Fr. Conceicao Rodrigues College of Engineering, Bandra (W)

TE Electronics & Computer Science (SEM V)

Mini Project-2A Proposal Form

AY 2022 - 23

1. **Name of the student(s) with roll numbers**

   - Christopher Roach (9157)
   - Vivek Sain (9159)
   - Jordan Soans (9165)

2. **Title of the Mini Project:**

"Printout Vending Machine"

3. **Mini Project Category:**

Research		**Software**	
Application		**Hardware**	
Product	√	**Software and Hardware**	√

4. **Mini Project Area/ Problem Characteristics:**

Analog Circuits		**Software Tools**	√
Digital Circuits		**Mobile Application**	√
Micro-Controller based circuits		**DBMS/Data Structure Application**	
Basic Science/Engineering		**Social/Environmental issues**	
Others (Please Specify)			

Background

In Mumbai, the city that never sleeps, stationary shops go to sleep at 10:30pm. This poses great problems for students who need printouts regularly and remember only at the last moment. Many students do not own a printer and in such cases are left stuck without options. Last minute printouts are always a difficulty, be it an assignment, a document or even a flight or train ticket. In the current model, an operator takes our document by USB or by mail, downloads it to his machine. He then gives us a preview and prints the required documents. We then take the documents to a cashier who counts the number of pages and tells us how much we need to pay. This model is restricted by the availability of an operator and a cashier to complete the transaction.

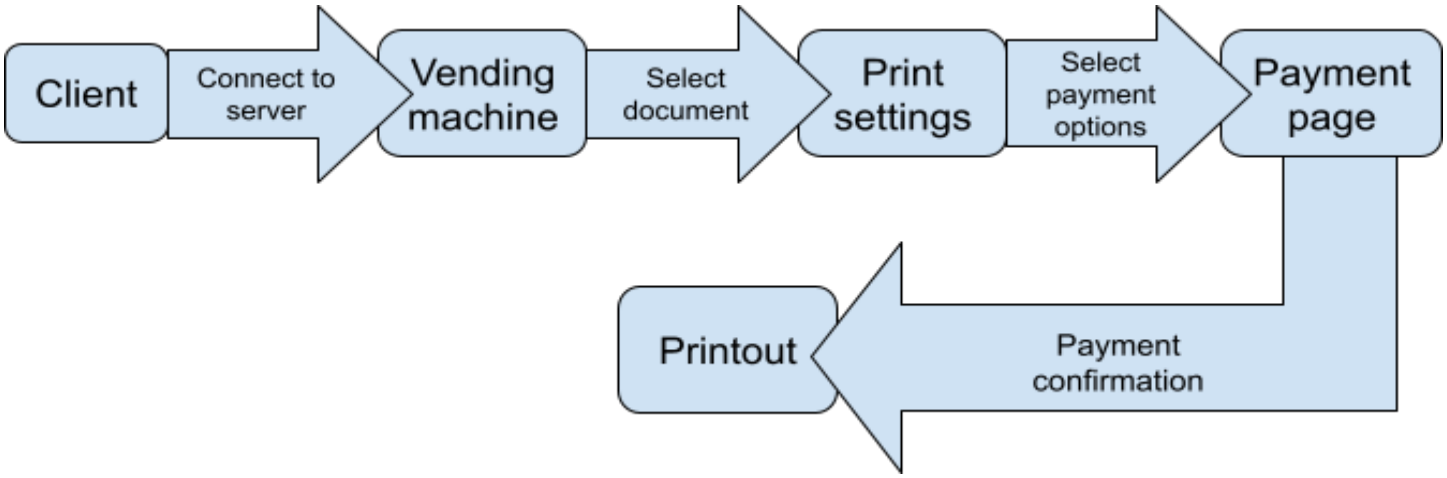
5 A. Mini Project Abstract:

Presently we need an operator and cashier to get a printout. This however prevents us from being able to take printouts all the time as keeping an operator and a cashier at night is not feasible. To solve this problem this project is aimed towards building a printout vending machine. This machine will be able to accept a document from the user, allow the user to choose the required settings and show a preview of the printout. Then the user can request for a printout, the machine will then direct the user to a payment gateway and print the documents once the payment is complete.

5 B. Project Objectives:

- Develop a software to accept documents from a user via the USB, internet, bluetooth, NFC and any other feasible methods
- Allow user to choose print settings
- Accept and confirm payment and payment amount
- Print the documents when the payment is completed
- Notify the administrator when the pages or ink is running low

6. Technical Feasibility



7. System Requirements

7.1 Software Requirements

- Android studio
- Java JDK 17
- Payment gateway

7.2 Hardware Requirements

- Touch screen display
- Printer
- Sensors to detect paper level

8. What is the Novelty / Innovation/ Social relevance in the proposed project?

Vending machines have long been used to sell snacks and drinks. However, they have not been used to provide printouts on a large scale. This machine aims to automate the entire printing process and reduce the manpower required to provide printouts and so enable users to get printouts around the clock. This will also speed up the printing process.

This will be exceptionally useful to students and also to government centers where printouts are frequently needed.

9. References

[1] https://documentsolution.com/en/content/insights/vending-machine-for-print-can-it-be-done

[2] https://www.slideshare.net/luchiybiernas/eprint-a-vending-printing-machine