

PHONE SELLING

WEBPAGE SYSTEM

Faculty: Ho Hoan Kiem

> Batch:

Team Member:

- Hua Vinh Khang
- Le Dat Anh Khoi
- Nguyen Duc Trung
- Dinh Nhu Hieu

Ho Chi Minh City, Nov 11 2020

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REVIEW 1

Problem Definition

1. The Object Of The Project

1.1 Background

Nowadays, people find that buying products online are more convenient which leads to more and more people surf the web for buying products. We present the phone manage website to sell electronic devices to customers and manage them under the control of administrator.

1.2 Business Opportunity

Many phone shop owners demand a system that could help customers to order products online. Such a system can help customers to save their time and effort. The future ability for customers who want to buy electronic devices use on-web purchasing service and provide the possibility of convenience when the system is promised to cooperate with many online banking companies.

1.3 Business Objectives

BO-01: Reduce 15% server operating cost

BO-02: The app will be used by 4% phone shops and 43000 customers in the city after 3 months initial release.

BO-03: The app will be used by 18% phone shops and 102,000 customers in the city after 6 months initial release.

BO-04: The app will be used by 25% phone shops and 176,000 customers in the city after 1-year initial release.

1.4 Vision Statement

For customers who want to buy electronic devices without going directly to phone shop before this app was deployed, the Phone Selling Webpage is an Internet-based and webenabled application that will help customers to purchase phone shop's products online.

For shop managers who want to easily manage products and track orders in history, using the PSWS is one of the most convenient ways to implement the former demands. Unlike the paper way, with PSWS the system is real-time based which means the information is always up-to-date and the data is transparent to the managers.

1.5 Business Risks

RI-01: Too few phone shops and customers might use this system, affect the revenue and the investment of the system (Probability = 0.35; Impact = 9)

RI-02: The latency of the services provided to customers (Probability = 0.2; Impact = 4)

RI-03: The competition with other system providers (Probability = 0.3; Impact = 3)

Customer Request Specification

2. Functional Requirements

Following is a list of functionalities of the system. More functionalities that you find appropriate can be added to this list.

- Customer must have a valid User Id and password to login to the system
- The default role is "Guest". Guests can view the list of items, search items and view the detail of one of the items.
- If user want to buy products, he/she has to login as a "Customer".
- When User want to buy products, if this is the first product to add to cart, customer has to input the address that will be the destination to ship the products. If the customer currently has a cart in session, he/she doesn't have to input address again.
- Customer can manage his/her cart as long as the session currently exist (add more products, update the quantity, remove products and confirm the cart to make it ready to ship).
- Customer can see orders that have been confirmed to track his/her orders.
- If User login as "Admin" he/she will have the permission to add phones/ update phones and track all orders confirmed before.
- When updating phones, "Admin" can update the "Status" to "Available" or
 "Unavailable" to turn the View of the desire phones to "Customer" and "Guest" off.
 We don't have a delete function to make sure the phones sold still exist in the
 database.

3. Hardware/Software Requirements

By adding new technologies such as ASP.NET 3.5, AJAX, Web Service and 3-tier architecture, the web site becomes more interactive with users, security and easily updated.

1. System Requirement

- For Users
 - o Hardware
 - CPU: Pentium IV 2.0 GHz or higher
 - RAM: 512 MB or higher
 - o Software
 - OS: Windows 7/8/10/XP Professional...
 - Browser: Internet Explorer 8.0 or higher, Google Chrome, Firefox, Edge, ...

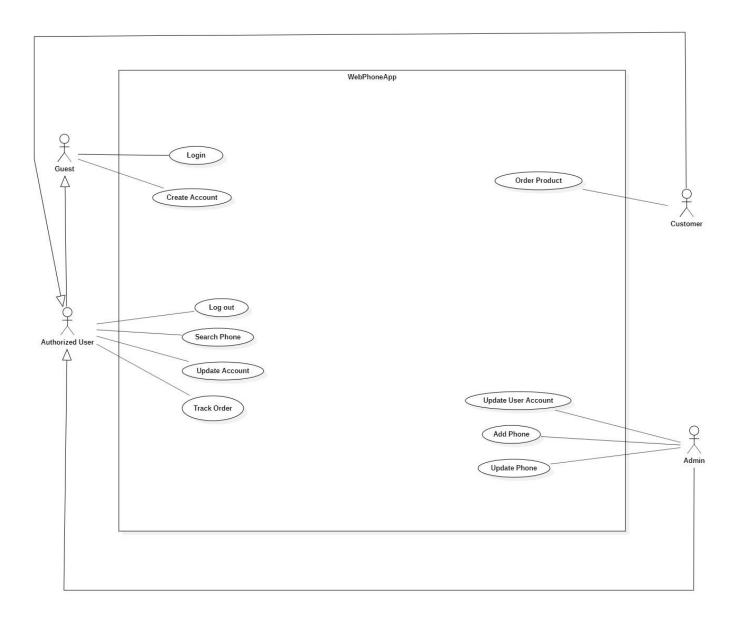
• For Software Developers

- Hardware
 - CPU: Pentium IV 2.0 GHz or higher
 - RAM: 512 MB or higher
- Software
 - OS: Windows 10
 - Environment: Microsoft .NET Framework 4.7.2.
 - Database Management System: Microsoft SQL Server 2014
 - IDE: Microsoft Visual Studio 2019
 - Web Server: Internet Information Services (IIS) JSP

