Polythecnic University of Puerto Rico

Hato Rey, Puerto Rico

Department of Electrical & Computer Engineering

And Computer Sciences

VLL

Internet Services

SDD Document

CECS-4204 Software Engineering

Section 22 T-R 6:30-8:30

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Revision History

Date	Version	Description	Author
09/30/2010	0.1	Draft	Emmanuel López
10/03/2010	0.2	Draft	Harry Vega
10/07/2010	0.3	Section 3-4	Emmanuel López
10/10/2010	0.4	Section 5-6	Harry Vega
10/12/2010	0.5	Updated SDD	José López
10/14/2010	0.6	Section 1-2	José López
10/15/2010	1.0	Final Draft	José López
10/17/2010	1.1	Updated Section 3-4	Emmanuel López
10/21/2010	1.2	Updated Section 3-4	Emmanuel López
10/22/2010	1.3	Revised Section 3-4	Harry Vega
10/24/2010	1.4	Revised Section 5-6	José López
10/25/2010	1.5	Updated Section 5-6	Harry Vega
10/26/2010	1.6	Updated Section 5-6	José López
10/27/2010	2.0	Final SDD	Emmanuel López

Table of Contents

1. Introduction

1.1. Purpose

The Software Design Description (SDD) contains all specifications obtained in the Software Requirement Specification (SRS), and the programming requirements for the software to be develop. This document contains all the necessary information needed by a developer to adequately implement the software product described by the design requirements listed in this document. It also serves as a structured guide of all functions and how would be programmed.

This document is intended for software developers. Containing technical details it translates the customer's requirements to detail programming specifications for a full guided direction of what is specified by the customer.

1.2. Scope

With all the costumer specification known it is to create a document that will guide the developer throughout every step of the implementation of the website. This document provides the webmaster a full guided into the development of "VESA CLARO". The product consists of a website with all the necessary information about VESA Cellular & Internet Services and all the services they offer. The main functions of the product are:

- Provide information of available products.
- Provide information about current cellphone plans.
- Locations of VESA Cellular & Internet Services kiosk.
- Contact information about each kiosk.

In terms of the system, the product will be created in HTML, several internet programming languages and a database.

1.3. Definitions and acronyms

Abbreviation	
Term	**Definition**
e.g.	For example
etc.	etcetera
sec.	second

Table 1.1: Abreviations

Acronyms	
Term	**Description**
DBMS	Database Management System
E-mail	Electronic Mail
HTML	Hypertext Markup Language
Http	Hypertext Transfer Protocol
LD	Long Distance
MMS	Multimedia Message Service
SDD	System Design Document
SMS	Short Message Service
SRS	Software Requirements Specification
URL	Uniform Resource Locator
USA	United States of America
VESA	Vesa & Santiago
VLL	Vega López López
WWW	World Wide Web

Table 1.2: Acronyms

Term	**Definitions**
Customer	Used to refer to a current or potential buyer or user of the products of an individual or organization, called the supplier, seller, or vendor.
Database	Consists of an organized collection of data for one or more uses.
Guest	
Kiosk	A booth with an open window on one side used to sell small stuff, its used commonly in malls.
Long Distance	A telephone call made outside a certain area, usually characterized by an area code outside of a local call area.
Plans	
Product	A thing produced by labor or effort or the result of an act or a process.
Review Team	A specific group that posts its opinion about an specific article. In this case is the team that posts the reviews from the cell phones.
Reviews	An evaluation of a publication about something in specific. Can be refered to an movie, a software, a game etc..
Roaming	The extension of connectivity service in a

Term	Definitions
	location that is different from the home location where the service was registered.
Update	Modernize or bring up to date
Upload	Can refer to the sending of data from a local system to a remote system such as a server or another client with the intent that the remote system should store a copy of the data being transferred, or the initiation of such a process.
User Comment	The opinion from the customers or guest of an specific topic or product.
Vesa Claro	Web-page from Vesa Cellular created by VLL Internet Service.
VLL Internet Services	Vega Lopez Lopez company that's has the purpose in the develop of web page according with the customer specification and requirements.
Web Master	Person responsible for maintaining one or many websites. The duties of the webmaster may include ensuring that the web servers, hardware and software are operating accurately, designing the website, generating and revising web pages, replying to user comments, and examining traffic through the site.
Web Page	Document or information resource that is suitable for the World Wide Web and can be accessed through a web browser and displayed on a monitor or mobile device.

Table 1.3: Definitions

2. References

2.1. IEEE, IEEE Std. 830-1998 IEEE Recommended Practice for Software Requirements

2.2. http://code.google.com/apis/maps/index.html

2.3. Software Engineering: A Practitioner's Approach, 6th Edition, Roger Pressman, McGraw-HILL, 2004
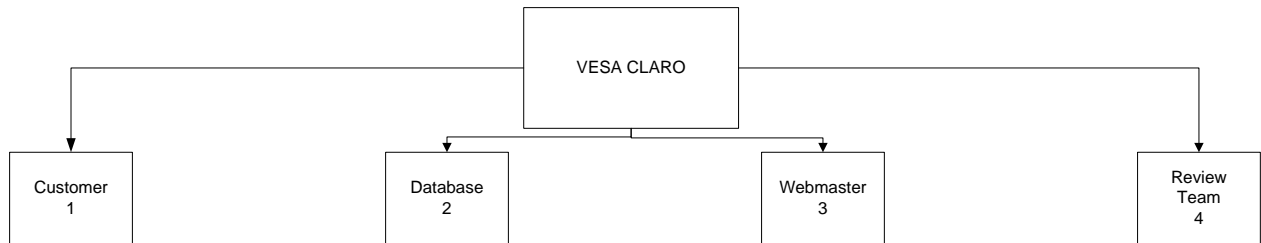
3. Decomposition Description
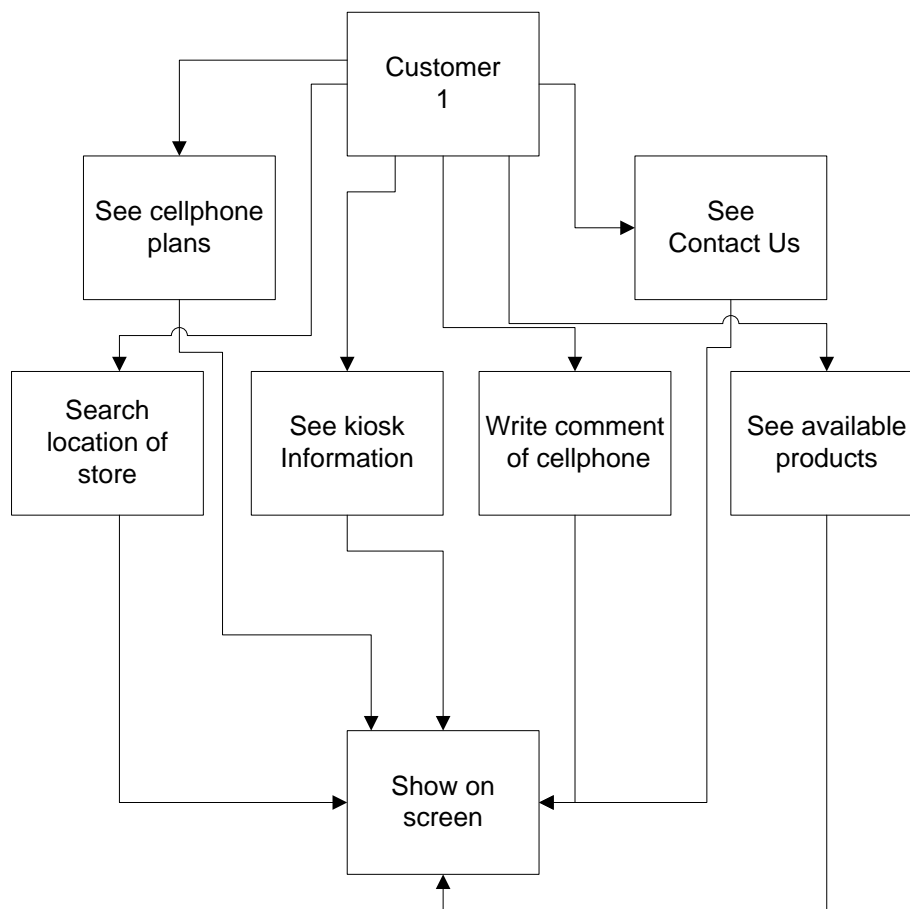

