

Automated Computer Shopping System (ACSS)

Assignment 1

ICT 1123 System Analysis Design and Usability

by

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Declaration

“We certify that this project does not incorporate without acknowledgement, Any material previously submitted for an assignment in any institution and to the best of my knowledge and belief, it does not contain any material previously published or written by another person or myself except where due reference is made in the text”

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1. Introduction

1.1. Introduction to the organization

Buykorea is a computer item and service providing company that is situated in Nugegoda, Sri Lanka. It provides all brand new and secondhand items and services like computer repairing, computer software diagnoses and computer assembly.

1.2. Current process of the organization

Currently this organization is running on a full manual system. Owners are willing to upgrade their system into more automated systems in the future.

1.3. Statement of the Problem

Because of the company's manual system, the customers only can access the services by coming to the store and requesting an order. This will consume the customer's time and money and the company's functionalities will be slower. The company's productivity is slower, and it can affect the company's wellbeing.

1.4. Aims and Objectives

Project Automated Computer Shopping System (ACSS) is built upon the idea to fully or partially automate the processes that are handled by the previously mentioned company. Our aim is to reduce the human entity or the live ware that is interacted with the company system.

1.5. Scope of the project

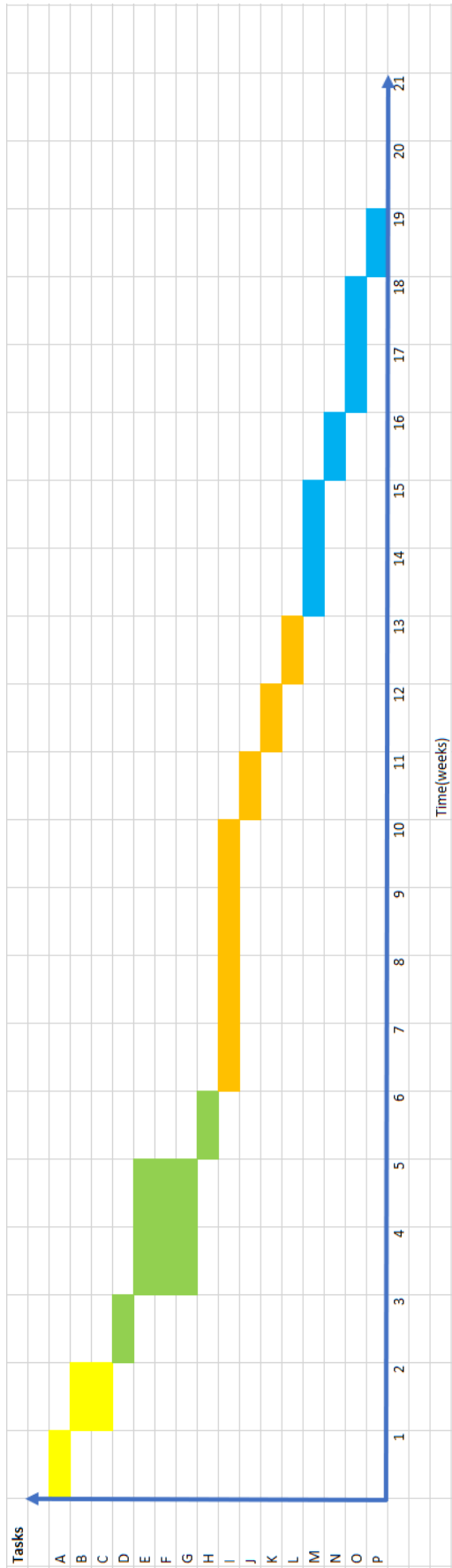
We are proposing a fully automated web-based system that users can interact without any reception involved. With this system users will be allowed to order items and services, order system assemblies and order computer repairs.

1.6. Gantt Chart

Description	Task	Must Follow	Time(weeks)
Define Project scope	A	None	1
Conduct User Research	B	A	1
Gathering Requirements	C	A	1
High Level Design	D	B, C	1
Design database	E	D	2
Design Software	F	D	2
Design User Interface	G	D	2
Finalice Design	H	E, F, G	1
Develop System Modules	I	H	4
Integrate System Modules	J	I	1
Preform Initial Testing	K	J	1
Complete Development	L	K	1
Perform System Testing	M	L	2
Document Found Issues	N	M	1
Correct Found Issues	O	N	2
Finalize System	P	O	1
Total Weeks			19