Date: Nov 11, 2020	Prepared by Project Group 3 Team Leader: Hua Vinh Khang	Approved by Mr. Ho Hoan Kiem
Signature		

REVIEW 2

USE CASE DIAGRAM



USE CASE DESCRIPTION

1. Actor:

- **Customers:** A customer is the one who will order products from the PSWS. Customers are expected to use the PSWS an average of 4 times per month each. An estimated 100 percent of orders will be placed from home or by web application
- **Administrators:** The Administrator is a shop employee who will manage all the products for the phone shop system

2. <u>Use case details:</u>

UC ID and Name:	UC-1 Update Phone Use case		
Created By:	HieuDN	Date Created:	7-11-2020
Primary Actor:	Admin	Secondary	PSWS
		Actors:	
Trigger:	User clicks "Edit" button	n	
Description:	User can update phones	of the system for cu	stomer to read.
Preconditions:	PRE-1: User is logged in	nto the PSWS as an	Admin
	PRE-2: User is in the detail page of the desire phone to update		
Postconditions:	POST-1: The Phones updated will be stored the database with new		
	attributes		
Normal Flow:	1. System displays a form to update phone for manager		
	2. Admin inputs all fields		
	3. Admin clicks "Updat	e" button	
	4. System updates the phones that contains all the parameters admin		
	provided before		
	5. System redirects user to "Detail" page		
Alternative Flows:	1.1 Admin inputs wrong format of the phone		
	1. System shows the cor	respond message of	the incorrect fields in step 2 of

	normal flow
	2. Return to step 1 of normal flow
Exceptions:	1.0 E1 Server crash or session time-out
	1. The website redirect to the error page with "localhost refused to
	connect" message
Priority:	Low
Frequency of Use:	Rarely use, only if admin wants to update phones to set the price, the
	status,
Business Rules:	BR-3
Other Information:	N/A
Assumptions:	Assume that the database connection when updating has no exception

UC ID and Name:	UC-2 Add Product Use case		
Created By:	HieuDN	Date Created:	7-11-2020
Primary Actor:	Admin	Secondary	PSWS
		Actors:	
Trigger:	User clicks "Create Phon	ne" button	
Description:	User can add phones into	o the system for cus	tomer to buy
Preconditions:	PRE-1: User is logged in	nto the PSWS as an	Admin
Postconditions:	POST-1: The Phone pos	ted will be stored in	PSWS with the status
	"available"		
Normal Flow:	1. System displays a for	-	or admin
	2. Admin inputs all field		
	3. Admin clicks "Create		
		one that contains all	the parameters admin provided
	before		
	5. System redirects Use		_
Alternative Flows:	2.1 Admin inputs wrong format of the products		
	1. System shows the correspond message of the incorrect fields in step 2 of		
	normal flow		
	2. Return to step 1 of normal flow		
Eventions	2.0 E1 Server crash or		
Exceptions:			h "lagalhast rafusad to
	1. The website redirect t	o me error page wit	ii locamost refused to
Priority:	connect" message		
Frequency of Use:	Low		
Business Rules:	Sometimes, when admin wants to sell more phone		
Other Information:	BR-3		
Other information:	N/A		
Assumptions:	Assume that the databas	e connection when	adding has no exception
1 155 diliputolis.	112301110 that the dutabus	c connection when t	and its cheepiton

UC ID and Name:	UC-3 Search Products U	se case		
Created By:	HieuDN	Date Created:	7-11-2020	
Primary Actor:	All Users	Secondary	PSWS	
		Actors:		
Trigger:	User clicks "Search Pho	ne" button		
Description:	User can view the list ph	ones of the system	through search keywords	
Preconditions:	PRE-1: User is in the ma	ain page that shows	phone list	
Postconditions:	POST-1: The Phone list	is showed to user		
Normal Flow:	1. User inputs search fie	eld		
	2. User clicks "Search"	button		
	3. System shows the list	t of Phones that con	tains the keywords user	
	1	provided before		
Alternative Flows:	1	3.1 User inputs nothing on the search field		
	1. System redirect user to the main page			
	2. Return to step 1 of normal flow			
	20746			
Exceptions:	3.0 E1 Server crash or session time-out1. The website redirect to the error page with "localhost refused to			
		o the error page wit	h "localhost refused to	
D: '	connect" message			
Priority:				
Frequency of Use:				
	when customer want to search phone to buy			
Business Rules:				
Other Information:	N/A			
Assumptions:	Assume that the databas	e connection when	searching has no exception	

