Group Assignment

Client : Wickrama Electricals

System : Stores Management System

Module : System Analysis and Design

Batch : 18.2 Plymouth Computing

Group No : 10

Group Members :

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1. Acknowledgement

We are really grateful because we managed to complete our SAD assignment given by our lecturer Mrs. Dileeka Alwis. This assignment cannot be completed without the effort and co-operation from our group members. We also sincerely thank our lecturer of SAD module for the guidance and encouragement in making this system. And also teaching us in this module. Last but not least we would like to express our gratitude to the crew of the company for the support and willingness to spend time with us to fill the questionaries

2. Client Overview

Wickrama Electricals is supported by fully experienced more than 20 years in electrical industry and more than 15 years qualified technical background. The company was started in 2011.Their engineering service is geared to provide the best installation, remarkable and efficient after sales service to your satisfaction without disturbance to the ongoing production process. The owner of the company is **Mr. Rohan Gayanath Samarawickrama**. He is an electrical engineer. The company vision is **"Be recognized by our customer as their best supplier"**. The mission of the company is **"To be the most successful and leading company in providing the best and highest quality products and service solutions with entirely new experience"**.

Their leading product is VEICHI Inverters and they provide island wide delivery. VEICHI has developed a wide range of electrical products, covering variable frequency drives, servo systems, solar PV inverter, PLC, HMI, automation equipment's and so on.

As VIECHI products are well known as stable performance, high quality and perfect technical support. Its products are selling well that they are widely used in many fields such as petroleum, chemical, ceramics, lifting, machine tools, metal products, wire and cable, plastic, printing and packaging, textile, and chemical product and more.

The other electric items are targeted the factories and highly developing construction area. Horana is an extensive area located of industrial and export processing zones with huge factories because of that reason their location is very useful for the companies and also there is a good advantage for their business.

Contact information

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- wickramaelec5@gmail.com

Address

- No 44/1,
  Rathnapura road,
  Sawgas Junction,
  Munagama,
  Horana.

Client List

- A P Packaging Pvt Ltd
- Alfatrong Engineering system Pvt Ltd
- APS Knitters Pvt Ltd
- Bradix Textile Ltd
- Business Form Ltd
- Cerester Pvt Ltd
- CIRFAB Pvt Ltd
- CK Chemex industries
- Dilsha garment

3. Scope of study

1. Internal Environment

- Supplier details
- Customer details
- Daily transaction
- Stores details

2. External Environment

- Suppliers
- Customers
- Government
- Competitors
- Stockholders

3. System boundary

- Stores Building

4. Automated Boundary

- Currently there is no fully automated system boundary.

4. Details of the existing system

The existing system is a manual file-based system. When a business done the cashier writes everything on the record books. When the item stock finish, they call to the companies to order the items. They write the profits , daily sales, monthly sales and monthly profit on the books.

5. Drawback of the existing system

They are using a bookkeeping manual system. So, records are maintained by hand, not using a computerized system. Instead transactions are written in

journals, from which the information is manually rolled up into a set of financial statements.

Apart from that they faced so many problems. when suddenly some stocks are unavailable, the storekeeper have to search all over the pages of record books to find the details such as the date they updated the stores, the quantity of last updated stores and all. It is wasting of time. If the details were lost, those cannot get back because there are no backups in the company.

When they clean or rearrange where the record files/journals are stored and misplace a record file, the whole data in that can be lost. So, the less security of data is a huge problem.

The storekeepers have to pay more attention to the stores because they have to be in alert of every stores. It is so hard to scroll the books and calculate the quantities. When the store is less of goods they have to order some more . Because of a storekeeper calculates and writes all the data, the accuracy is less than a computerized system too.

6. Details of the proposed system

Proposed system is a computerized system and data of the store can be entered to the system such as the date, quantity, cost, details about the new suppliers, details about the new customers. The calculations are done by the computers. So the accuracy problem is less. The items are pending when they are less of quantity.
The stockkeeper can see all the items in one place, no need of searching all over the books. The available stores, customer details, Supplier details are shown in the system.

