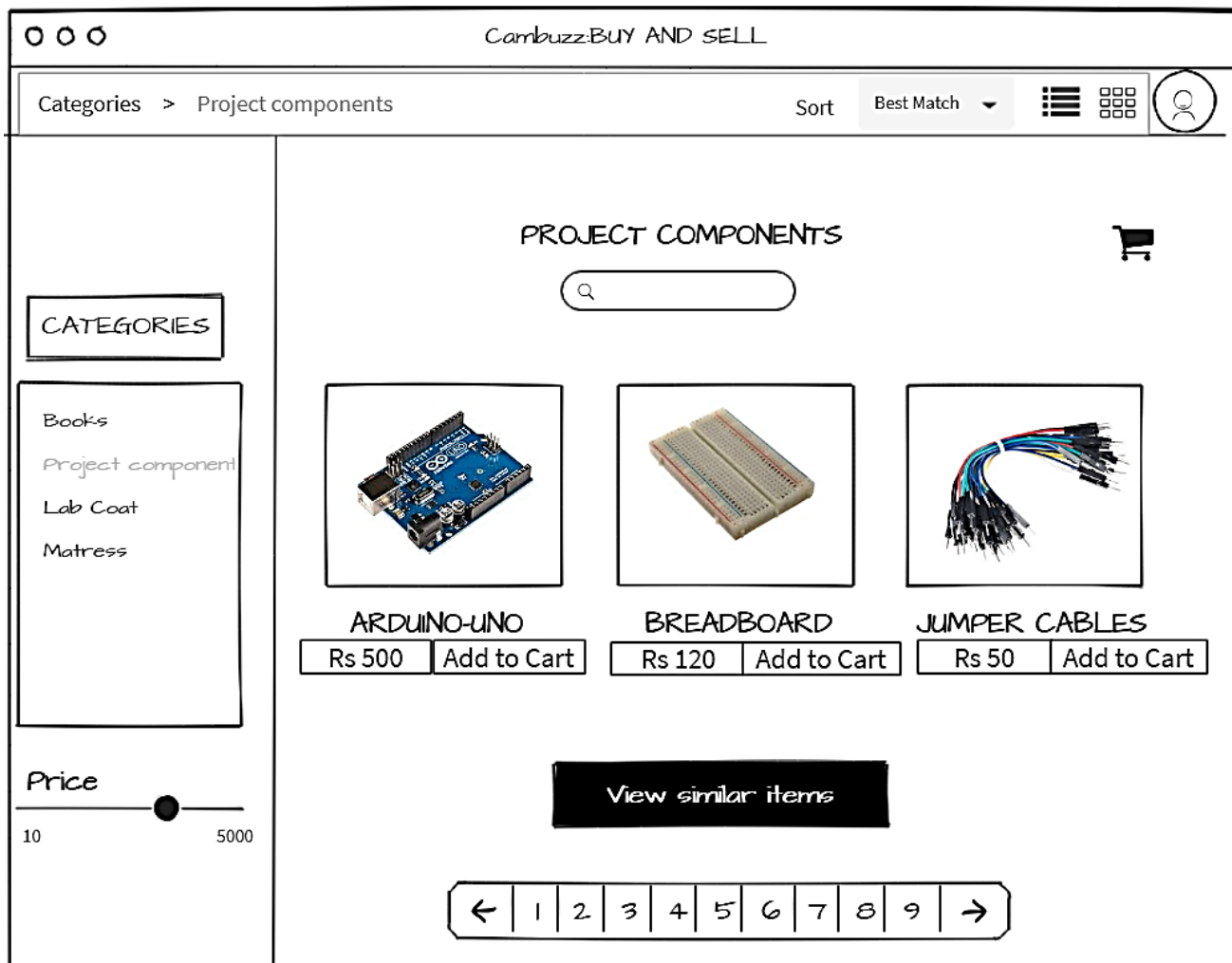
DESCRIPTION

Student can get all types of books on CAMBUZZ.

They can search the book by name/author/subject and all the available book will be shown with number of copies available. Student can just click borrow button and can contact the owner of the book

If hardcopy of book is not available, student can download the PDF version of the book from the large book database of CAMBUZZ.