UC ID and Name:	UC-4 Update Information Use case			
Created By:	KhoiLDA Date Created: 7-11-2020			
Primary Actor:	Authorized User	Secondary	PSWS	
		Actors:		
Trigger:	User clicks "Update Acc	count" button		
Description:	User can update informa	User can update information of his/her account. Admin can update		
	information of any Users' account.			
Preconditions:	PRE-1: User is logged into the PSWS as an Authorized User			
	PRE-2: User is in the detail page of their account to update			
Postconditions:	POST-1: The Account Information updated will be stored in Database			
Normal Flow:	1. System displays a form to update Information for user			
	2. User inputs all fields			
	3. User clicks "Update Information" button			
	4. System updates the information that contains all the parameters user			

	provided before 5. System redirect to main page.
Alternative Flows:	 4.1 User inputs wrong format of the information 1. System shows the correspond message of the incorrect fields in step 2 of normal flow 2. Return to step 1 of normal flow
Exceptions:	4.0E1 Server crash or session time-out 1. The website redirect to the error page with "localhost refused to connect" message
Priority:	Low
Frequency of Use:	Usually use, only if Admin wants to update account to set the status, and when users want to change their information
Business Rules:	BR-2
Other Information:	N/A
Assumptions:	Assume that the database connection when updating has no exception

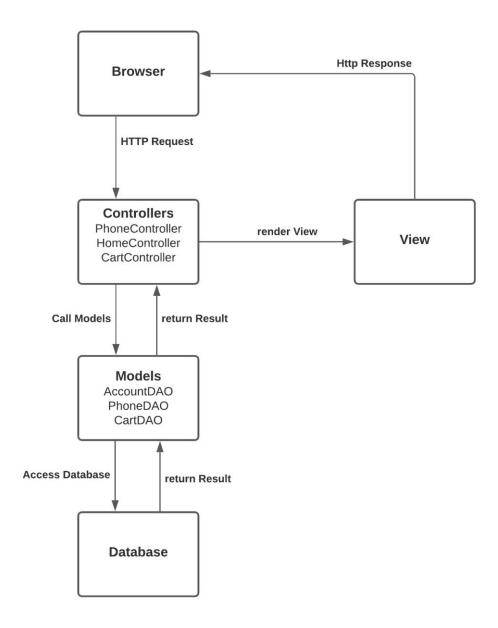
HCTD 1M	110 5 0 1 1		
UC ID and Name:	1		
Created By:	KhangHV	Date Created:	7-11-2020
Primary Actor:	Customer	Secondary	PSWS
		Actors:	
Trigger:	Customer clicks "Confir	m Payment" button	
Description:	Customer order the prod	ucts that they want	from PSWS
Preconditions:	PRE-1. Customer is logg	ged into PSWS	
	PRE-2. Customer has ad	ded products to car	t
	PRE-3. Customer is in the	ne "View Cart" page	e
Postconditions:	POST-1. Order is stored	in PSWS	
Normal Flow:	5.0. Order products		
	1. PSWS displays a sho	w cart that contains	all the products in cart, the
	total cost that customer must pay and a button to confirm their order		
	2. Customer confirm their order		
	3. PSWS stores order, sends order information to PSWS		
	4. System show notification for customer if the order has been submitted		
	successfully		
Alternative Flows:	None		
Exceptions:	5.0 E1 Product is order	has recently out o	of stock
	1. PSWS informs the pr	oduct that has out o	f stock
	5.1 E1 Server crash or	session time-out	
	1. The website redirect t	o the error page wit	h "localhost refused to
	connect" message		
Priority:	High		
Frequency of Use:	Approximately 200 user	s, average of one us	age per day.
Business Rules:	BR-1		
Other Information:	Customer shall be able to order at any time if they have selected the item		
Assumptions:	Assume that the databas	e connection when	updating has no exception

UC ID and Name:	UC-6 – Track Orders			
Created By:	TrungND	Date Created:	7-11-2020	
Primary Actor:	Authorized User	Secondary	PSWS	
		Actors:		
Trigger:	User clicks "Manage Or	der" button as an A	dmin or "View Order" as a	
	Customer.			
Description:	Customer can see orders	that he/she has con	firmed before and Admin can	
	track all orders have bee	n confirmed.		
Preconditions:	PRE-1. User is logged in	nto PSWS as "Custo	omer" or "Admin"	
	PRE-2. User is in the ma			
		Order List page, use	er can click an order to view	
	the order details.			
Postconditions:		POST-1. Order information and details is shown to User		
Normal Flow:	6.0. Order products			
	1. PSWS displays a list of orders that Customers have confirmed before to			
	Admin or displays a list of orders of a Customer to him/herself			
	2. Customer clicks "Check" button / Admin clicks an Order			
	3. PSWS shows the list of Order Details for User			
Alternative Flows:	None			
Exceptions:			1 (1 11	
	1. The website redirect t	o the error page wit	h "localhost refused to	
D 1 1	connect" message			
Priority:				
Frequency of Use:				
D ' D 1	wants to check his/her orders and Admin wants to track orders.			
Business Rules:	BR-4			
Other Information:	N/A			
Assumptions:	Assume that the database connection when tracking has no exception			