Figure 0.1

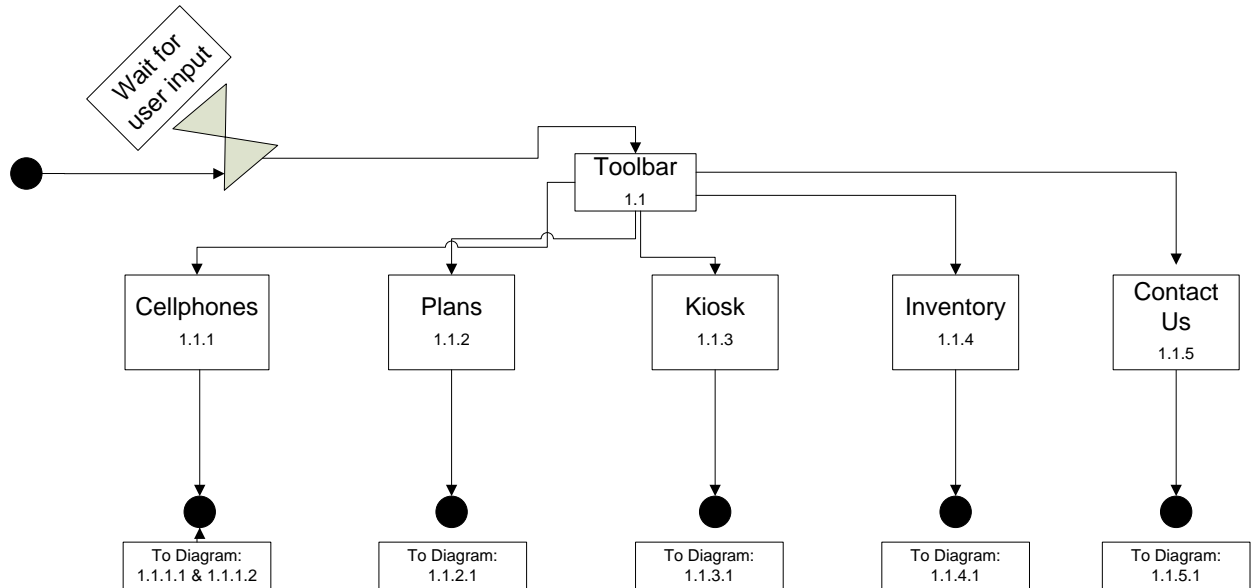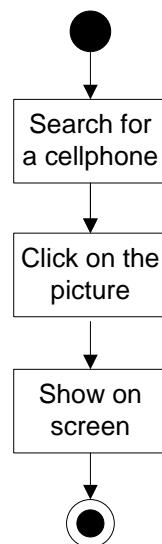## 3.1. General Customer Diagram

Figure 1(Figure 0.1)

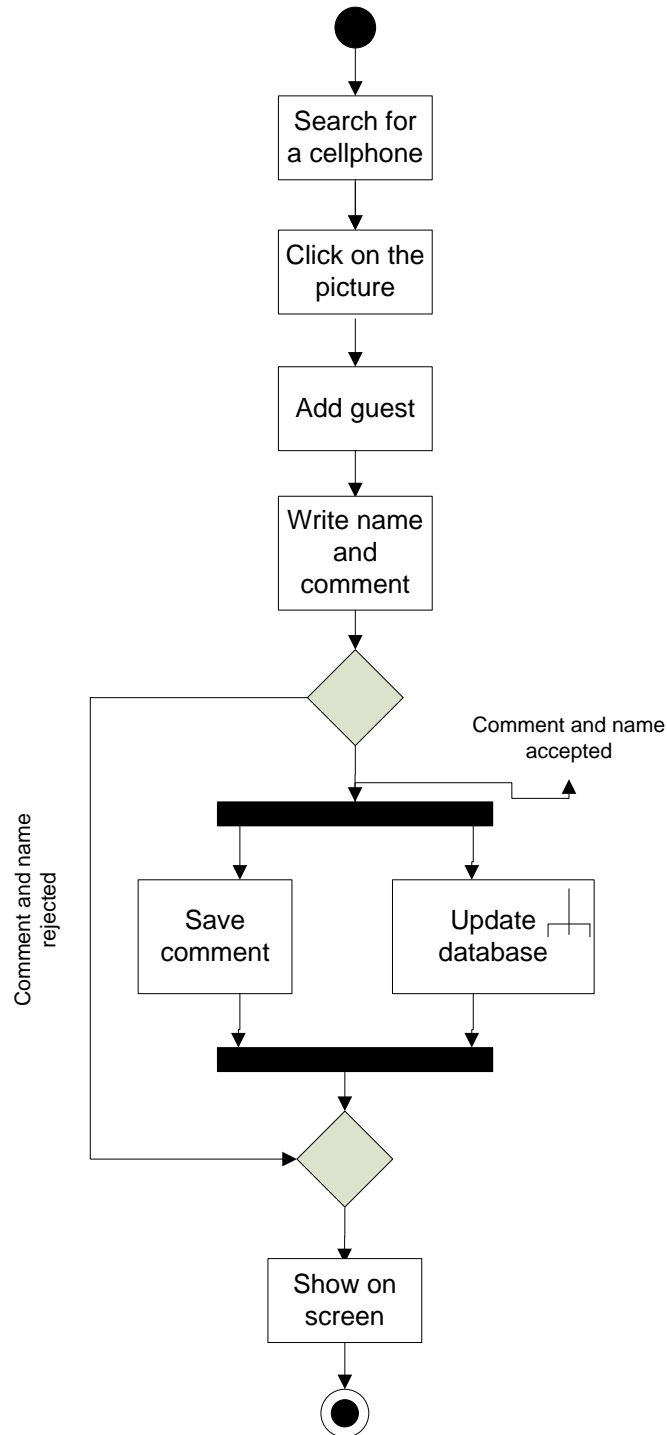### 3.1.1. Toolbar Activity Diagram

The user can use this toolbar to navigate through the webpage
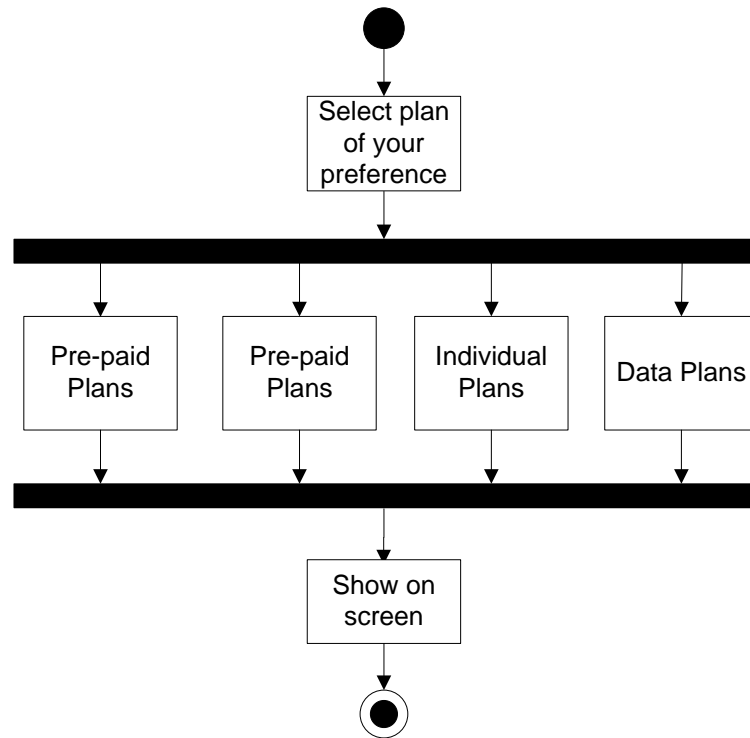Diagram 1.1(Figure 1)