7. Expected benefits of the proposed system

- Minimizing the employee stress and the time consume.
- The safety of the data is significantly improved than in the current situation.
- Due to the centralized approach, the data redundancy is elliminated.
- Since the data isstored in a centralized sysem it is much easier to review the entered data.
- The ability to make data backups significantly quicker than the manual system.
- Improved upgradability of the system.

8. Resourse Requirements

- Software (Visual Studio)
- Hardware (PC/Laptop)
- Client
- Employees
- Official website

9. Fact finding methods

- **<u>Observation of the work environment</u>**

We contacted the owner of the company (Mr. Rohan Gayanath Samarawickrama) and took an appointment. Then we went to his office and got an idea about how the things are going on.
Currently there is no compuerized system to handle the stores details. All the details are written in journals and maintains daily.

- **Survey**

We could get an idea about the existing manual system from some customers and found some problems within it. As well as we had much time to talk with some suppliers and get their opinions too.

- **Interviews**

We interviewed the following personalities

- Owner of thecmpany
- Stores keeper of the company
- Cashier of the company

10. Functional requirements

The System aims at providing an efficient interface to the user for managing of stores, it shall also provide the user varied options for managing the stores through various functions at hand.
The ingredient levels are continuously monitored based on their usage and are checked for the threshold levels in the stores and accordingly the user is alerted about low levels of certain ingredients.

The design is such that the user does not have to manually update the inventory every time, the System does if for the user.
The System calculates and predicts the amount of usage for specific set days that are pre-set by the user(admin) , it also alerts the user of an impending action to order ingredients before the specific day set by the user.
Therefore the user never has to worry about manually calculating the estimated usage of the ingredients as the System does it for the user. The simple interface of the System has functions like adding new good details, removing or updating good details.
It also extends to functions such as adding a vendor for an ingredient, removing the vendor, checking threshold levels, processing orders, altering processed orders etc.

11. Non functional requirements

- Response time will be less.
- Only authorized users can access the system with username and password.
- System will use secured database.
- Easy tasking of records and updation can be done.

- User friendly interface.
- Backups for database will be available.
- The system will give an message when the stores are less of goods

12. Constraints and Risk involved

- **Lack of IT knowledge**

The workers did't have much knowledge to handle a computerized system. So we had to explain more and more informations about what are we going to develop, before we confirm the deal.

- **Cost**

Cost was a very big issue to make the deal. The owner didn't accept our cost details. His budget was less than it and we has explain few more about the system and expenditures. At the end of the convercation he agreed with us.

- **Technology**

Our client don't have a device to run our software. This was also a huge problem. And the owner of the company agreed with us to buy a new device.