Figure 1: Gantt Chart Description

Figure 2: Gantt Chart



2. System Analysis & Design

2.1. Context diagram

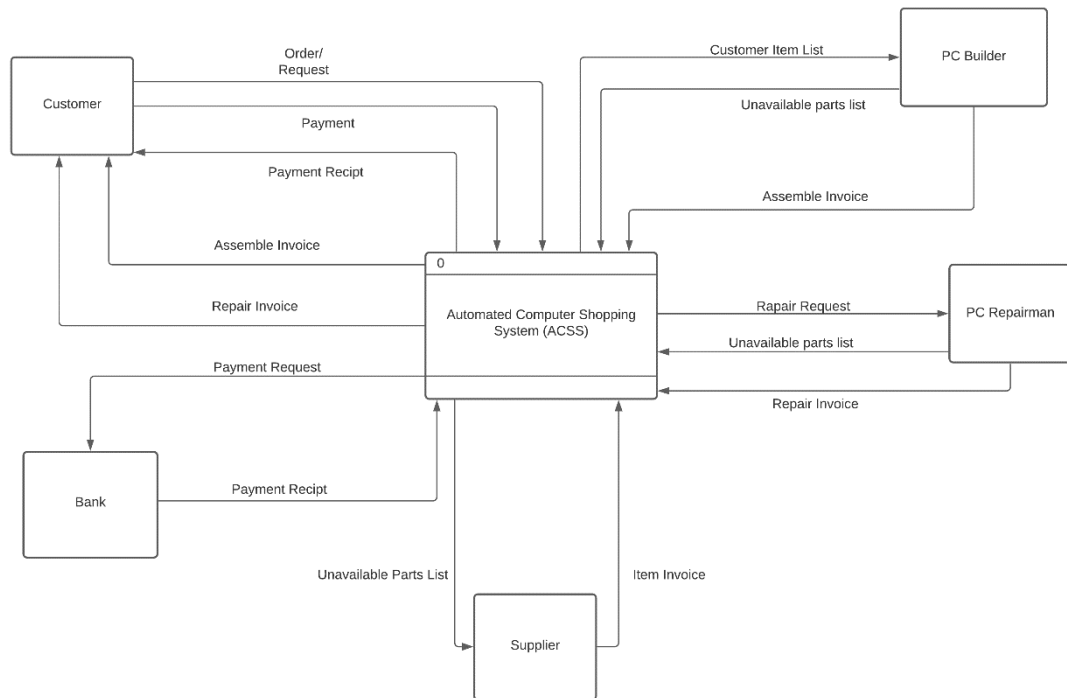


Figure 3: Context diagram

2.2. DFD Level 0

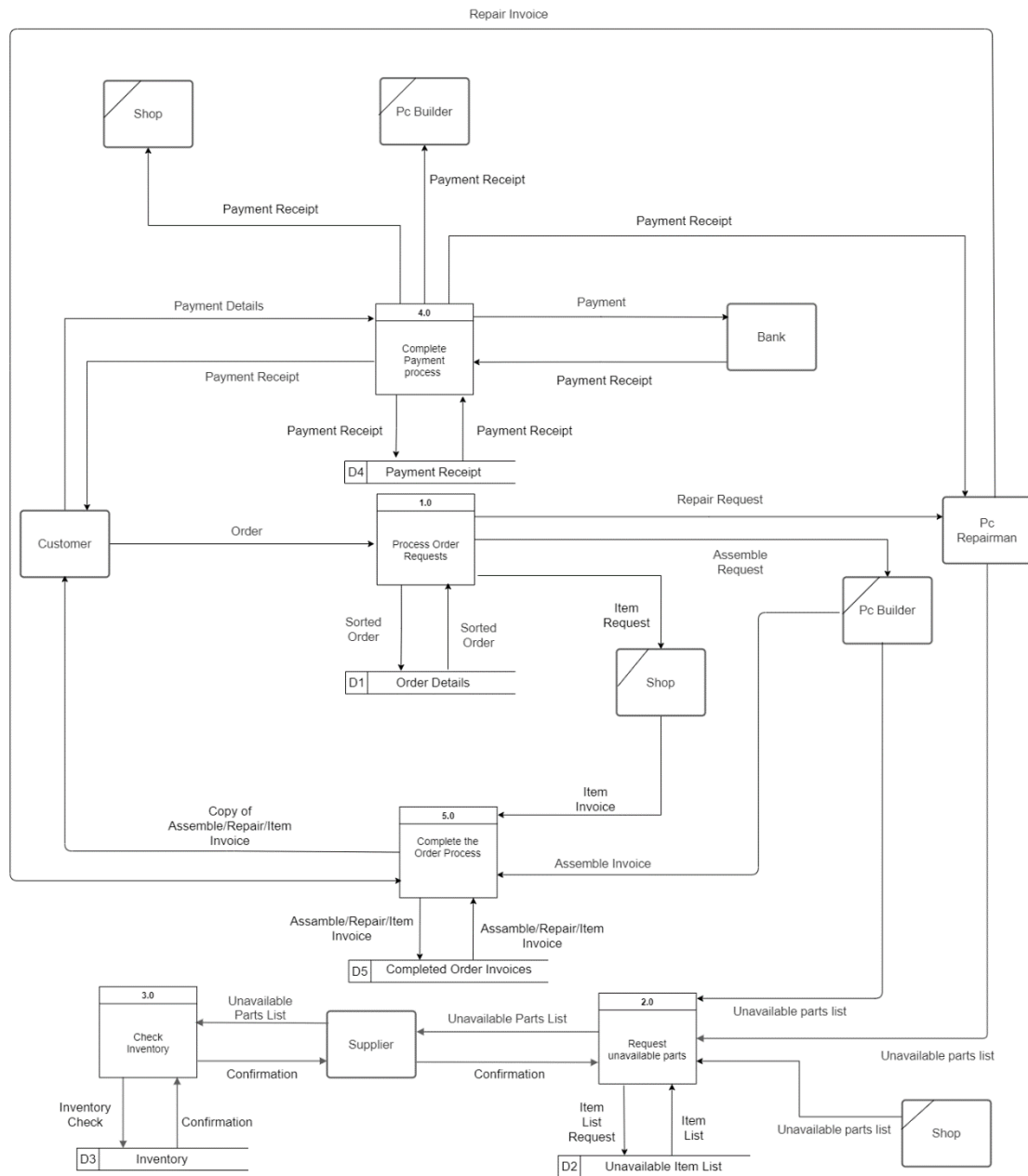


Figure 4: DFD Level 0

2.3. DFD Level 1 - Order Process

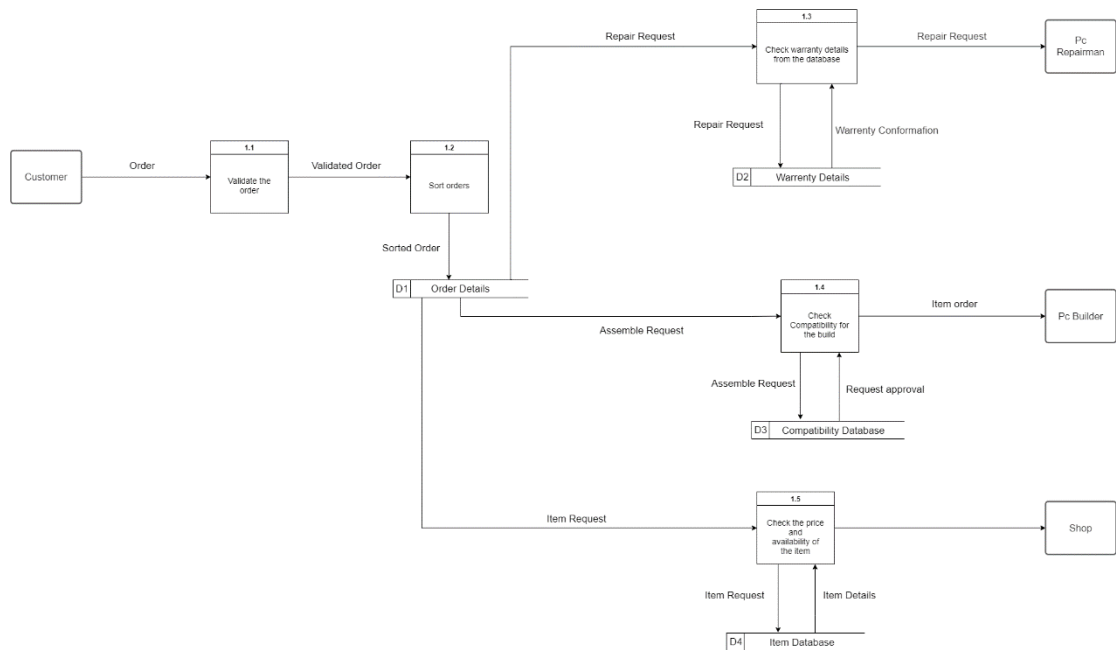


Figure 5: DFD Level 1 - order process

2.4. DFD Level 1 - Payment Process

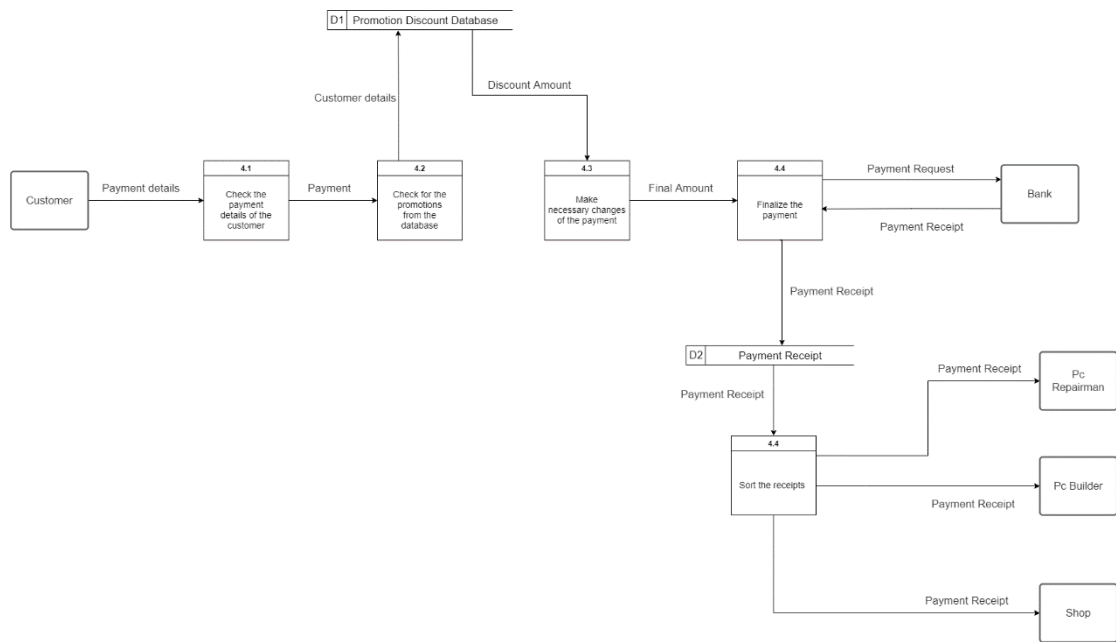