3.1.2. Show cell phone diagram

How the user get to see the available cell phones
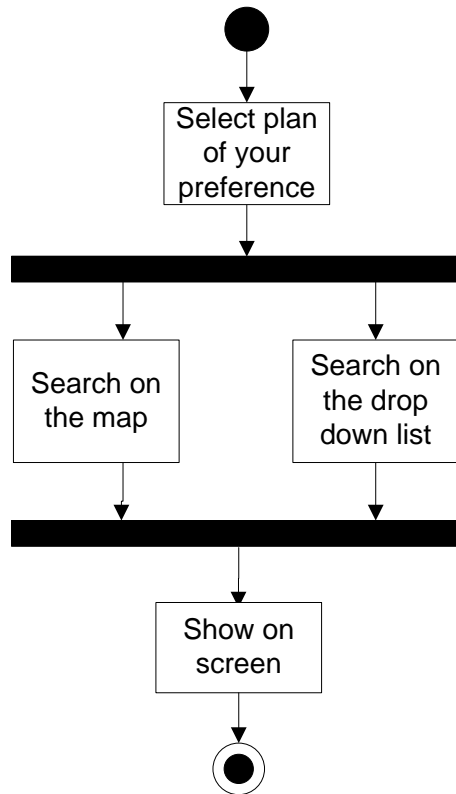Diagram1.1.1.1 (Figure 1.1)

3.1.2.1. Write comments diagram

```
                    ●
                    │
                    ▼
            ┌───────────────┐
            │  Search for   │
            │  a cellphone  │
            └───────────────┘
                    │
                    ▼
            ┌───────────────┐
            │ Click on the  │
            │    picture    │
            └───────────────┘
                    │
                    ▼
            ┌───────────────┐
            │   Add guest   │
            └───────────────┘
                    │
                    ▼
            ┌───────────────┐
            │  Write name   │
            │      and      │
            │   comment     │
            └───────────────┘
                    │
                    ▼
                    ◇                    Comment and name
                                            accepted
   Comment and name
      rejected
            ■■■■■■■■■■■■■■■■■■■■■■

        ┌──────────┐      ┌──────────────┐
        │   Save   │      │   Update     │
        │ comment  │      │  database    │
        └──────────┘      └──────────────┘

            ■■■■■■■■■■■■■■■■■■■■■■
                    │
                    ◇
                    │
                    ▼
            ┌───────────────┐
            │   Show on     │
            │    screen     │
            └───────────────┘
                    │
                    ▼
                   ◉
```

How the user is going to write comments about cell phones
Diagram 1.1.1.2 (Figure 1.1)

3.1.3. Cell phone plans

How the user get to see the available cell phone plans
Diagram 1.1.2.1 (Figure 1.1)

3.1.4. Kiosk info

How the user get to see kiosk info
Diagram 1.1.3.1 (Figure 1.1)

3.1.5. Available products
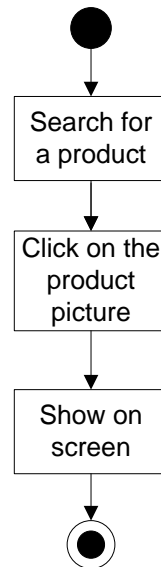
How the user get to see the available products
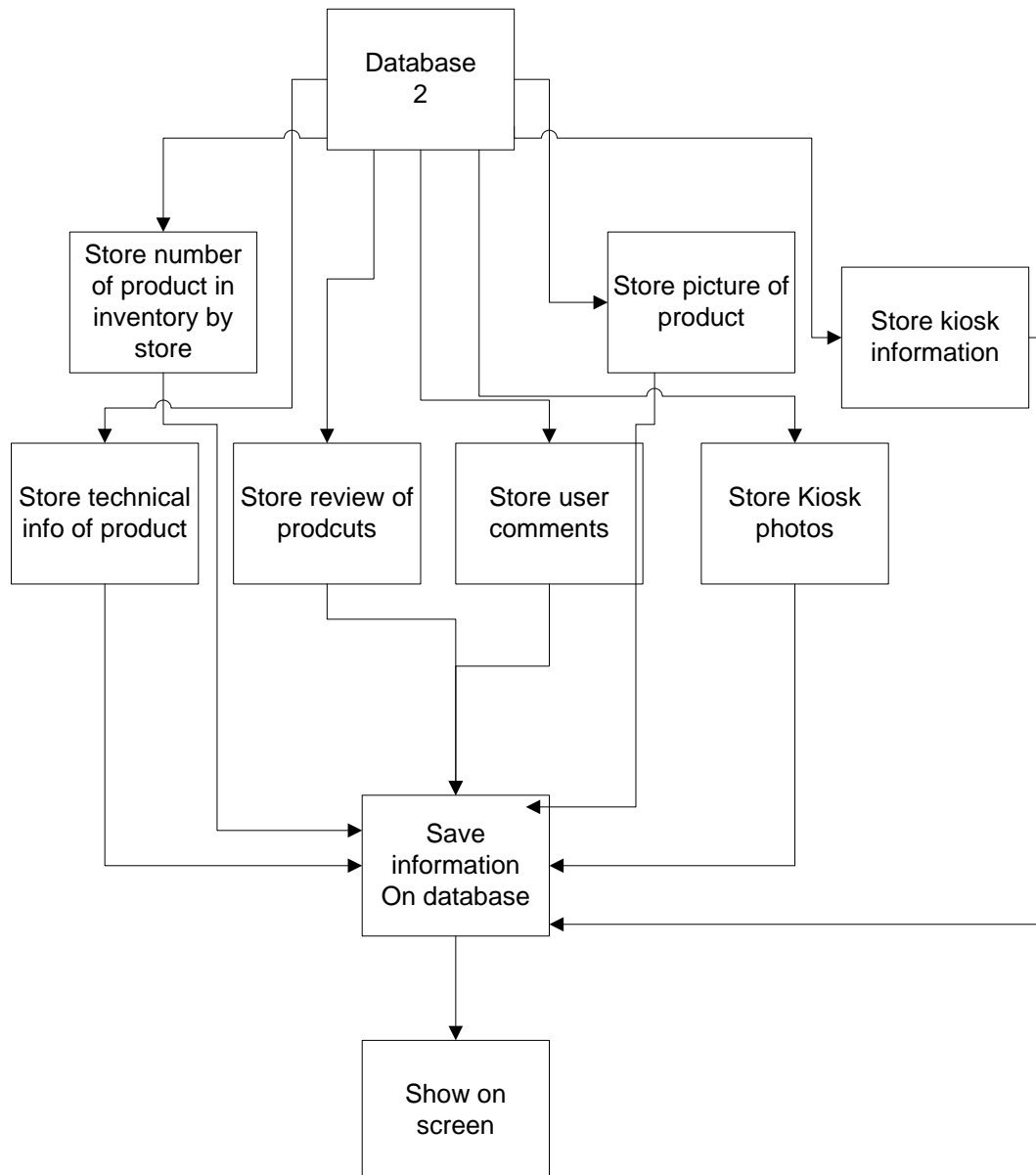Diagram1.1.4.1 (Figure 1.1)
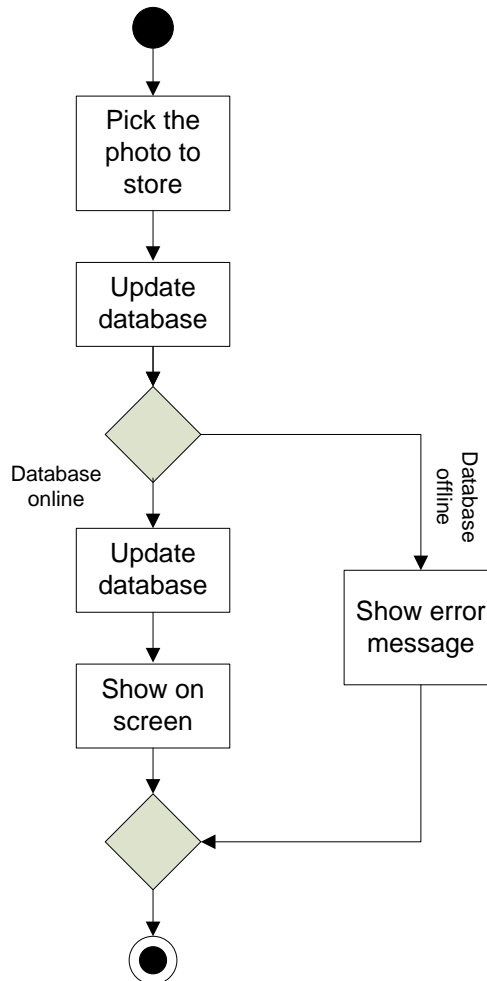
3.1.6. Contact us
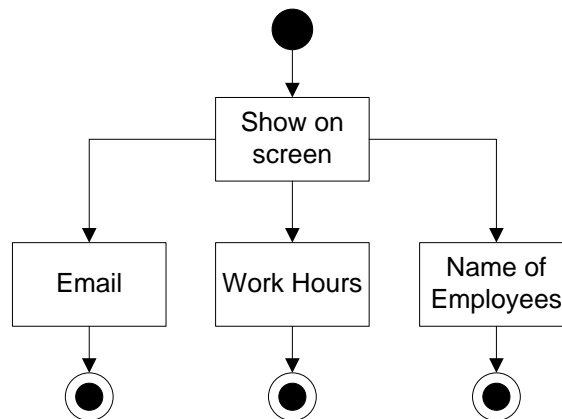
How the user get to see the contact us
Diagram 1.1.5.1 (Figure 1.1)