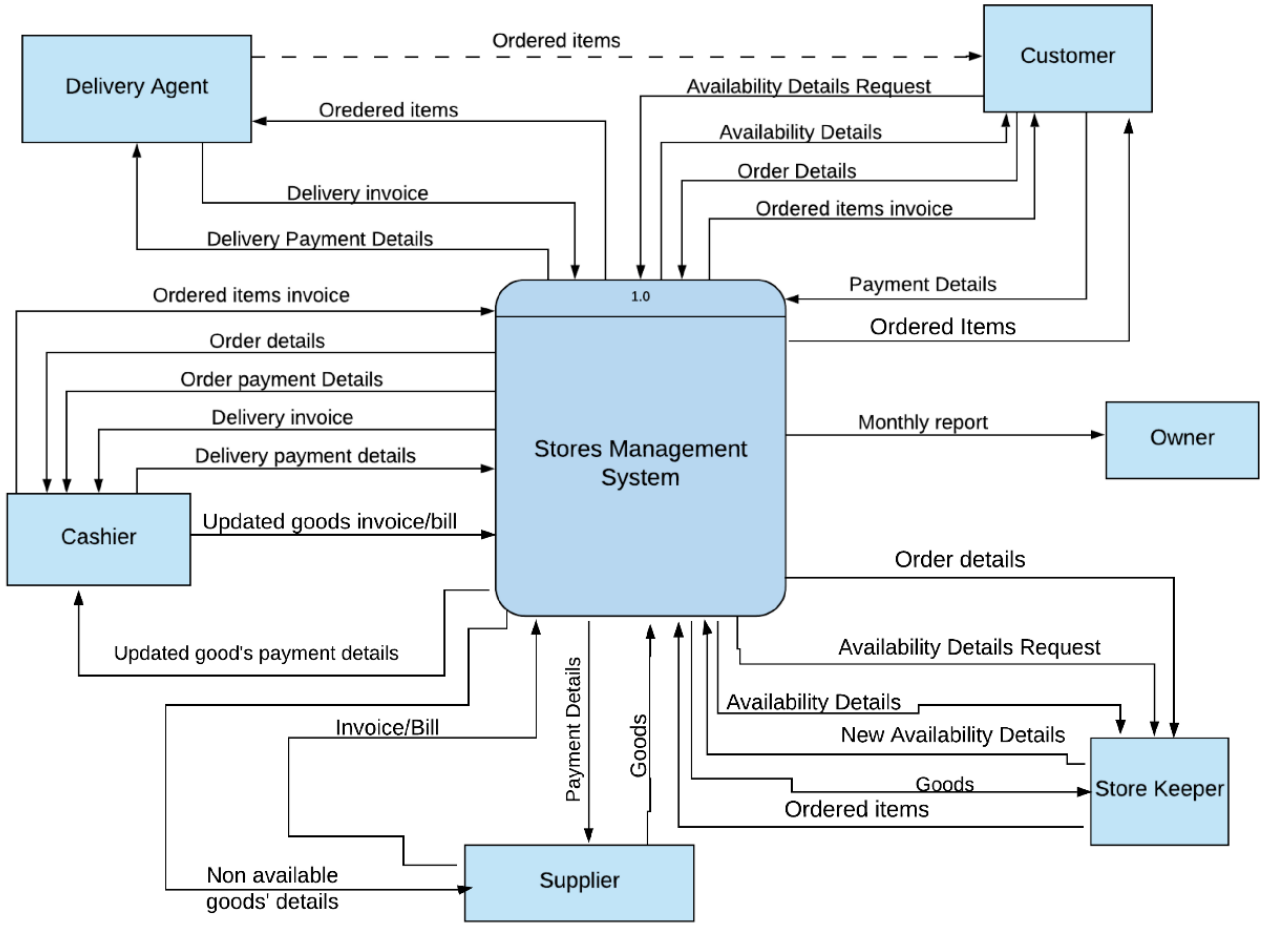
- **Distance**

To get more and more information we had to visit the company more times and we had to contact the owner and workers to clear the doubts.