MODULE 9: STUDENT BUY/SELL OF ITEMS MODULE



DESCRIPTION

Student can BUY and SELL all kind of products on CAMBUZZ

They can buy different category of product like

- Project components
- Lab coats
- Matress

Student can select the items in cart and buy with different modes of payment:

- Paytm
- TEZ
- Debit card
- COD (cash on delivery)

MODULE 9 (CONTD). POST NEW ITEM TO SELL

○ ○ ○

Cambuzz:BUY AND SELL

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×

×

×

×

○

Enter product name

Enter price

Used/new

Add product description

Submit

UPLOAD ITEM PICTURES

←

1

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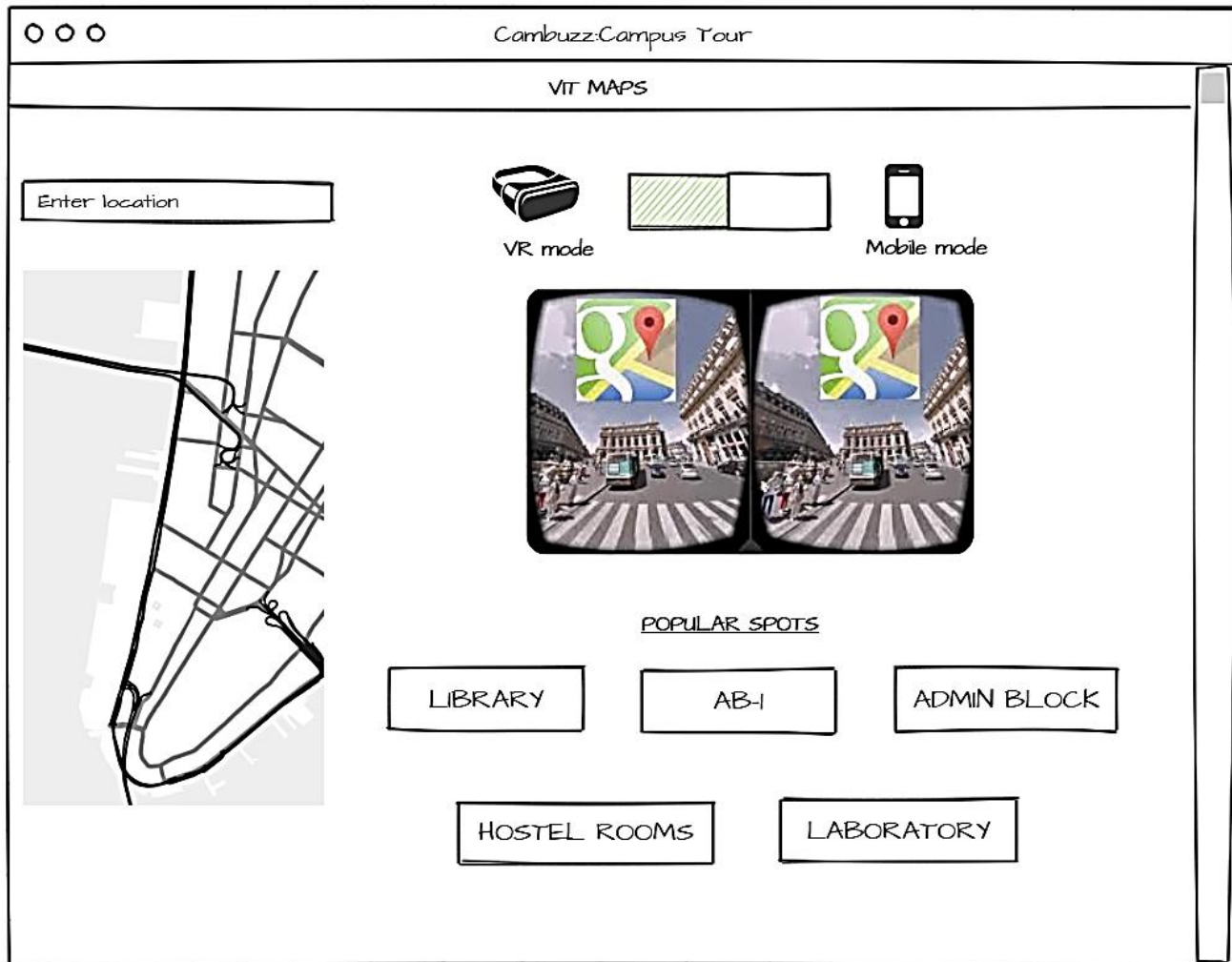
DESCRIPTION