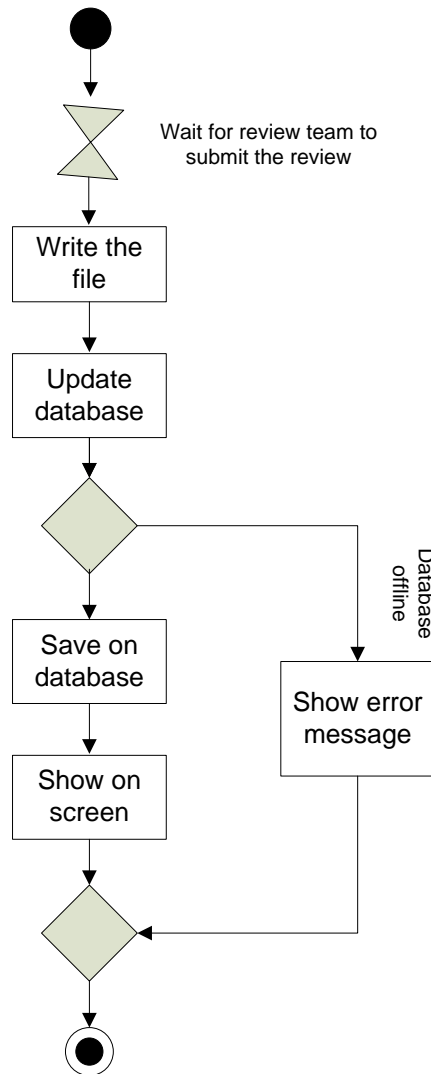
3.2. Database Activity Diagram
3.2.1.   General Database Diagram

3.2.2. Store picture of product

How the webmaster get to store picture of the product in a database
Diagram 2.1 (Figure 2)

3.2.3. Product Review

How the webmaster get to store the review of the products
Diagram 2.2 (Figure 2)

3.2.4. Kiosk Photos
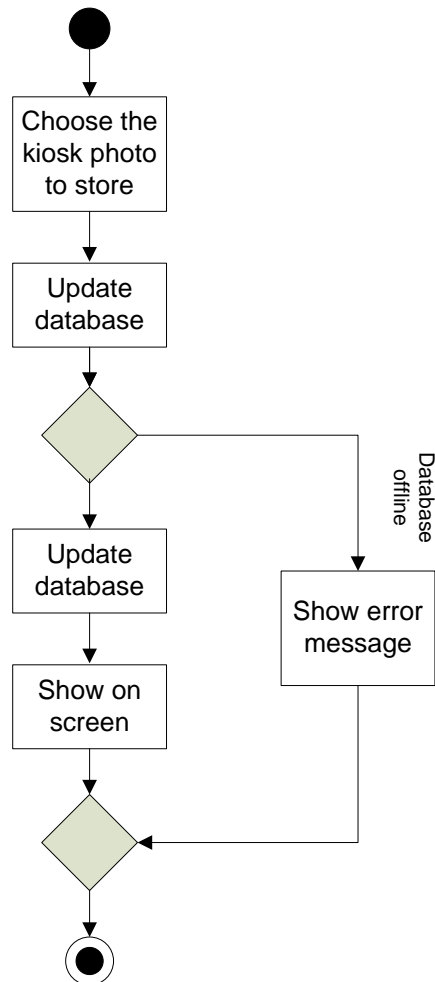
How the webmaster get to store the kiosk photos in a database
Diagram 2.3 (Figure 2)

3.2.5. Number of Products
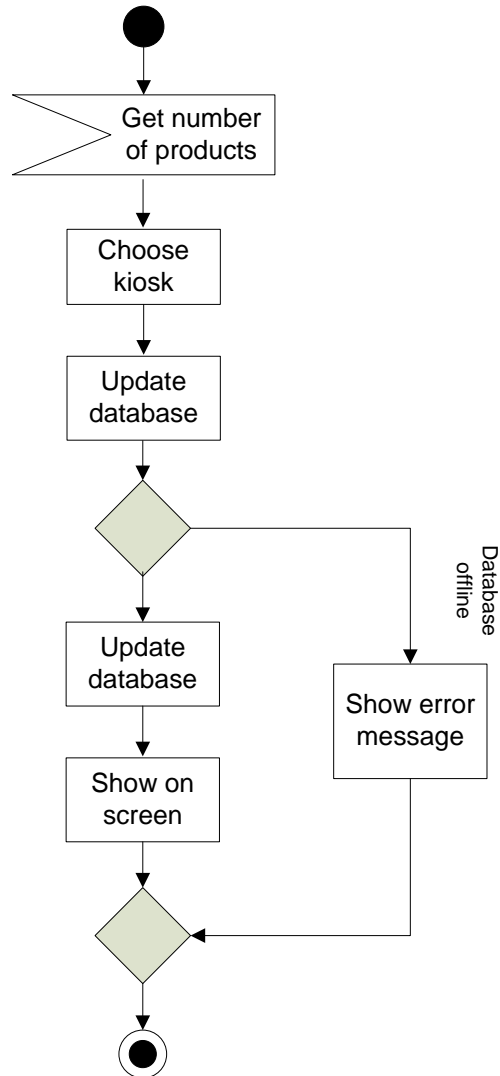
How the webmaster store the number of products by store
Diagram 2.4 (Figure 2)

3.2.6. Product Info

Get
information
of products

Choose
product

Update
database

Update
database

Database
offline

Show error
message

Show on
screen
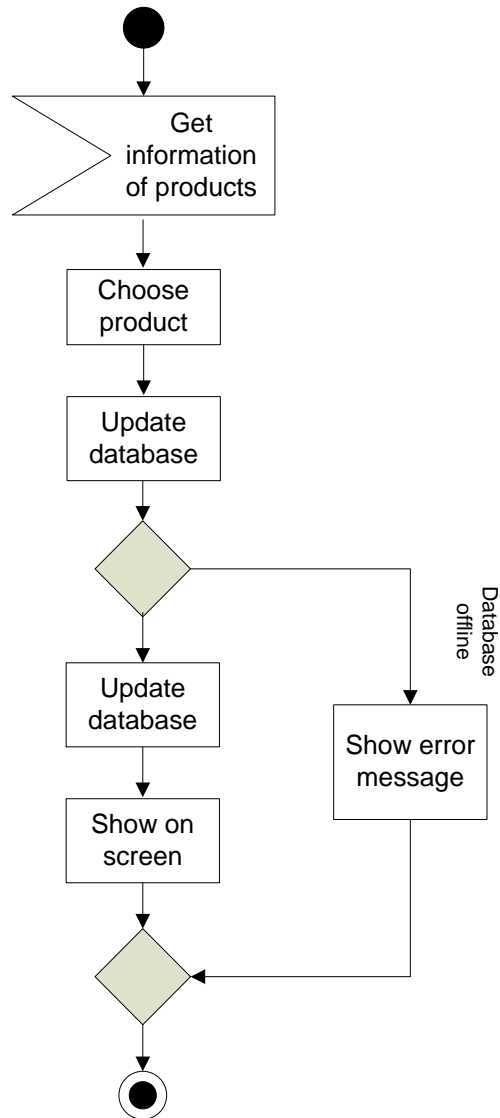
How the webmaster get to store the info of the products in a database
Diagram 2.5 (Figure 2)