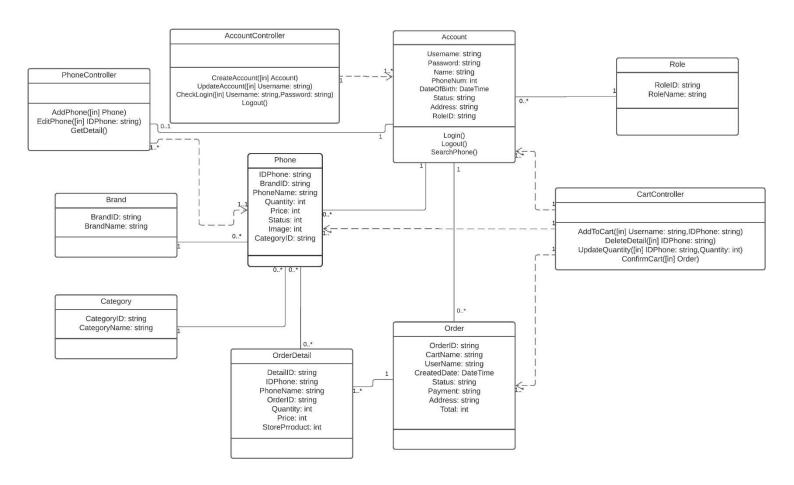
Business Rules:

ID	Rule Definition	Type of Rule	Static or Dynamic	Source
BR-1	Only Customers can use the order products function	Constraint	Static	Phone Shop Manager
BR-2	Only Admin can modify other users.	Constraint	Static	Phone Shop Manager
BR-3	Only Admin can create, modify or delete products.	Constraint	Static	Phone Shop Manager
BR-4	Only show Customer own Orders if a User is logged as a Customer.	Constraint	Static	Phone Shop's Policy

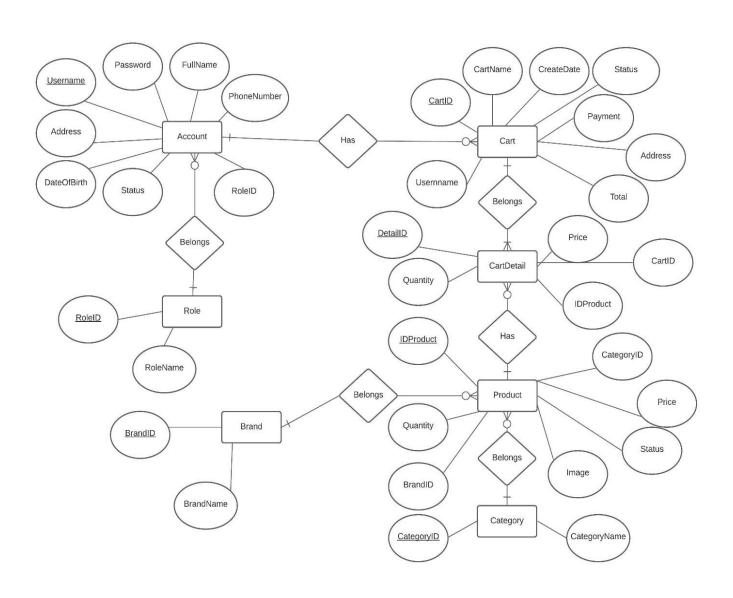
SYSTEM ARCHITECTURE

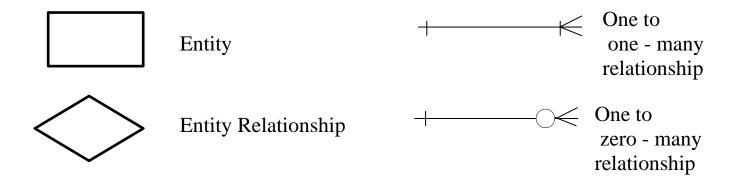


CLASS DIAGRAM



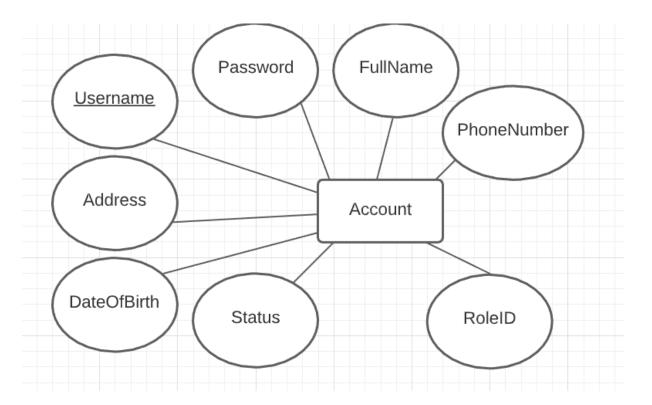
ENTITY RELATIONSHIP DIAGRAM (ERD)