Student can also sell item using CAMBUZZ by follow these steps:

1. Uploading product pictures
2. Product name
3. Price
4. Marking it as USED/NEW
5. Product description

MODULE 10: VR CAMPUS TOUR

(APPLIED VIRTUAL REALITY AND AUGMENTED REALITY)



DESCRIPTION

The student can use CAMBUZZ maps to get direction for different department buildings in campus.

VR Maps

New admissions and student who cannot come to campus for a visit before admission can view the campus in VR mode which makes the campus look realistic without being on campus

People can view different hostel rooms, mess, library, classrooms on VR mode.

Cambuzz - CAB SHARING

VIT Student

CAB POOLING FOR HASSLE FREE TRAVEL

FROM

TO

Q Current: VIT Chennai

Q ML Suggest: Domestic Airport

DATE OF TRAVEL

2 Nov 2018

PREFERRED TIME

16

30

PM

GENDER

☒ Male

☐ Female

TRAVELLERS WITH YOU

1

PREFERRED TOTAL TRAVELLERS

4

CHANCES OF FINDING A MATCH

82%

Save for now

Submit

+ -

VIT Chennai

Predicted Total Fare (ML)

UBER

Rs. 347

OLA

Rs. 364

DESCRIPTION

CAMBUZZ facilitates cab sharing among the campus student to save fuel and money.

It takes the drop location, no. of seats required, time of travel, information of traveller (Name, Gender) from the user and gives best matches available for cab pooling.

It also provides different cab options like OLA, UBER along with price comparison to choose the best suitable.

Cambuzz - MESS MENU

MEN's Hostel A - Block

Select Mess

DAY	BREAKFAST	LUNCH	SNACKS	DINNER
MONDAY
TUESDAY
WEDNESDAY
THURSDAY
FRIDAY
SATURDAY
SUNDAY

CAMBUZZ solves the daily hassle faced by mess caterers of selecting the mess menu for students.

Cambuzz - MESS MENU VOTING

MESS MENU VOTING FOR THE WEEK: 22 Oct to 28 Oct

VIT Student

MONDAY COMPLETED!

TUESDAY one or more field(s) incomplete!

WEDNESDAY

Breakfast: Padi Masala Dosa

Lunch: Shahi Paneer, Rice.

Snacks: Sandwich, Dahi Vada, Samosa, Burger

Dinner: Select

Progress: 1 of 7

Save for now

The app facilitates the selection of menu based on voting among the students. The student can vote from various dishes for different meals (Breakfast, Lunch, Dinner) from the dropdown menu available.

Cambuzz - MESS MENU VOTING

VIT Student

MESS MENU VOTING FOR THE WEEK: 22 Oct - 28 Oct

	DISHES MATCHED
MONDAY	76% - Good enough
TUESDAY	91% - Awesome!
WEDNESDAY	82% - Great!
THURSDAY	54% - Review choices?
FRIDAY	64% - Okayish
SATURDAY	83% - Great!
SUNDAY	95% - Awesome!