3.2.7. User Comments

Wait for user comment

Get user comment from webpage

Choose kiosk

Update database

Database online

Database offline

Update database

Show error message

Show on screen
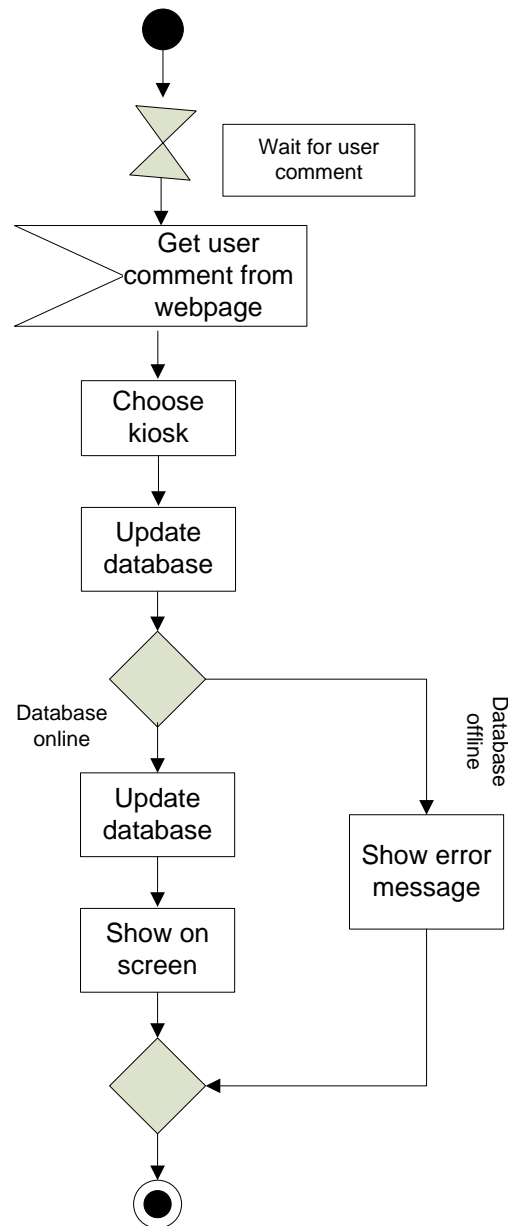
How the webmaster get to store the user comments in a database
Diagram 2.6 (Figure 2)

3.2.8. Kiosk info
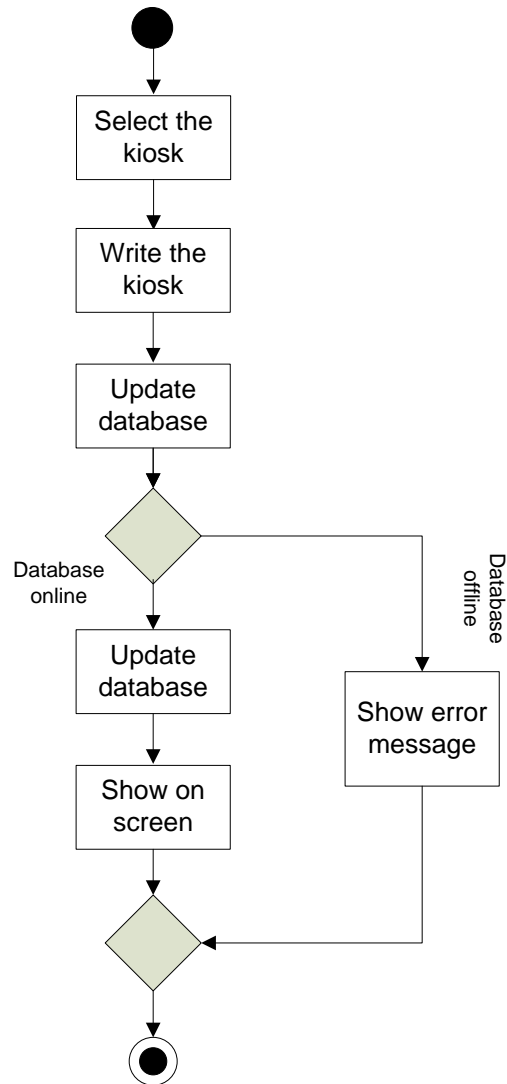
How the webmaster get to store the kiosk info in a database
Diagram 2.7 (Figure 2)

3.3. Webmaster Activity Diagram
3.3.1.   Webmaster General Diagram
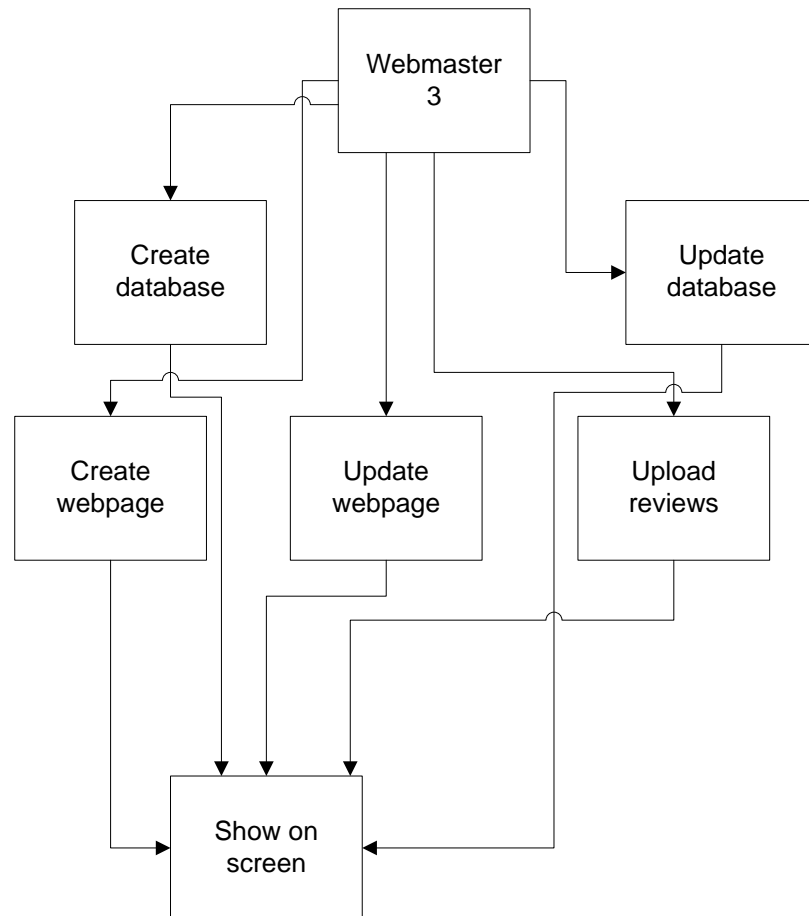
3.3.2. Create Database
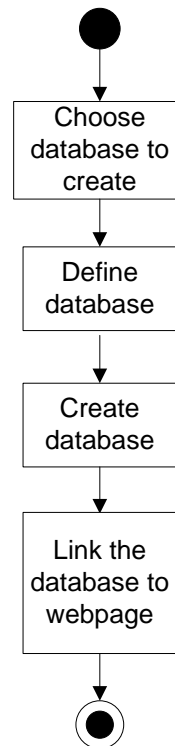
How the webmaster is going to create the database
Diagram 3.1 (Figure 3)