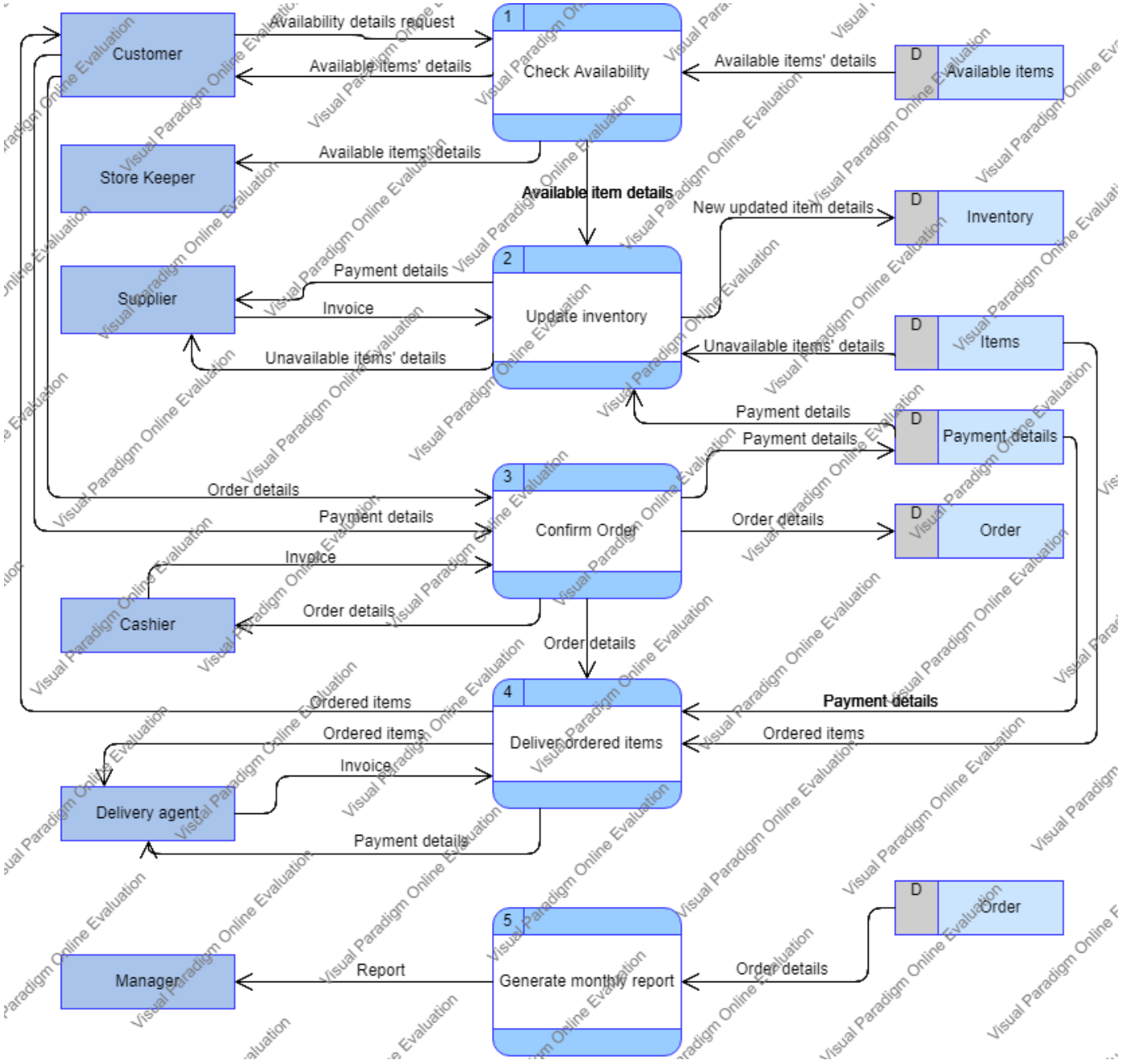
- **Time**

We had to talk so much time to get him agree with us about the time period. He had no idea about developing a software andhe needed the software in a short period. But we clearly explain him that this is not that much is to develop in a short period.