Figure 6: DFD Level 1 - Payment Process

2.5. ER diagram

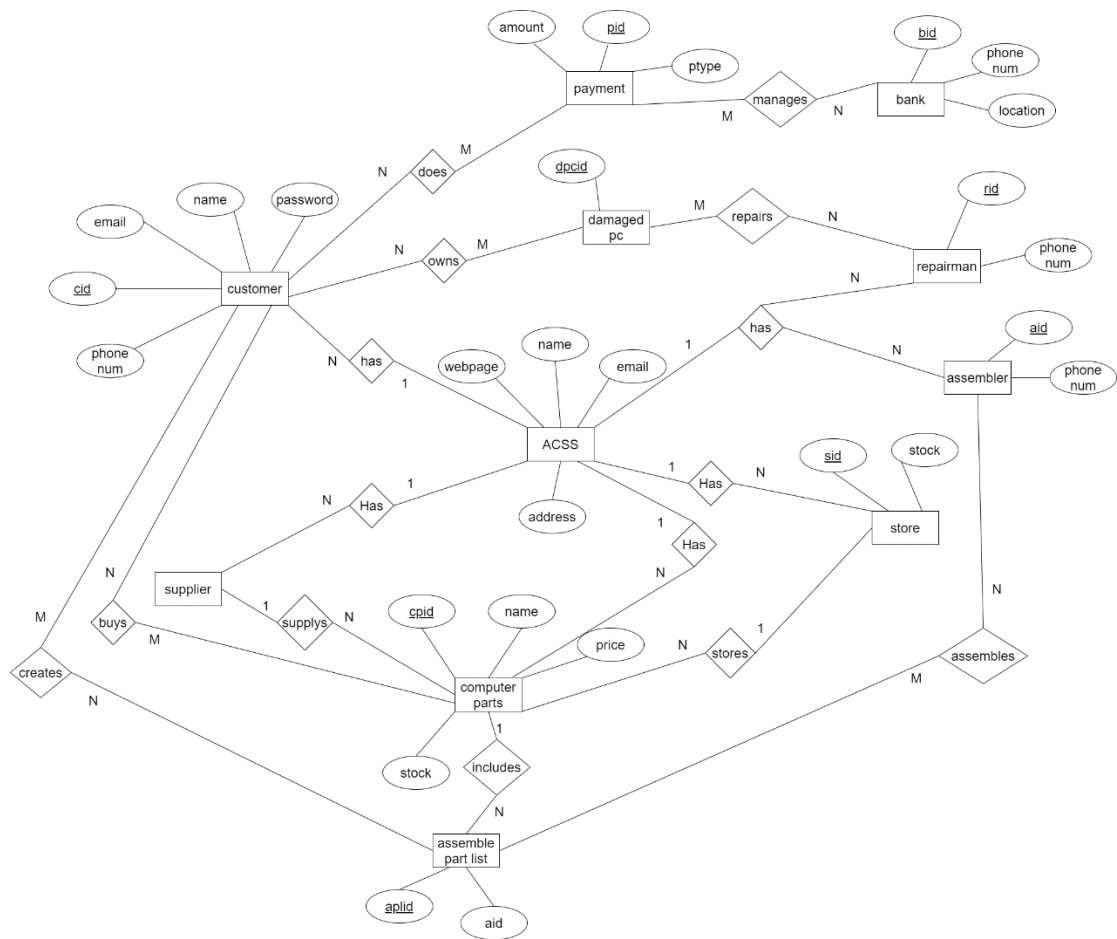


Figure 7: ER Diagram

2.6. Software Requirement Specification

Table 1:SRS: Functional

ID	Description
Application	
1	Shall be able to register users
2	Shall be able to authenticate users
3	Shall be able to display services
4	Shall be able to display product information
5	Shall be able to read the order
6	Shall be able to read items inventory
7	Shall be able to lookup if some items miss from order and report that
8	Shall be able to read discounts for the items
9	Shall be able to process the bill
10	Shall be able to process the payment
User	
11	Shall be able to navigate through services
12	Shall be able to login to system
13	Shall be able to place an order or service
Staff	
14	Shall be able to login
15	Shall be able to lookup orders
16	Shall be able to update inventory
17	Shall be able to check bill