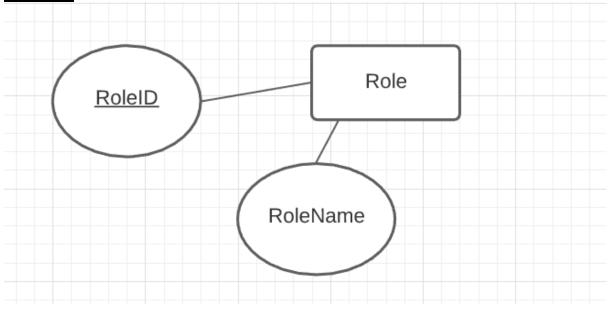


ENTITY DESCRIPTION

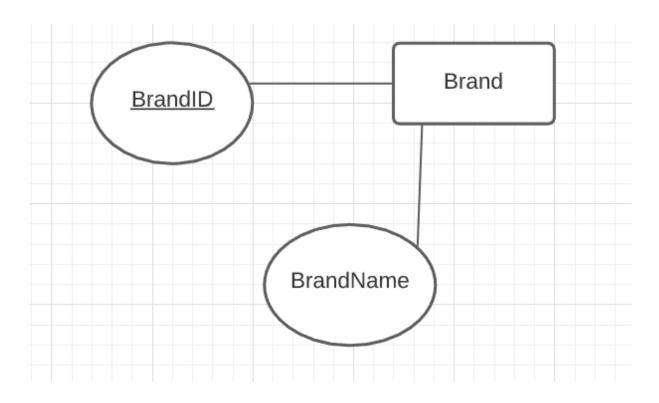
1.Account:



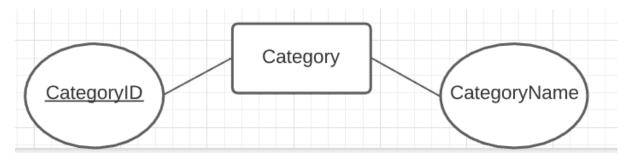
2. Role:



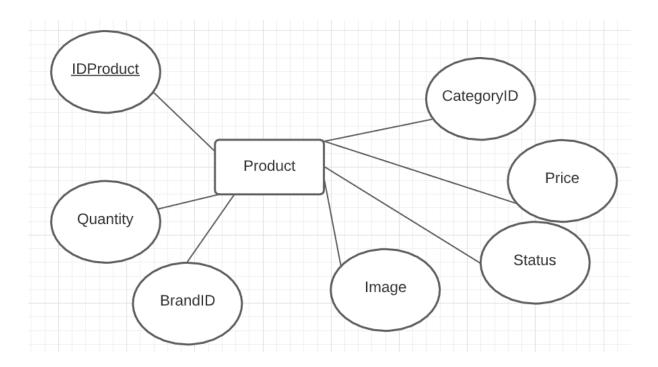
3. Brand :



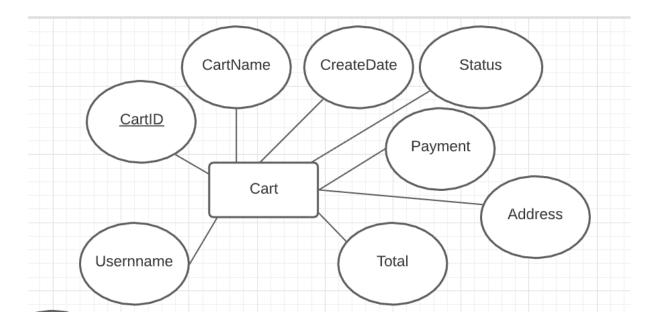
4. Category:



5. Product:



6. Cart:



7. Cart Detail:

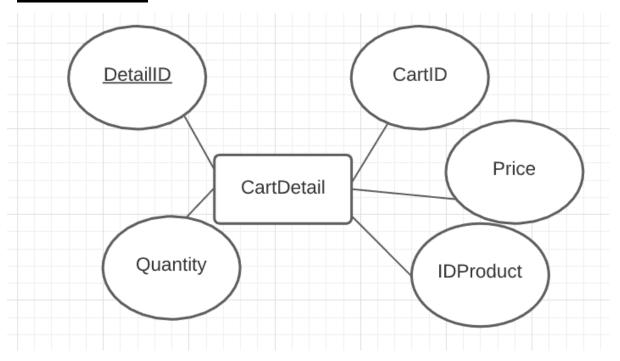


TABLE DESIGN

1.Account:

Data Element	Description	Composition or Data Type	Length	Values
	The Username of a customer, customer can use this Username goes with Password to access the System	String	20	
Password	The Password of a customer, he/she can use the Password goes with Username to access the System	String	20	
PhoneNumber	The phone number of a customer, customer can use this phone number to order products from the shop	String	11	A string of numbers that can be 10 to 11 characters
FullName	Full Name of a customer	Alphabetic	50	
Address	Address of a customer, can be the address to ship product	String	200	
DateOfBirth	Date of birth of a customer	Date, MM/DD/YYYY	10	
Status	Status of an account (Available/ Banned)	String	9	
RoleID	ID of a role of a User	String	5	A string of numbers