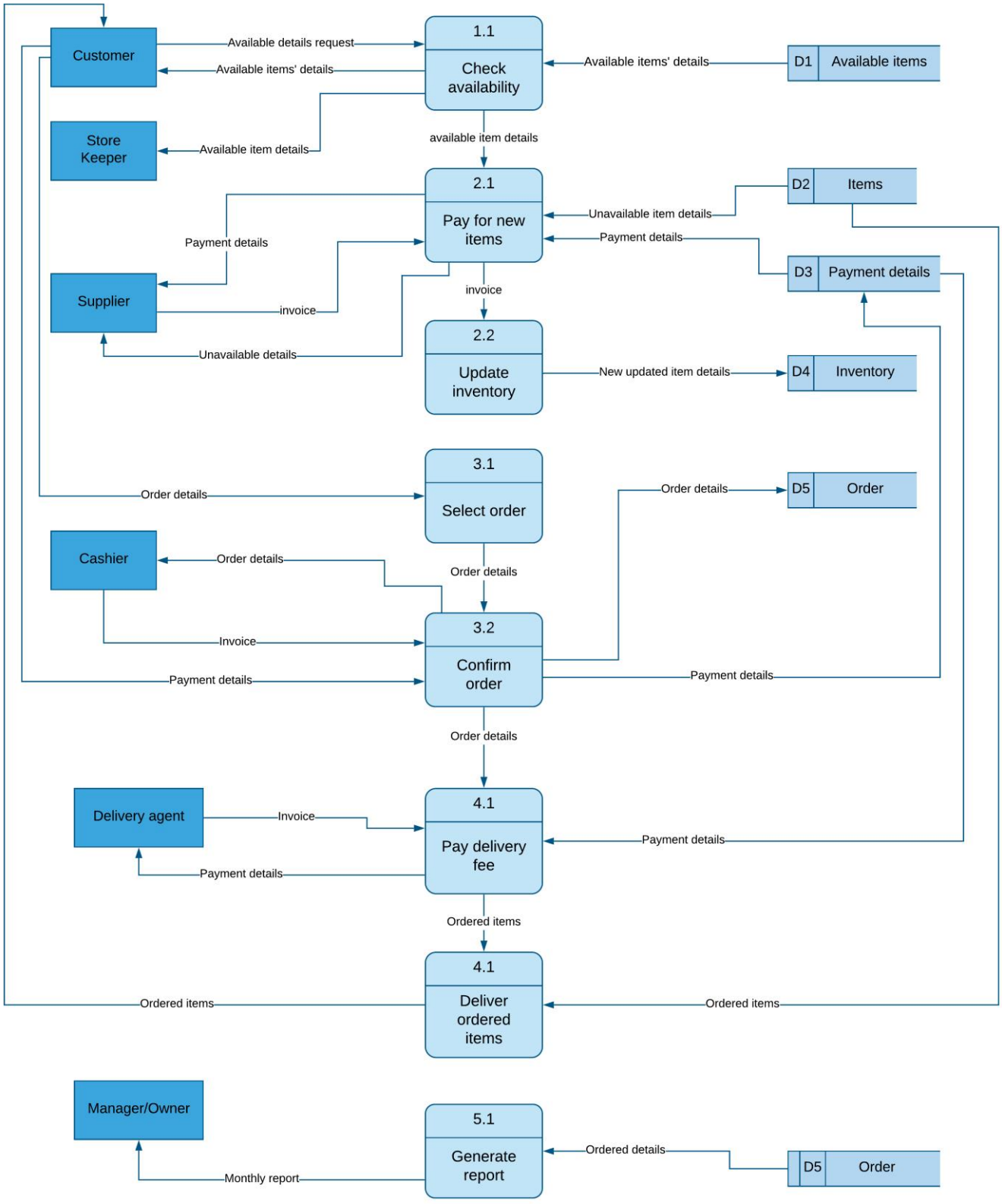
13. Context Diagram



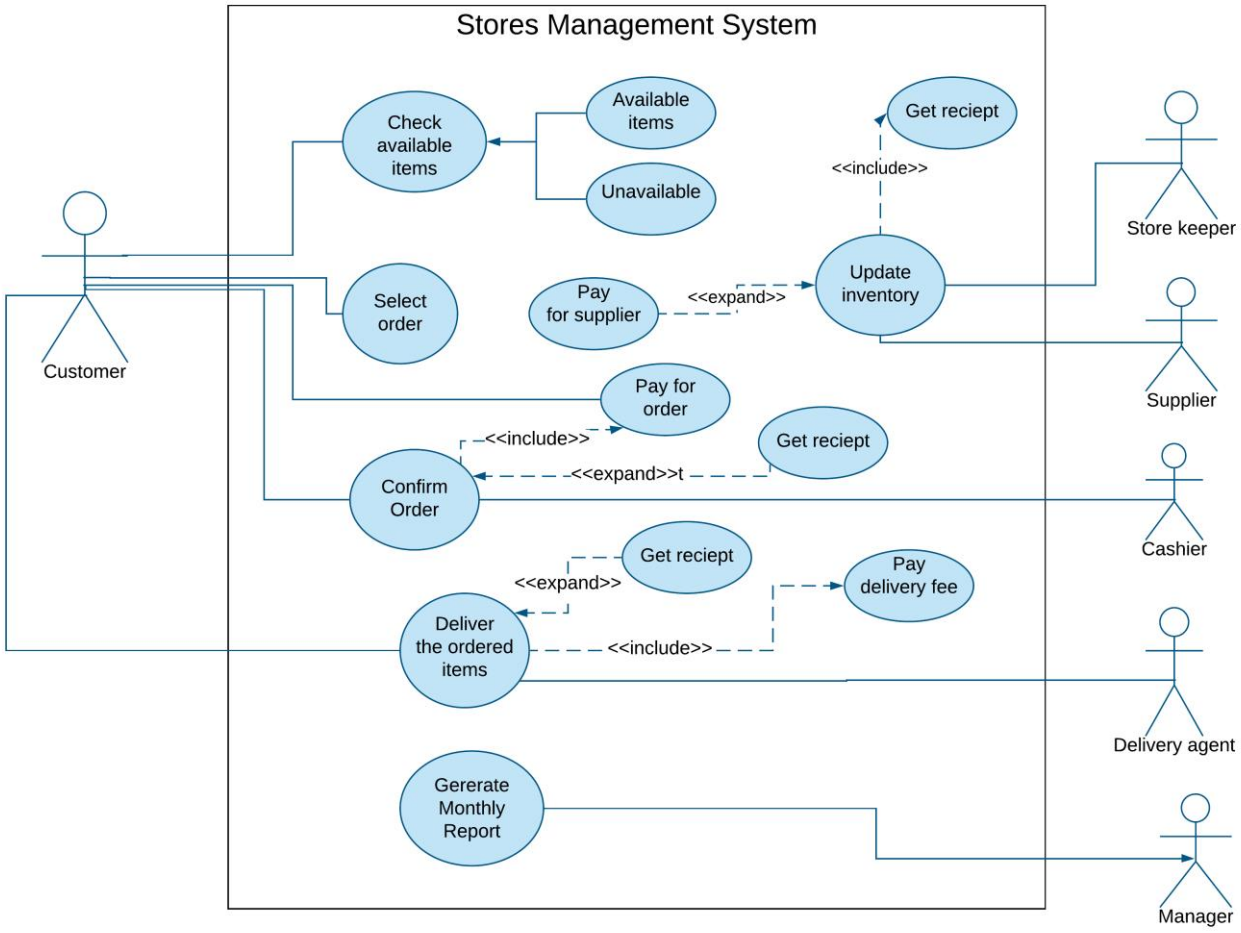
14. Level 0 DFD



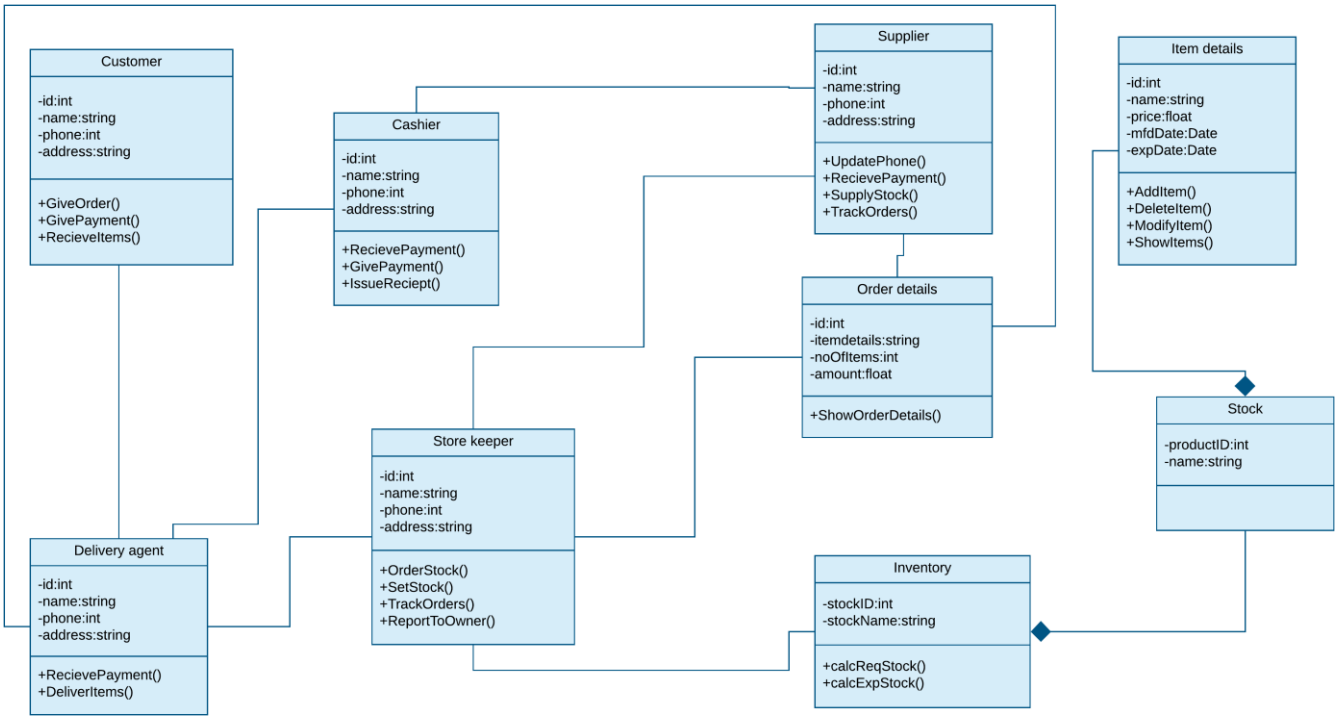
15. Level 1 DFD



16. Use case diagram



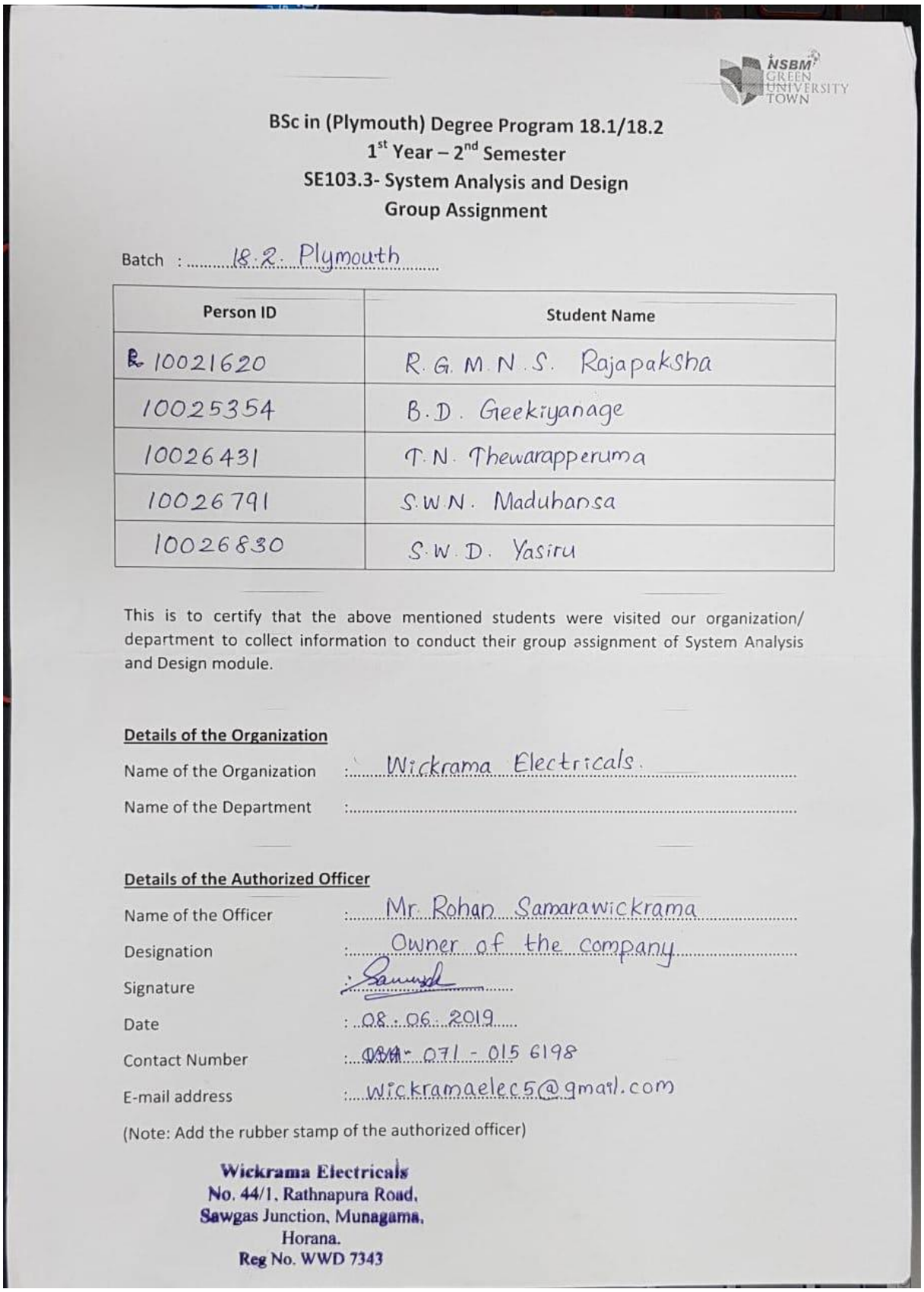
17. Class diagram



18. Detailed budget for the project

Income	Cost
Payment details for client 1) First Payment - 30% of the full payment (Advanced Payment) 100 000 * 30 / 100 30 000/= **30 000/=**	Software Purchasing & Internet Facilities 1) Visual Studio = 10 000/= 2) SQL Server = 10 000/= 3) Internet Facilities = 8000/= 4) Transport = 2000/= **30 000/=**
Payment details for client 2) Second Payment - 20% of the full payment 100 000 * 20 / 100 20 000/= **20 000/=**	Registration and documentary things 1) Software Registration = 13 000/= 2) Stationary things = 15 000/= 3) Transport = 2000/= **20 000/=**