3. Proposed System Design

3.1. Proposed System Interfaces

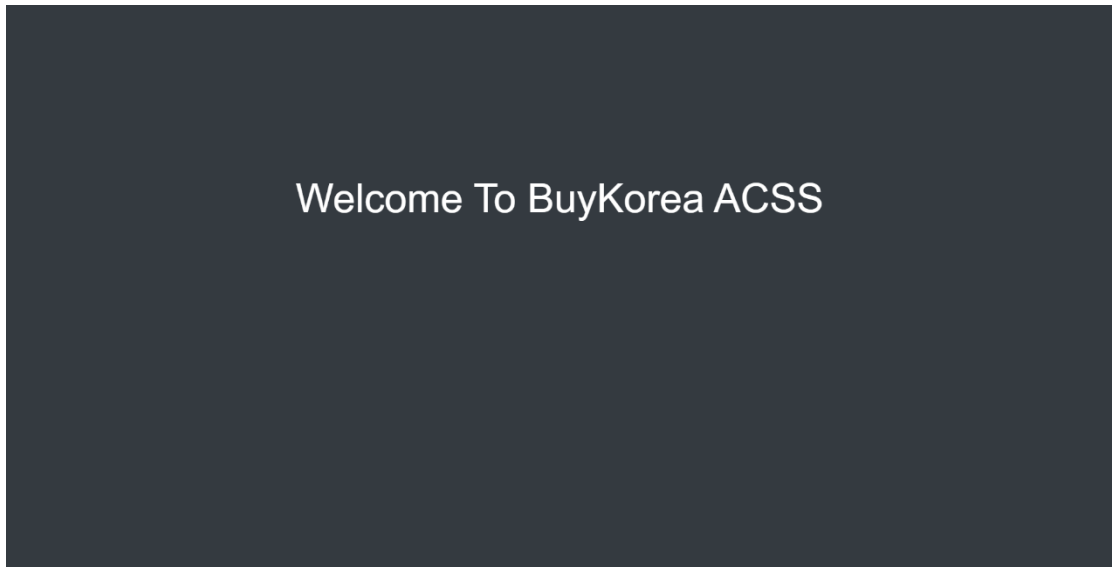


Figure 8: ACSS Welcome Screen

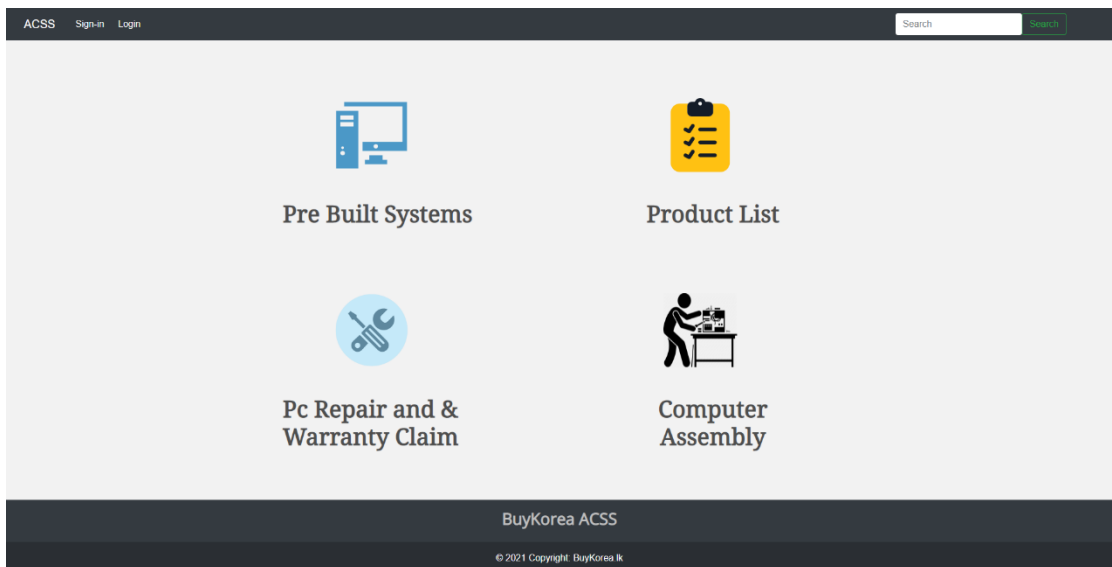


Figure 9: ACSS Home Page

ACSS

Home

Pre Built Systems

Product List

Pc Repair and & Warranty Claim

Computer Assembly

Search

Search

Sign-in

Sign In

User Name

Email address

Password

Re-enter Password

SIGN IN

BuyKorea ACSS

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Figure 10: ACSS Sign-in Page

ACSS

Home

Pre Built Systems

Product List

Pc Repair and & Warranty Claim

Computer Assembly

Search

Search

Log in

Log In

Email address

Password

LOG IN

BuyKorea ACSS

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Figure 11: ACSS Login Page

ACSS
Home
Product List
Pc Repair and & Warranty Claim
Computer Assembly

Pre-Build Systems

Silver Most Economical Rs.15,000	Gold Most Preferred Rs.30,000	Platinum The Most Rs.100,000
E8400 PRO	I7 4770 PRO	R3 3200 PRO
DDR3 4GB 2x2	DDR3 4GB Single	B450 MSI MB
320GB HDD	500GB HDD	DDR4 8GB
DVD RW	DVD RW	1TB HDD
Brand New Case	Brand New Case	RX550 4GB VGA
<input type="button" value="BUY NOW"/>	<input type="button" value="BUY NOW"/>	<input type="button" value="BUY NOW"/>

BuyKorea ACSS

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Figure 12: ACSS Pre-Build Systems Page

ACSS
Home
Pre Built Systems
Pc Repair and & Warranty Claim
Computer Assembly

Product List









 <div> \$165 </div> <div> Category Product Many desktop publishing packages and web page editors now. </div> <div> <input type="button" value="Buy"/> </div>	 <div> \$190 </div> <div> Category Product Many desktop publishing packages and web page editors now. </div> <div> <input type="button" value="Buy"/> </div>	 <div> \$208 </div> <div> Category Product Many desktop publishing packages and web page editors now. </div> <div> <input type="button" value="Buy"/> </div>	 <div> \$29 </div> <div> Category Product Many desktop publishing packages and web page editors now. </div> <div> <input type="button" value="Buy"/> </div>
 <div> \$65 </div>	 <div> \$80 </div>	 <div> \$140 </div>	 <div> \$150 </div>