2. Role:

Data Element	Description	Composition or Data Type	Length	Values
⊷ RoleID	ID of a role of a User	String	5	A string of numbers
RoleName	Name of a role of a User	String	15	Customer/ Admin

3. **Brand** :

Data Element	Description	Composition or Data Type		Values
⊷ BrandID	The ID of a product brand	String	5	A numeric string
BrandName	The name of a product brand	String	50	

4. Category:

Data Element	Description	Composition or Data Type	Length	Values
► CategoryID	The ID of a product category	String	5	A numeric string
CategoryName	The name of a product category	String	50	

5. Product:

Data Element	Description	Composition or Data Type	Length	Values	
→ IDProduct	The ID of a product	String	5	A numeric string	
ProductName	The name of a product	String	50		
Quantity The quantity of a product in storage		Integer	7	A positive integer	
Price	The price of a product	Integer	10	A positive integer in VND	
Status	The status of a product	String	20	Available / Unavailable	
Image	The image of a product	String	500	A hyperlink of the image of a product	
CategoryID	The ID of a product String category		5	A numeric string	

6. Cart:

Data Element	Description	Composition or Data Type	Length	Values
► CartID	The ID of an order that from customer to order	String	5	A string of numbers

	products			
CartName	Name of an order	String	50	
CreatedDate	Date generated when customer creates the order	Date, MM/DD/YYYY	10	
Address	Address of a customer, can be the address to ship products	String	200	
Username	Username of customer who has the cart	String	20	
Status	Status of an order	String	20	Waiting /Pending /Cancelled/ Done
Payment	Payment of the order	String	10	COD (currently)
Total	Total price of all products	Integer	10	Positive Integer in VND

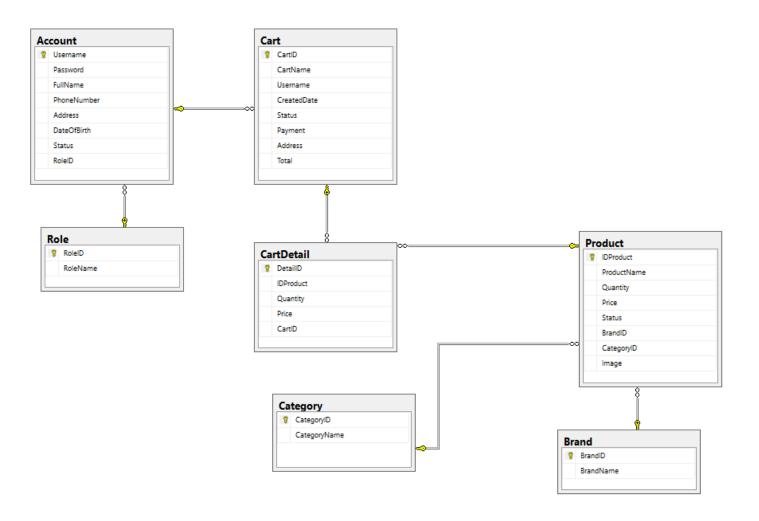
7. Cart Detail:

Data Element	Description	Composition or Data Type	Length	Values
► DetailID	The ID of an order detail that from a customer-order's list to order products	String	5	A string of numbers
CartID	The ID of an order that from customer to order products	String	5	A string of numbers
Price	The price of a product that is in an order detail (for storing data purpose)	Integer	10	A positive integer in VND
Quantity	The quantity of a product that is in the order detail	Integer	3	A positive integer
IDProduct	The ID of a product	String	5	A numeric string

<u>Note</u>

→ Primary key
✓ Unique constraint

TABLE RELATIONSHIP DIAGRAM

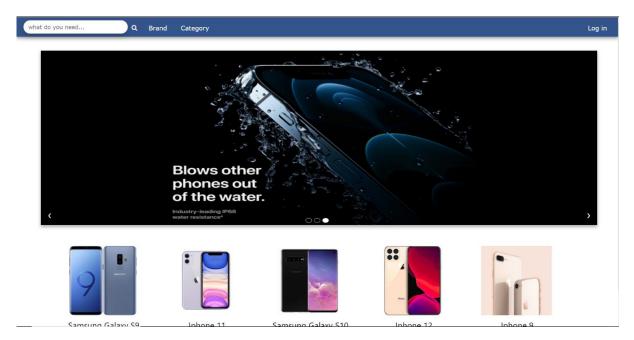


Date: Nov 11, 2020	Prepared by Project Group 3 Team Leader: Hua Vinh Khang	Approved by Mr. Ho Hoan Kiem
Signature		

REVIEW 3

INTERFACE DESIGN

1. Home Page (Guest)



Name	Type	Event	Validation	Description	Status
Search	TextBox		String	Input Product's	
				name	
Button Search	Button		Click	Search products	
				with text in Search	
				Text Box to list in	
				home page.	
Log in	Button		Click	Choose Login	
Brand	Dropdown		Click	Choose a brand of	
	Button			products.	
Category	Dropdown		Click	Choose a type of	
	Button			products.	