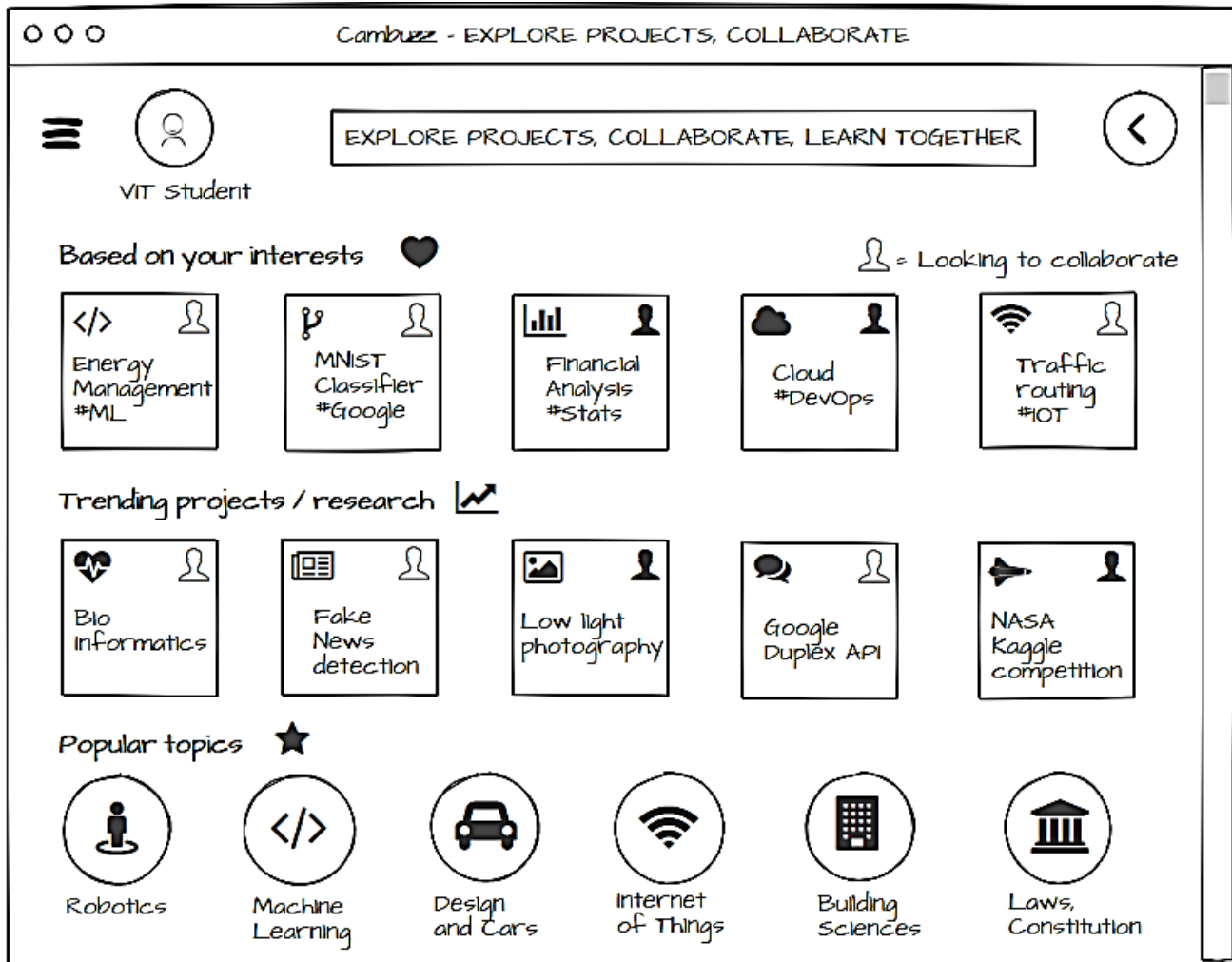
Save for now Discard changes **SAVE and SUBMIT**

DESCRIPTION

The app supported with Machine Learning algorithm gives a menu based on the preference of the majority.

The app notifies the user till the whole form is filled and when the form is filled completely a completion message is showed.

MODULE 13: COLLABORATING ON PROJECTS WITH PEER STUDENTS (APPLIED MACHINE LEARNING)