Figure 13: ACSS Product List Page



Figure 14: ACSS Repair and Warranty Choose Page

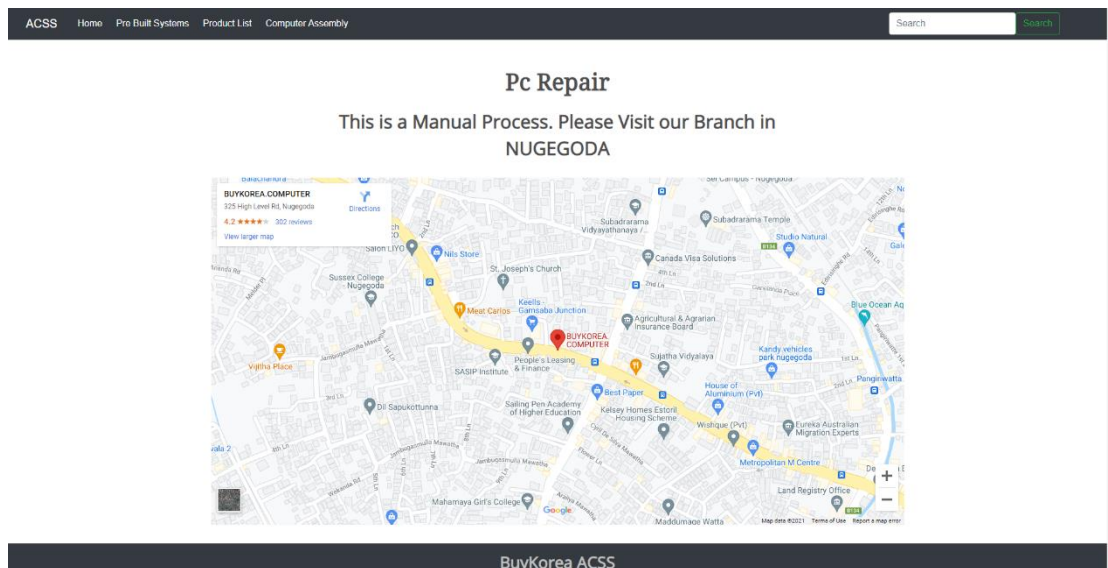


Figure 15: ACSS PC Repair Page

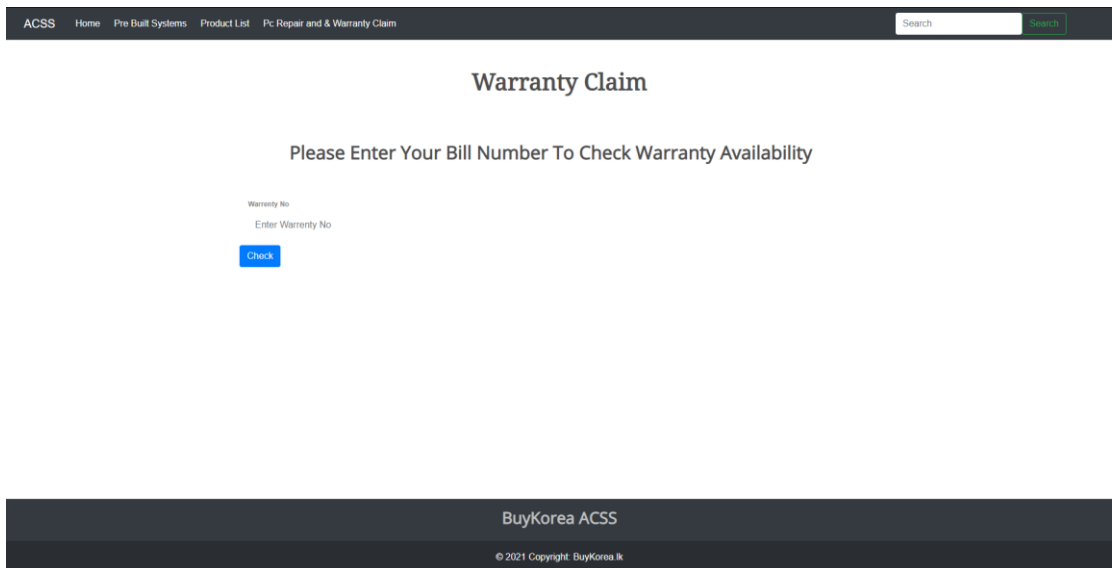


Figure 16: ACSS Warranty Claim Page

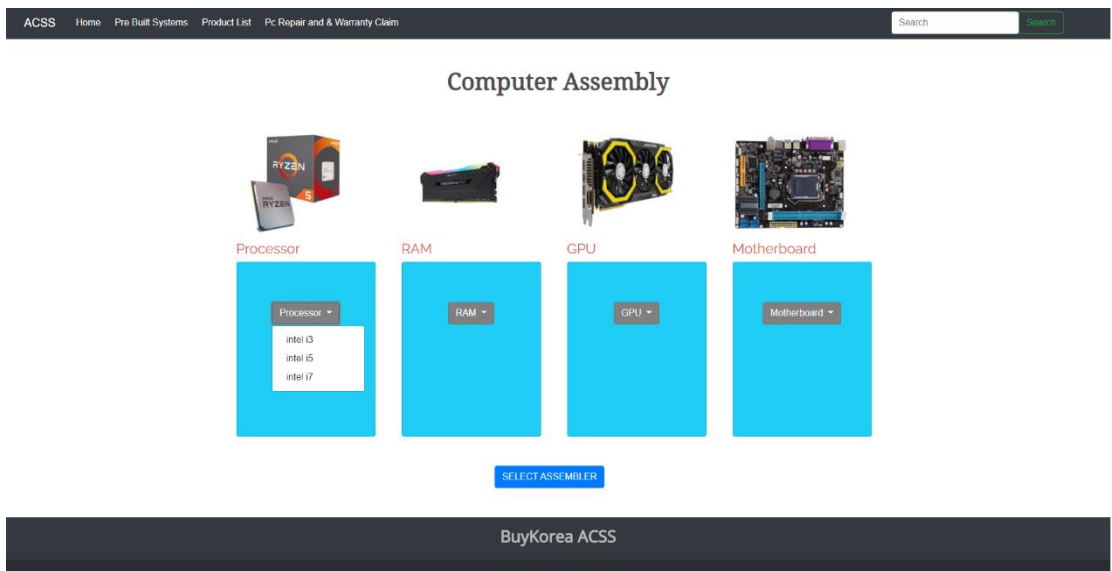


Figure 17: ACSS Computer Assembly Page

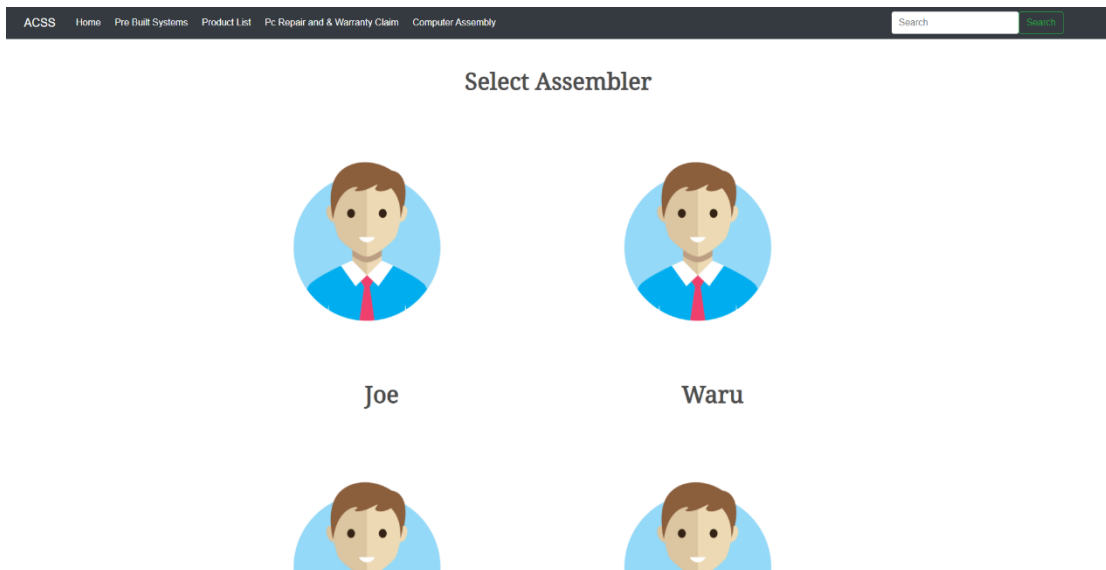


Figure 18: ACSS Select Assembler Page

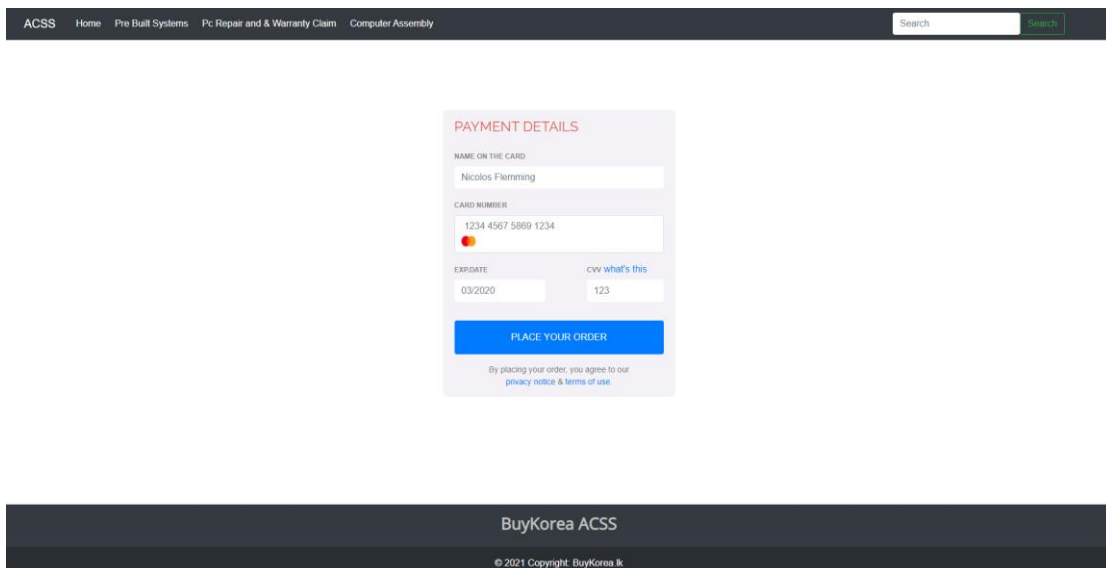


Figure 19: ACSS Payment Portal

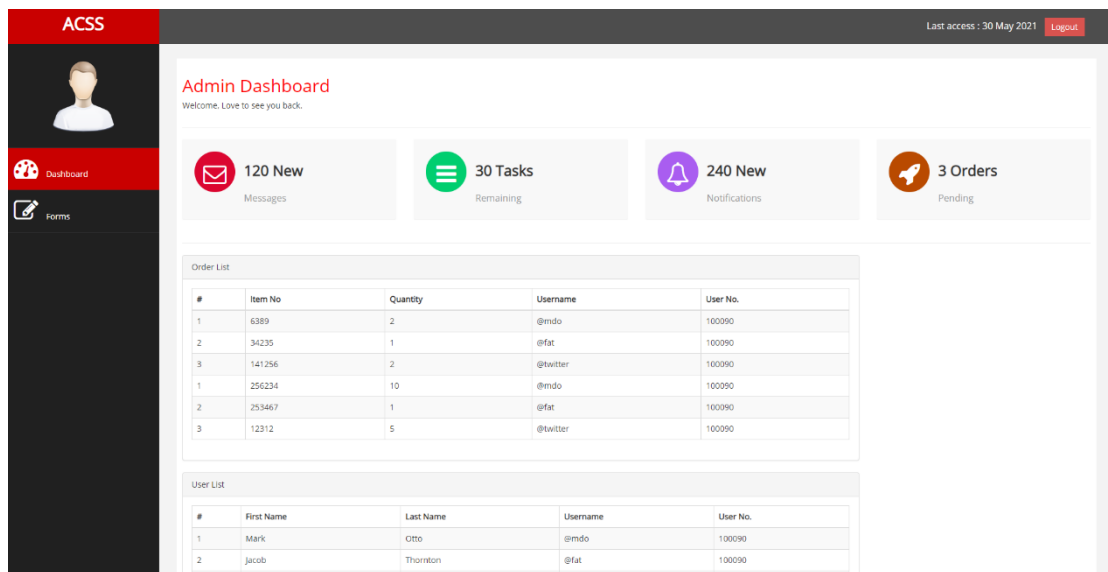


Figure 20: Admin Dashboard

3.2. Report Designs

Main Page: The main page of the site has the title of our system as BuyKorea ACSS (Automated Computer Shopping System). And it presents four choices as Pre-Built Systems, Price list, Pc Repair and Warranty claim & Computer Assembly. When a user selects Pre-Built Systems, the user will be forwarded to a collection of pre-built systems. In the Price List option, users will be forwarded to an updated price list of our newest and greatest computer items. When users select the Pc Repair & Warranty claim user will be forwarded to the page to claim their warranties and get their pc repair bill. In the computer assembly option users will get a list of parts to select as they prefer for their build.

Login Page: In this page users will get the option to login to save their builds and invoices. If they do not have an account, they will need to create an account. That Option also provided here.

Price List Page: As described in the previous page, This Page will include all the items and some details about them. And item price. If users want, they can click on the item and get more details about a specific item.