3.3.3. Update database
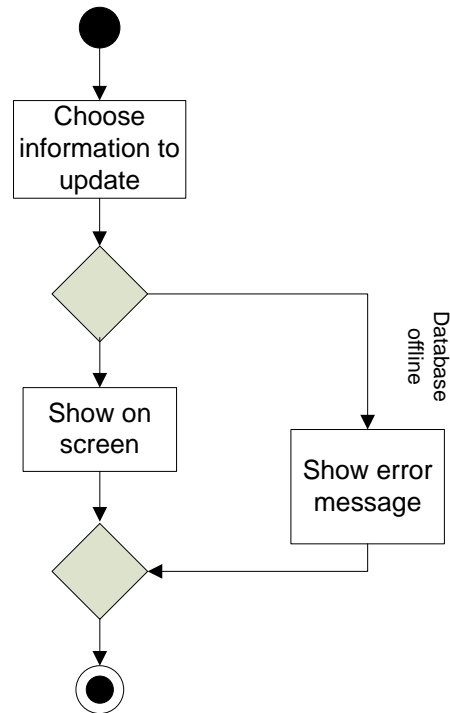
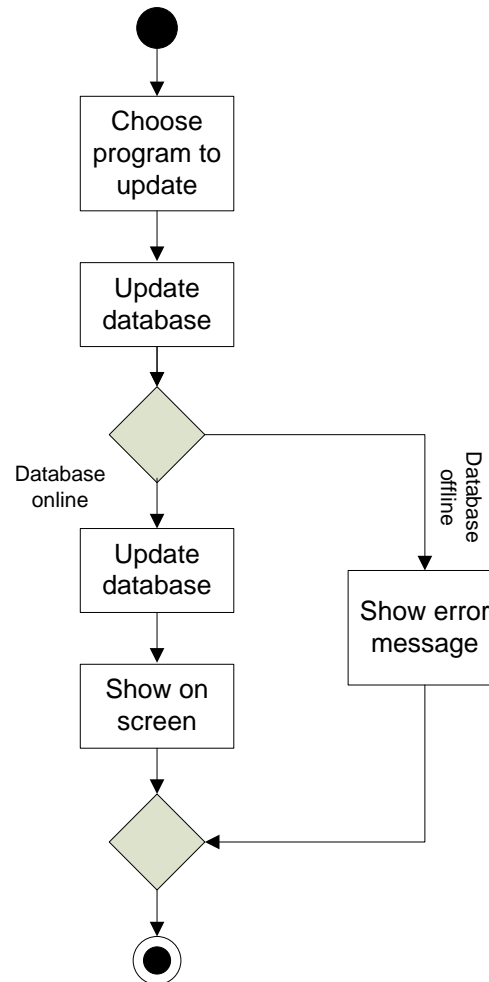How the webmaster is going to update the database
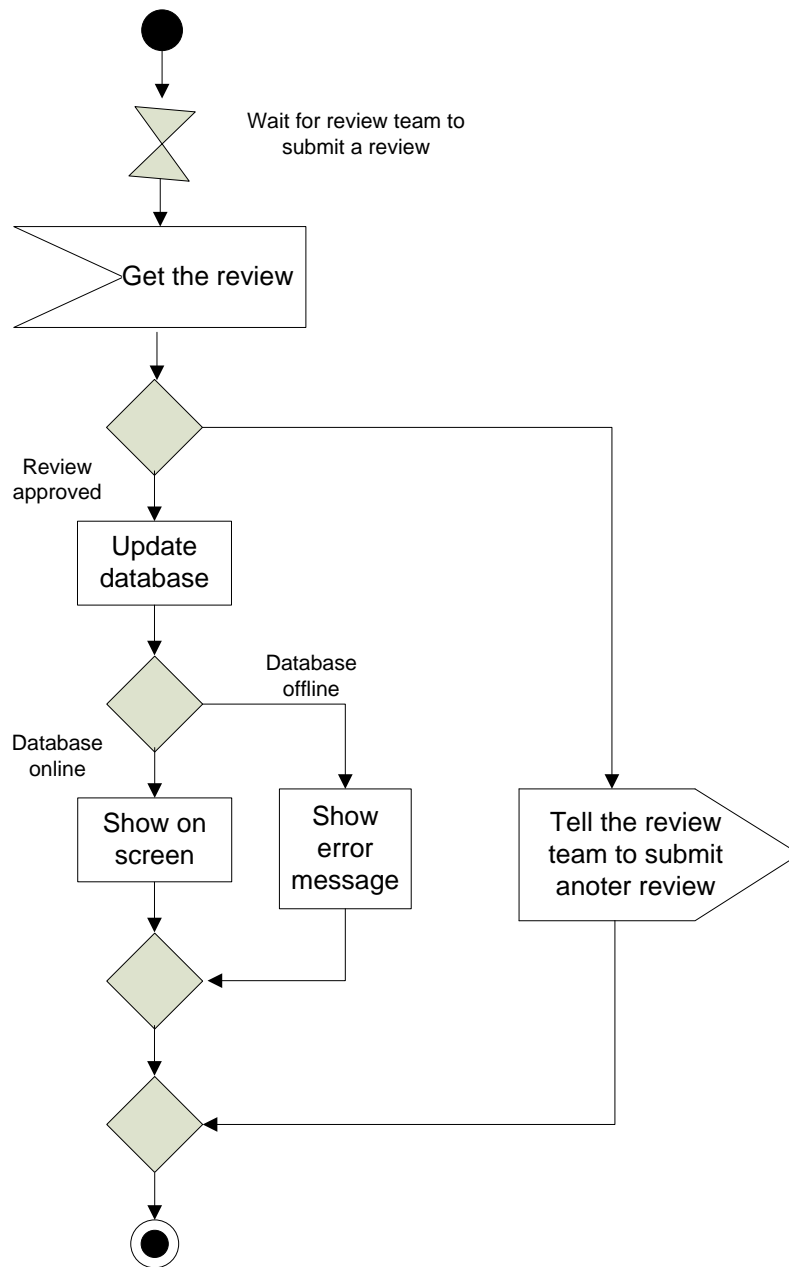Diagram 3.2 (Figure 3)

3.3.4. Create Webpage
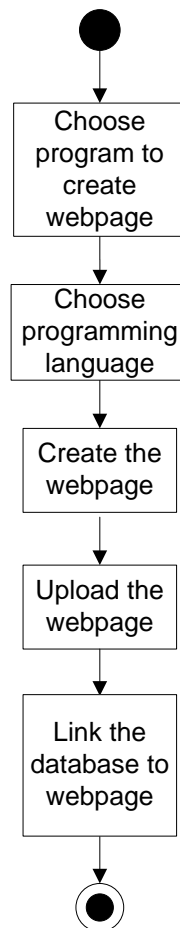
How the webmaster is going to create the webpage
Diagram 3.3 (Figure 3)

3.3.5. Update Webpage

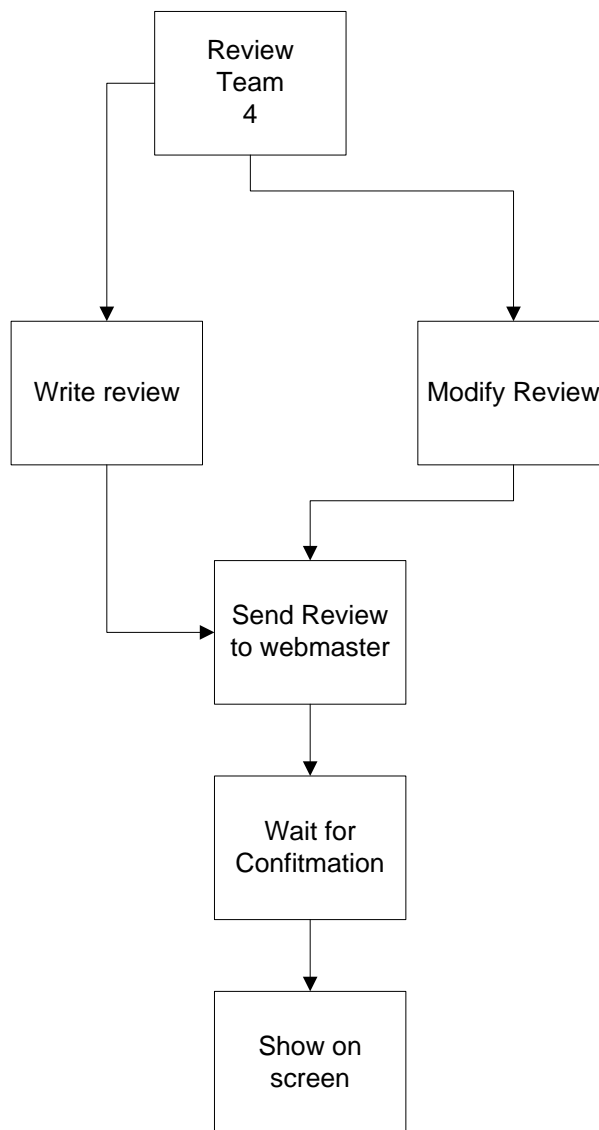How the webmaster is going to update webpage
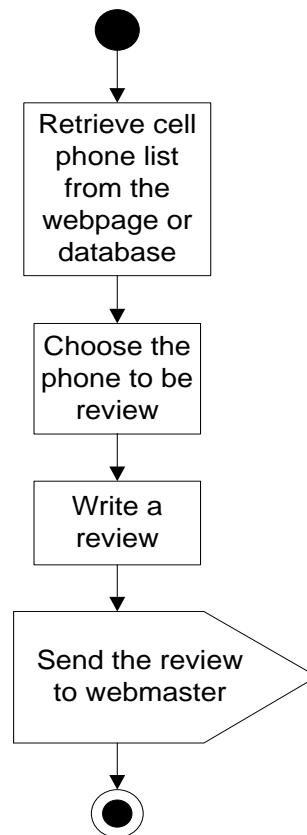Diagram 3.4 (Figure 3)