2. Product's Details (Guest)



Samsung Galaxy S9

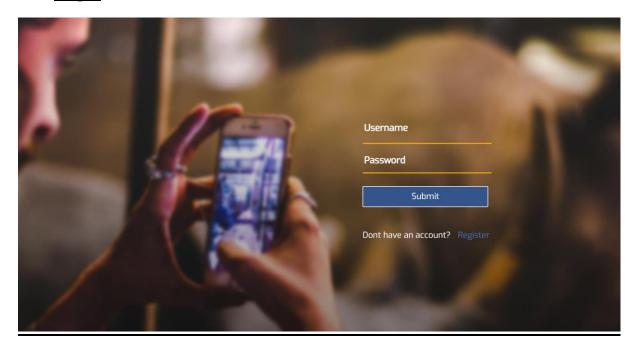
Status: Available

Price: 16000000 d

You have not logged in, please Login to buy this product

Name	Type	Event	Validation	Description	Status
Login	Button		Click	Login to buy this	
				product	

3. Login



Name	Type	Event	Validation	Description	Status
Username	TextBox		String, not	Input username	
			null		

Password	TextBox	String, not null	Input password
Submit	Button	Click	Choose Submit to enter with authorized user.
Register	Button	Click	Choose Register a new customer account.

4. Register

Be our member to get all concesssionaries now



Go Back Here

Name	Type	Event	Validation	Description	Status
Username	TextBox		String, not null	Input username	
Password	TextBox		String, not null	Input password	
Fullname	TextBox		String, not null	Input Fullname	
Phone Number	TextBox		String, not null	Input Phone Number	
Address	TextBox		String, not null	Input Address	
Date of Birth	Date		Click	Input Birthday	
Sign Up	Button		Click	Choose Sign up	
Go Back Here	Button		Click	Choose Go back here to go to Login Page	

5. Nav bar (Customer)



Name	Type	Event	Validation	Description	Status
Search	TextBox		String	Input Product's	
				name	
Button Search	Button		Click	Search products	
				with text in Search	
				Text Box to list in	
				home page.	
Log out	Button		Click	Choose Log out	
				account	
Brand	Dropdown		Click	Choose a brand of	
	Button			products.	
Category	Dropdown		Click	Choose a type of	
	Button			products.	
Your Cart	Button		Click	Choose "Your	
				cart"	
Your Orders	Button		Click	Choose "Your	
				Orders"	

6. Product's Details



Name	Type	Event	Validation	Description	Status
Address	TextBox		String, not null	Input Address	

Add this	Button	Click	Add this product is	
"product" to			choosing into cart	
cart				

7. View Cart

View Your Cart

1	16000000 ₫	1 Change	98	Delete
1	20000000 ₫	1 Change	93	Delete
	1			

Go Back Here

Confirm information and Buy

Name	Type	Event	Validation	Description	Status
Quantity	Number		int, not null	Input number to update quantity of product.	
Change	Button		Click	Change quantity of product.	
Delete	Button		Click	Delete this product from cart.	
Confirm information and Buy	Button		Click	Confirm this cart and add order to database.	
Go Back Here	Button		Click	Choose Go back here to	

8. View Order

Your Order Status and Details

Cart Id	Cart Name	Created Date	Address	Details
10	Cart of Tester	11/12/2020 12:00:00 AM	456 Test 2 home	Check
9	Cart of Tester	11/12/2020 12:00:00 AM	123 Test Home	Check

Name	Type	Event	Validation	Description	Status
Check	Button		Click	Check Details of this	
				order.	

9. Nav Bar (Admin)



Name	Туре	Event	Validation	Description	Statu s
Search	TextBox		String	Input Product's name	
Button Search	Button		Click	Search products with text in Search Text Box to list in home page.	
Log out	Button		Click	Choose Log out account	
Brand	Dropdown Button		Click	Choose a brand of products.	
Category	Dropdown Button		Click	Choose a type of products.	
Manage Order	Button		Click	Choose "Manage Order"	
Create Phone	Button		Click	Choose "Create Phone"	
Manage Account	Button		Click	Choose "Manage Account"	

10. Product's Details (Admin)



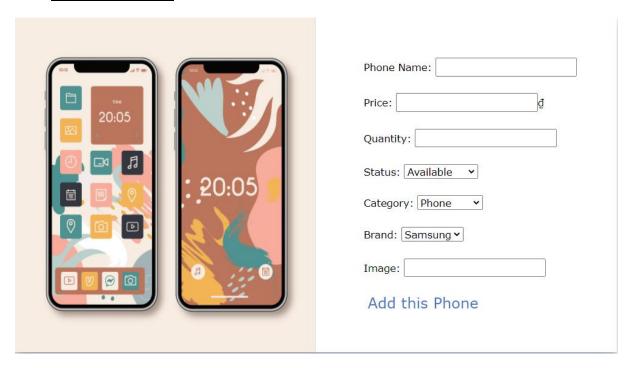
Name	Type	Event	Validation	Description	Status
Update this	Button		Click	Choose "Update this	
product				product"	