DESCRIPTION

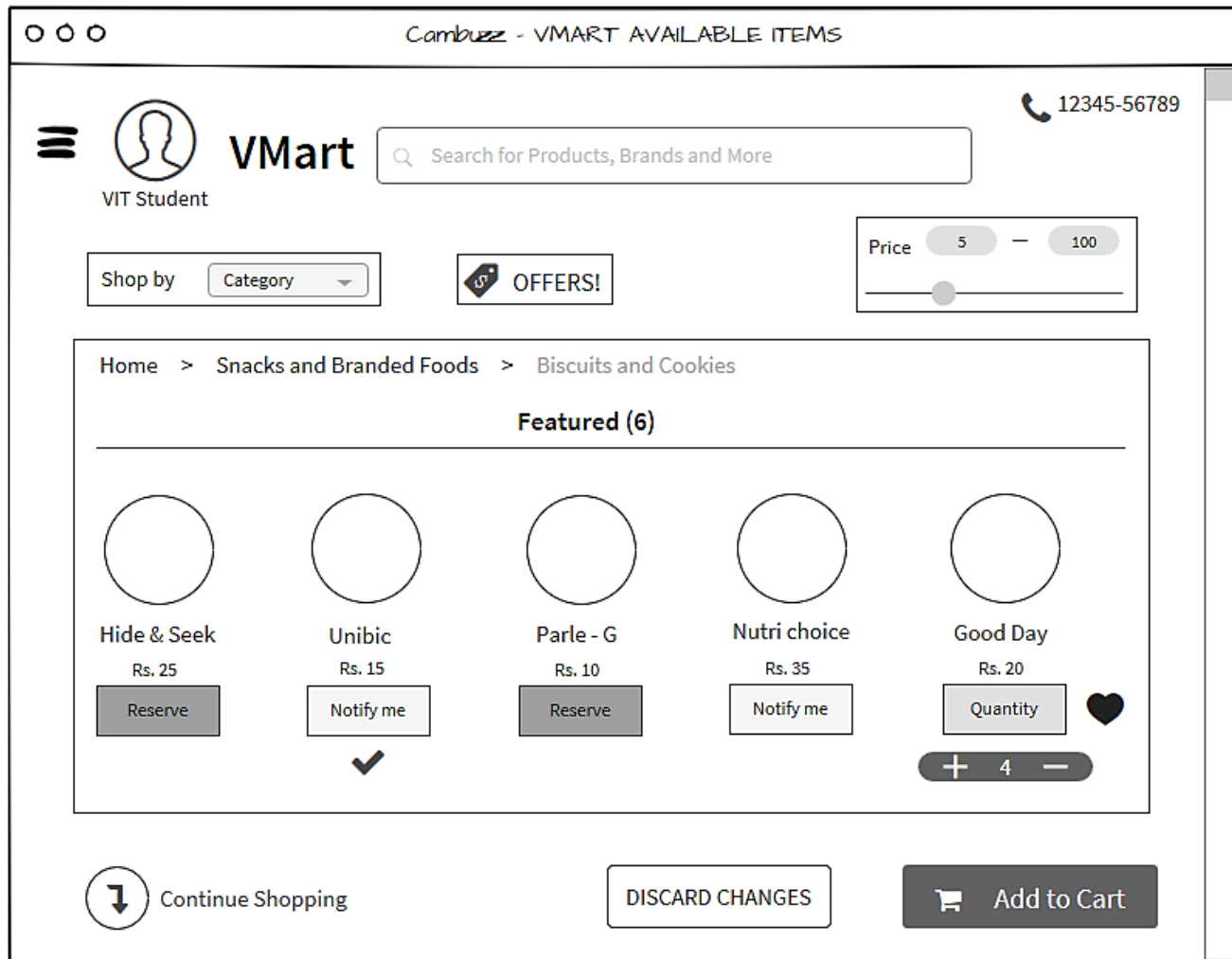
CAMBUZZ helps to promote quality research work and projects ongoing in campus.

The app provides student to search various projects ongoing on campus and collaborate with them based on subjects and topics of their interest.

It also shows if any project team needs a member for specific work (like app-development, backend etc.) The app also shows the current trending projects and topics on campus.

MODULE 14: VMART AVAILABILITY AND NOTIFICATION

(APPLIED INTERNET OF THINGS)



DESCRIPTION

CAMBUZZ makes the 'VMART' the departmental store of the campus fully digital.

The student can track the stock available in store just using the app and can also reserve the items needed for some time from their app.

If any item is out of stock the student gets notified as soon as the item is again in stock.

APPLICATION OF 8 GOLDEN RULES (NEXT)

APPLICATION OF **8 GOLDEN RULES FOR INTERFACE DESIGN** IN CAMBUZZ

1. Strive for consistency

- Consistent sequences of actions are designed for all similar situations.
- Identical terminology is used all over in prompts, menus, and help screens
- Consistent color, layout, capitalization and fonts is employed throughout.