Payment details for client 3) Final Payment - 50% of the full payment 100 000 * 50 / 100 50 000/= **50 000/=**	Software hosting and personal expenditure 1) Hosting Cost = 5000/= 2) Nine Thousand labor expenditure for each member 9000 * 5 45 000/= **50 000/=**
Total Income: 1) Advanced Payment = 30 000/= 2) Second Payment = 20 000/= 3) Final Payment = 50 000/= **100 000/=**	Total Cost 1) Software Purchasing & Internet Facilities = 30 000/= 2) Software Purchasing & Internet Facilities = 20 000/= 3) Software hosting and personal expenditure = 50 000/= **100 000/=**

19. Authorized document from client



NSBM GREEN UNIVERSITY TOWN

BSc in (Plymouth) Degree Program 18.1/18.2
1st Year – 2nd Semester
SE103.3- System Analysis and Design
Group Assignment

Batch : 18.2. Plymouth

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This is to certify that the above mentioned students were visited our organization/ department to collect information to conduct their group assignment of System Analysis and Design module.

Details of the Organization

Name of the Organization : Wickrama Electricals.

Name of the Department :

Details of the Authorized Officer

Name of the Officer : Mr. Rohan Samarawickrama

Designation : Owner of the company

Signature :

Date : 08.06.2019

Contact Number : 071 - 015 6198

E-mail address : wickramaelec5@gmail.com

(Note: Add the rubber stamp of the authorized officer)

Wickrama Electricals
No. 44/1, Rathnapura Road,
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Horana.
Reg No. WWD 7343

20. Work Load Matrix

NSBM GREEN UNIVERSITY TOWN

SE103.3 - System Analysis and Design
Work Load Matrix

Person ID	Task Completed by each member	Signature
10021620	Chapter 02 ; Fact finding methods chapter 01 ; information was given.	
10025354	Chapter 02 ; Detailed budget for the Project. Chapter 01 ; information was given.	
10026431	Chapter 01 ; Sope of study , Details of the existing system , Details of proposed system, Expected benifits of the purposed system, Resourse Requirements , Timeline , edited & attached the information given by other members to the final chapter 1 document Chapter 02 ; Functional & non functional requirements, edited & attached data given by other members to the chapter 2 final document.	
10026791	Chapter 01 ; client overview , visited the company , Drawback of the existing system , contacted the owner , Details of Purposed system . Chapter 02 ; Constraints & Risks involved.	
10026830	Chapter 01 ; client overview , visited the company , Drawback of the existing system, Contacted the owner , Details of purposed system chapter 02 ; Constraints & Risks involved.	

21. 3rd Chapter Contribution

Diagram	Maker
Context Diagram	T.N Thewarapperuma
Level 0 DFD	R.G.M.N.S Rajapaksha
Level 1 DFD	B.D Geekiyanage
Use case diagram	S.W.D Yasiru
Class diagram	S.W.N Maduhansa