Pre-Built Systems Page: In this page users will be prompted with specific pre-built systems to select as they prefer. Basically, our pre-built systems will be in three types.

Computer Assembly Page: In this page the user will be served with the ability to choose the parts for his system as they prefer. Main computer parts like Processor, Ram, GPU and Motherboard will be prompted to choose. Other parts will be automatically chosen and sent to the assembler that you choose.

Select Assembler Page: In this page users will be prompted to choose the assembler that they want to assemble their pc build. As soon as the

user selects the assembler, he will receive a receipt with a barcode and estimated assembly time. Either user can wait in the waiting area and he can do the whole process at another place and pick up his build as soon as it is completed.

Pc Repair and Warranty Claim: This is a manual process. In this step the user must go to the shop premises and verify his warranty card if it remains.

Conclusion

As the conclusion, A system like this for a physical business is quite useful and it dramatically increases the efficacy and productivity. In a pandemic situation like COVID, this type of online system can not only save many lives and give more services to business's customer base.

ACSS will provide more secure and attractive way of doing business. Any customer who is interested in buying items from the system can create an account from the system simply by sign-in. They can securely browse around the products or assemble a pc as they want in matter of minutes. Most specially not like physical stores, ACSS can operate 24/7 and provide customers what they want seamlessly.

As the users buy, assemble and swipe through the systems web interface, it will keep a log about the users with their login details. When they login to the system next time they will be served with products and services according to their choices.

Searching for items will be easier because ACSS web interface includes a database wide search engine. Users will be able to select whatever they want even without talking or physically meeting staff.

Staff will be able to update prices of products and services within few clicks. Adding new items and products also available to staff. In most online systems adding and updating products only can be done by a staff member that is skilled in databases. In ACSS we have make sure that every staff member with proper access will be able to update and add data without any issue.

System like ACSS will help the business to increase their exposure to other clients simply because it is online and anyone with an internet enabled device and visit the store within seconds. Even clients from abroad will be able to present their loved ones with computers by ordering online and using our currier service. Aside from increasing business's exposure, ACSS will also serve as their competitive marketing strategy to battle with other businesses.

References

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http://teclms.ruh.ac.lk/pluginfile.php/18543/mod_resource/content/1/Assignment%20 Report%20Guide.pdf

http://teclms.ruh.ac.lk/pluginfile.php/18163/mod_resource/content/0/Lesson_04%20p art%20I.pdf

Appendices

ACSS – Automated Computer Shopping System

SRS – Software requirements specification

DFD – Data Flow Diagram

GPU – Graphic Processing Unit

ER – Entity Relationship