2. Enable frequent users to use shortcuts

- To reduce the number of interactions and to **increase the pace of interaction** several shortcuts have been provided like price filter as provided in buying and selling user doesn't have to filter the items manually, easy switch to VR maps by just clicking on VR icon.
- Several abbreviations, special keys and menu shortcuts are provided for frequent knowledgeable users.

3. Offer informative feedback

- For every user action, there should be **system feedback** like user gets a notification of account created successfully when user creates a new account, user gets a notification when his cab is booked successfully and is also notified when user has completed the mess menu voting form or when his favorite item is available in VMart.

4. Design dialogs to yield closure

- Sequences of **actions are organized into groups with a beginning, middle, and end.**
- Informative feedback is given at the completion of a group of actions like checkout sequences from buying and selling option move users toward completion of their purchases, ending with a clear confirmation page.

5. Prevent errors

- If users make an error, the **system detects the error and offer simple, constructive, and specific instructions for recovery**, like users are not required to retype an entire signup form if they enter an invalid email-id or phone no, but it guides to repair only the faulty part.
- User are notified about invalid passwords and usernames

6. Permit easy reversal of actions

- Majority of **actions are made reversible.** This feature relieves anxiety, since the user knows that errors can be undone, thus encouraging exploration of unfamiliar options.
- If user votes wrong dish in voting he can change it before submitting the form
- If user has selected wrong item during buying he can remove item from cart or can cancel the order.

7. Support internal locus of control

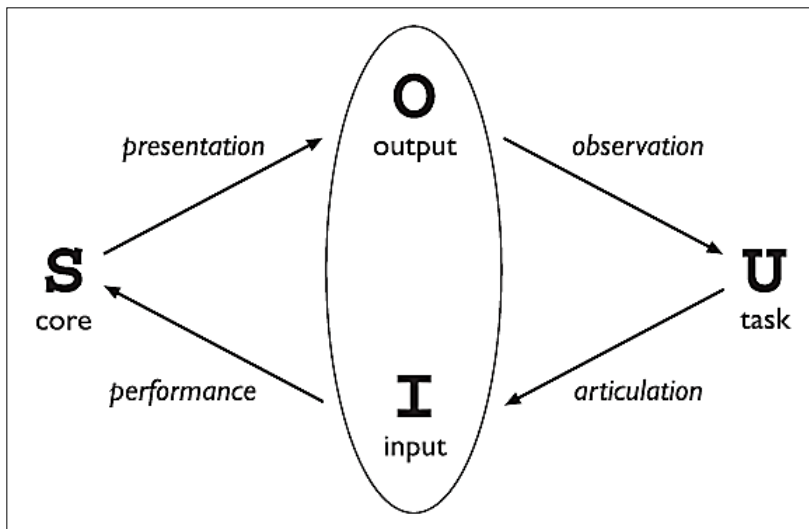
- User will experience that **they are in charge of the system and that the system responds to their actions.**
- All actions are based on user commands like searching for cab considering the user requirements, mess menu is formed based on input given by user during voting through the app which makes user initiators of action rather than the responders

8. Reduce short-term memory load

- Displays are kept **simple, multiple-page displays are consolidated and sufficient training time is allotted** for codes, mnemonics, and sequences of actions.
- The tasks involving multiple pages are consolidated. Eg: at checkout of buying / selling of goods, or while booking a cab.

Interaction Frameworks

- **There are four main translations**
 - involved in the interaction: articulation, performance, presentation and observation



HOW WE WILL GET FEEDBACK for Cambuzz

There are a number of ways to get feedback on our app. We will conduct a focus group—that way we will get customized feedback and see user reactions to the app. A focus group will provide us with more valuable feedback than sending out a survey with a link to test the product.

We will not only have users test and provide feedback after the prototype is completed but also collect feedback once we have a user interface developed and at various other stages to get feedback on an ongoing basis. Keeping our testing methods flexible, as requirements and user needs will change over the course of our implementation.

CONCLUSION

Thus, the objectives set for Cambuzz were achieved, and the interface designs were made effectively using the Golden Rules guidelines. Also, upcoming technologies like Machine Learning, Internet of Things and Virtual Reality were applied in appropriate manner in the interface design of Cambuzz.