3.3.6. Upload reviews

How the webmaster is going to upload the reviews to a database
Diagram 3.5 (Figure 3)

3.4. Review Team Activity Diagram
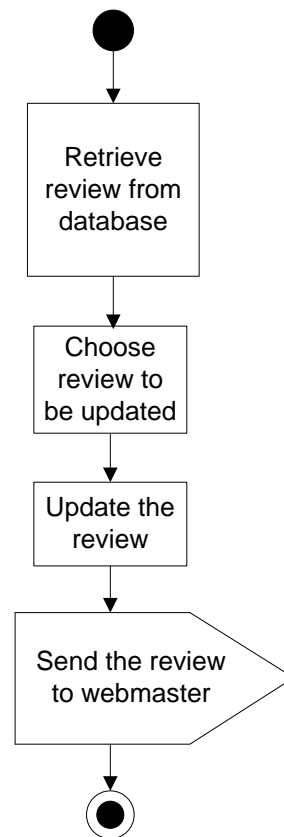   3.4.1.   Review Team General Diagram

```
                  ┌──────────────┐
                  │   Review     │
                  │   Team       │
                  │    4         │
                  └──────────────┘
          ┌──────────┘     └──────────┐
          ▼                           ▼
  ┌──────────────┐            ┌──────────────┐
  │ Write review │            │ Modify Review│
  └──────────────┘            └──────────────┘
          │                           │
          │         ┌─────────────────┘
          │         ▼
          │   ┌──────────────┐
          └──▶│ Send Review  │
              │ to webmaster │
              └──────────────┘
                     │
                     ▼
              ┌──────────────┐
              │ Wait for     │
              │ Confitmation │
              └──────────────┘
                     │
                     ▼
              ┌──────────────┐
              │ Show on      │
              │ screen       │
              └──────────────┘
```

3.4.2. Write Review

How the review team writes the review about a cell phone
Diagram 4.1 (Figure 4)

3.4.3.   Modify Review

How the review team is going to modify a certain review
Diagram 4.2 (Figure 4)

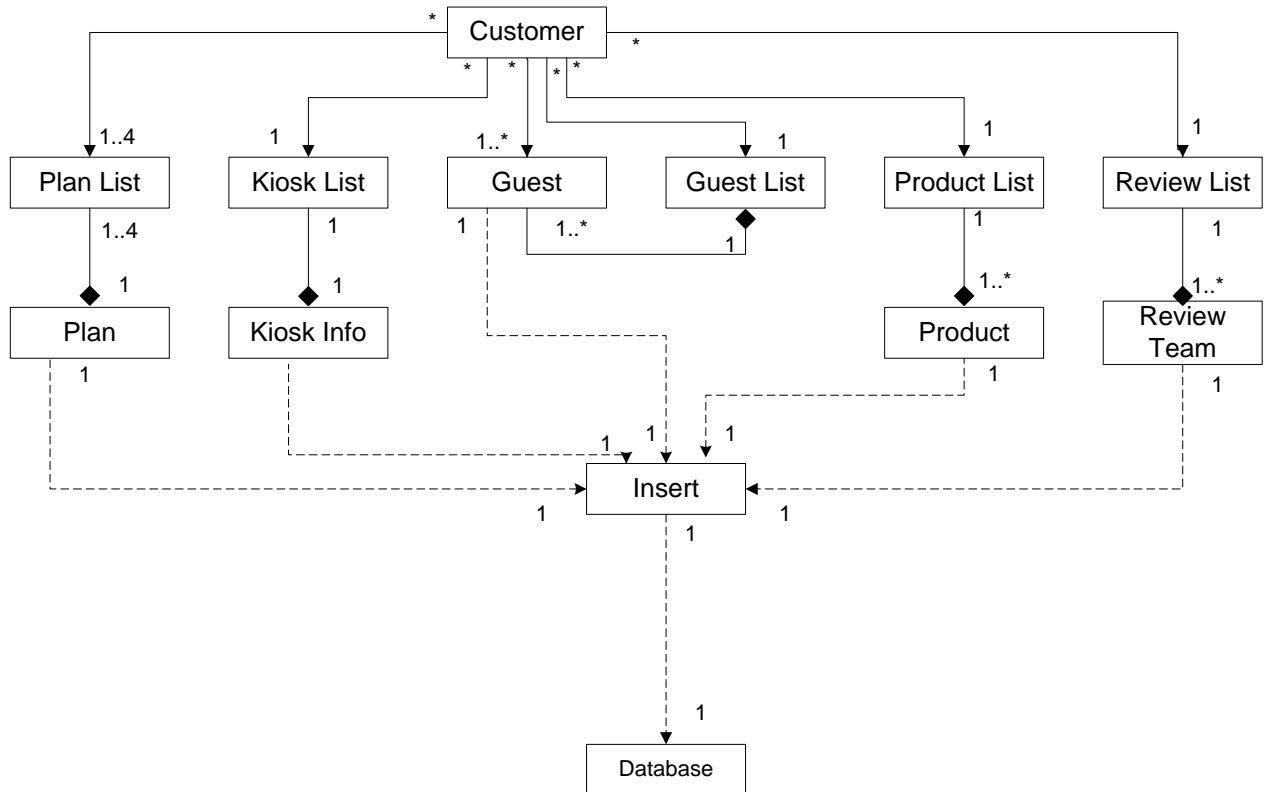## 4. Dependency Description
4.1. General Class Dependency Diagram