11. Update Product



Name	Type	Event	Validation	Description	Status
Phone Name	TextBox		String, not null	Input Product's name	
Price	Number		Int, not null	Input Product's Price	
Quantity	Number		Int, not null	Input Product's Quantity	
Status	Dropdown Button		Click	Choose a Status of products.	
Category	Dropdown Button		Click	Choose a Type of products.	
Brand	Dropdown Button		Click	Choose a Brand of products.	
Image	TextBox		String, not null	Input Product's Image Link	
Update Phone	Button		Click	Choose "Update Phone"	
Go Back	Button		Click	Choose "Go back"	

12. Create Product



Name	Type	Event	Validation	Description	Status
Phone Name	TextBox		String, not null	Input Product's name	
Price	Number		Int, not null	Input Product's Price	

Quantity	Number	Int, not null	Input Product's Quantity	
Status	Dropdown Button	Click	Choose a Status of products.	
Category	Dropdown Button	Click	Choose a Type of products.	
Brand	Dropdown Button	Click	Choose a Brand of products.	
Image	TextBox	String, not null	Input Product's Image Link	
Add this Phone	Button	Click	Choose "Add this Phone"	

13. Manage Account

Manage Account

Account Name	Address	Contact	Date of Birth	Customizing
ADMIN	Tp.Hồ Chí Minh	1234567890	25/04/2000	Update
Bùi Vĩnh Khôi	Quận 8	0312546212	05/11/2000	Update
Hứa Vĩnh Khang	QUận 2	0961101399	03/06/2000	Update
Tester	123 Test Home	01147852369	11/11/2000	Update
Nguyễn Đức Trung	Huyện Hóc Môn	0915723136	25/04/2000	Update

Name	Type	Event	Validation	Description	Status
Update	Button		Click	Choose "Update this	
				account"	

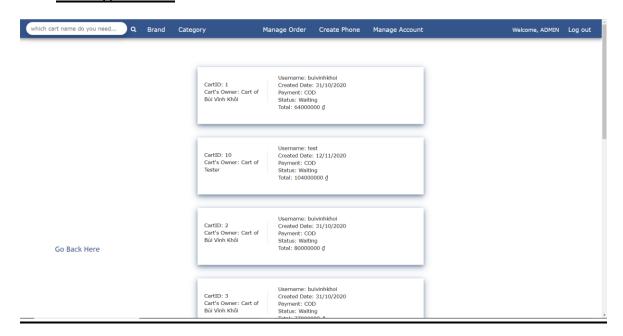
14. Account's Details

designed by treepik

User Name: buivinhkhoi
Password:
Confirm:
Full Name: Bùi Vĩnh Khôi
Phone Number: 0312546212
Address: Quận 8
Date Of Birth: 11/05/2000
Update this Account

Name	Type	Event	Validation	Description	Status
Username	TextBox		String, not null	Input username	
Password	TextBox		String, not null Input password		
Fullname	TextBox		String, not null	Input Fullname	
Phone Number	TextBox		String, not null	Input Phone Number	
Address	TextBox		String, not null	Input Address	
Date of Birth	Date		Click	Input Birthday	
Update this Account	Button		Click	Choose "Update this Account"	

15. Manage Order



Name	Type	Event	Validation	Description	Status
Order Detail	Button		Click	Choose an order to	
				manage order details in	
				this order.	
Go Back Here	Button		Click	Choose "Go Back Here"	
				to go to Home page	
Search	Textbox		String	Input Cart's name	
Button Search	Button		Click	Search Cart with text in	
				Search Textbox in the	
				Order Manage Page of	
				Admin	

TASK SHEET

	Project Title Phone Selling Webpage System		Date of Preparation		Activity Plan Prepared by Nguyen Duc Trung	
No		Task Title	Planned Start Date	Planned Completed Date	Team Mate Names	Status

1	Create Product				Done
2	Update Product				Done
				Dinh Nhu	
3	Disable Product			Hieu	Done
4	Search Product			Tilea	Done
5	User interface				Done
6	Retrieve Product List			Hua Vinh	Done
7	Add Cart Detail			Khang	Done
8	Update Cart Detail				Done
9	Remove Cart Detail				Done
10	See Cart Detail	Oct 19,	Nov 10, 2020		Done
11	Login from Customers	2020	1,0,10,2020		Done
11	and Admin				
12	Find Product by Category			Nguyen Duc	Done
13	Find Product by Name			Trung	Done
14	Find Product by Brand				Done
15	Search cart name				Done
16	Track Order				Done
17	Validate with JS				Done
18	Register Account			Le Dat Anh Khoi	Done
19	Update Account				Done

Date: Nov 11, 2020	Prepared by Project Group 3 Team Leader: Hua Vinh Khang	Approved by Mr. Ho Hoan Kiem
Signature		