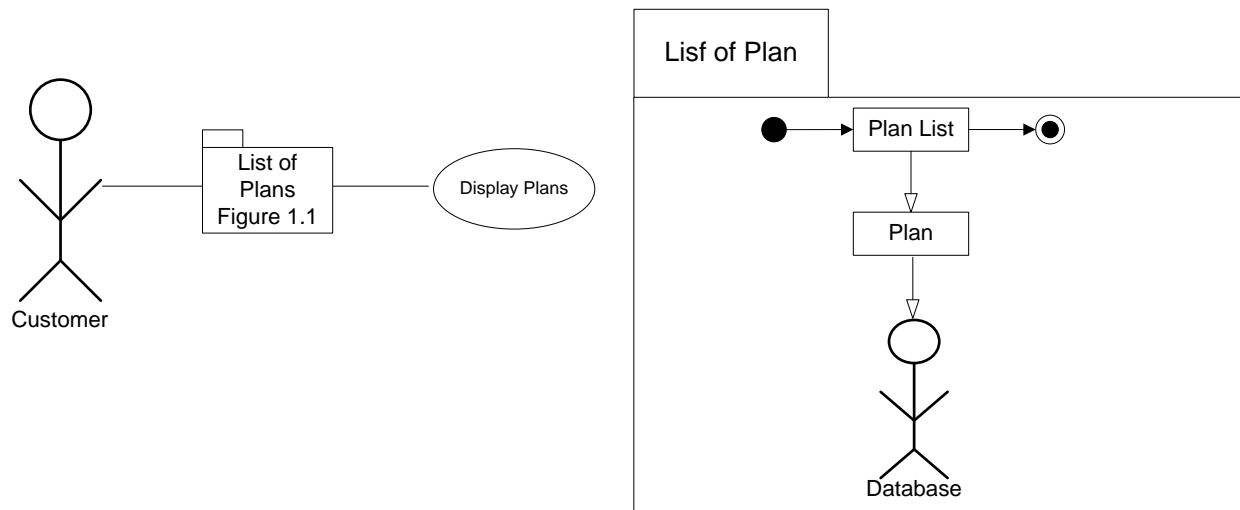
Figure 5

4.2. List of Plan Dependency Diagram

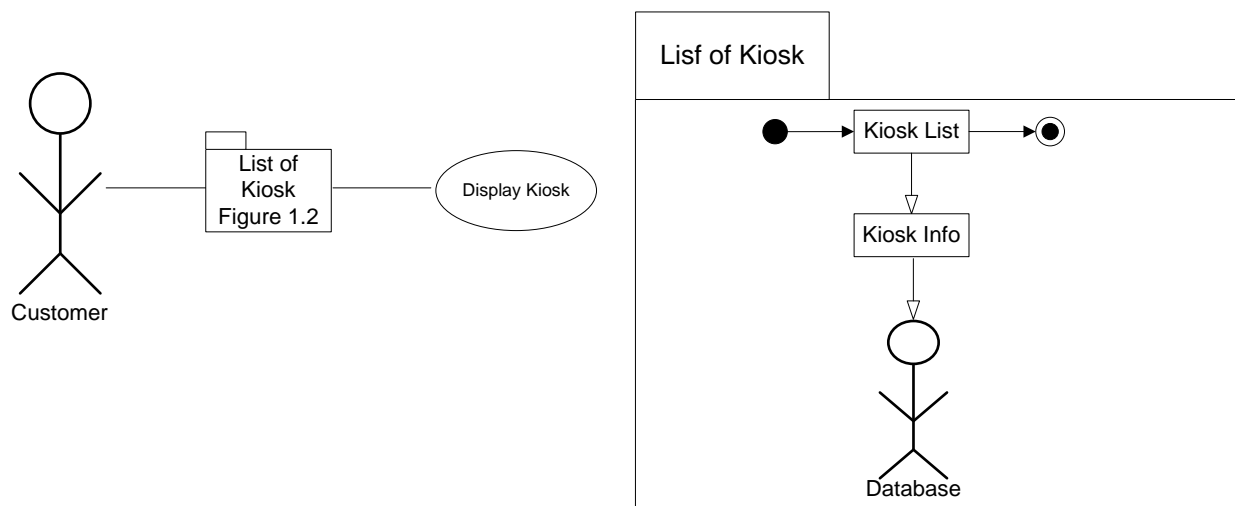**Diagram 5.1(Figure 5)**

4.3. List of Kiosk Dependency Diagram

Diagram 5.2(Figure 5)

4.4. List of Product Dependency Diagram
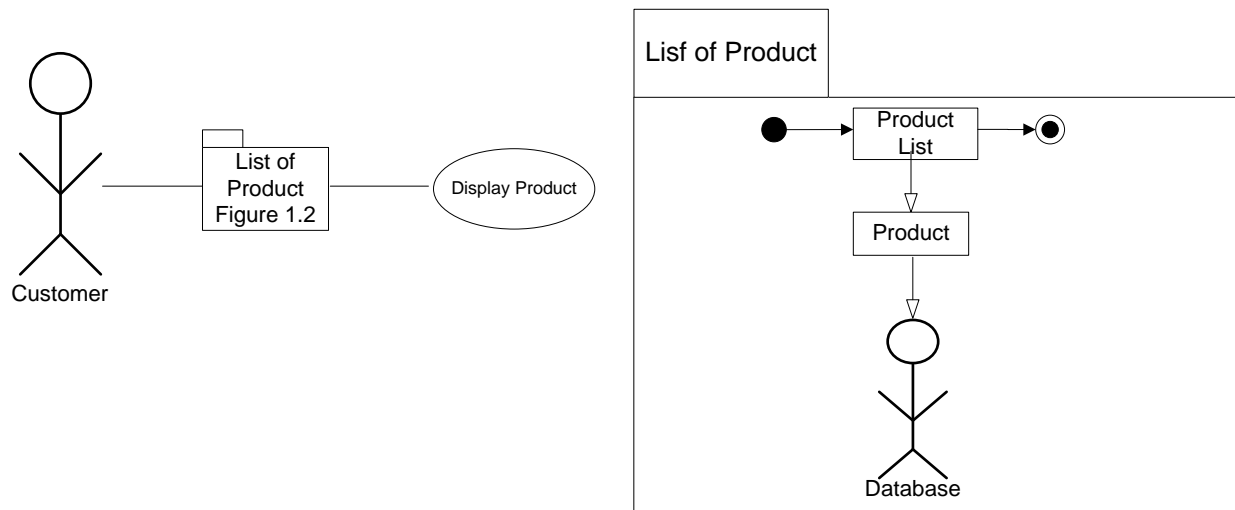
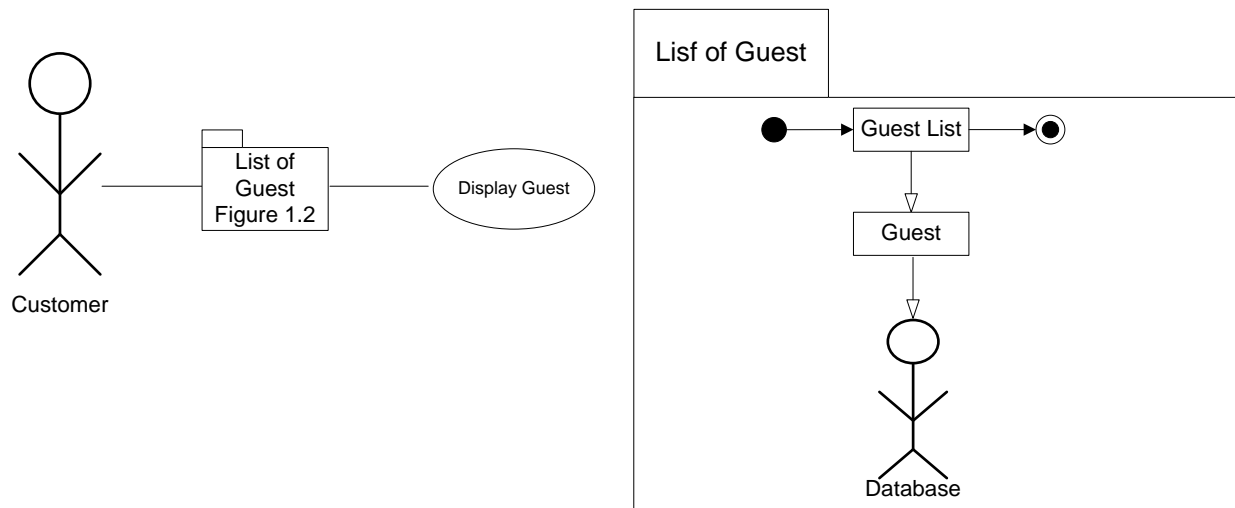**Diagram 5.3(Figure 5)**

4.5. List of Guest Dependency Diagram

Diagram 5.4(Figure 5)
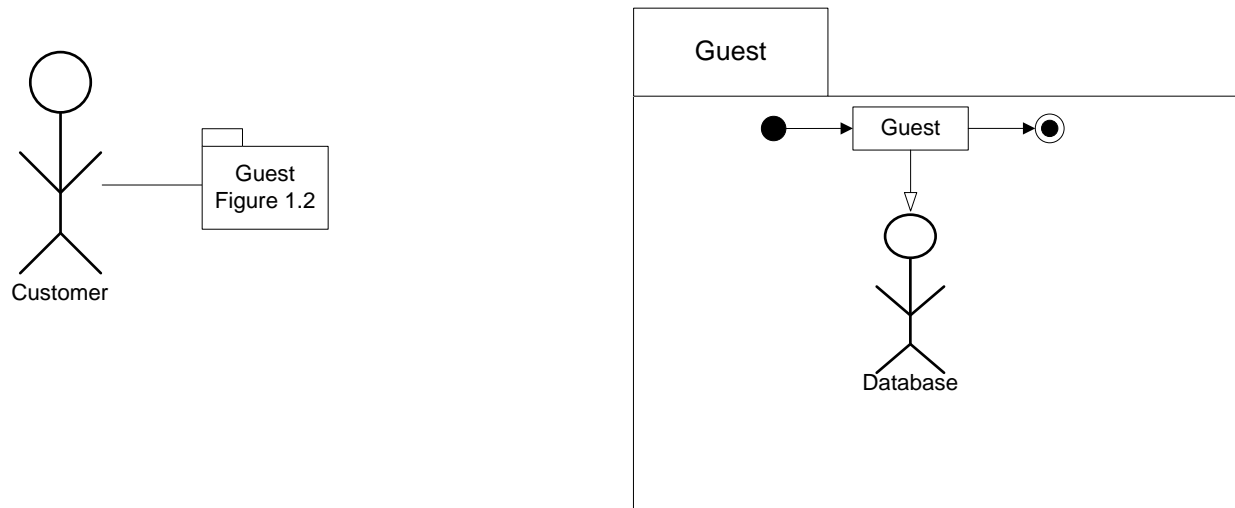
4.6. Guest Dependency Diagram

Diagram 5.5(Figure 5)

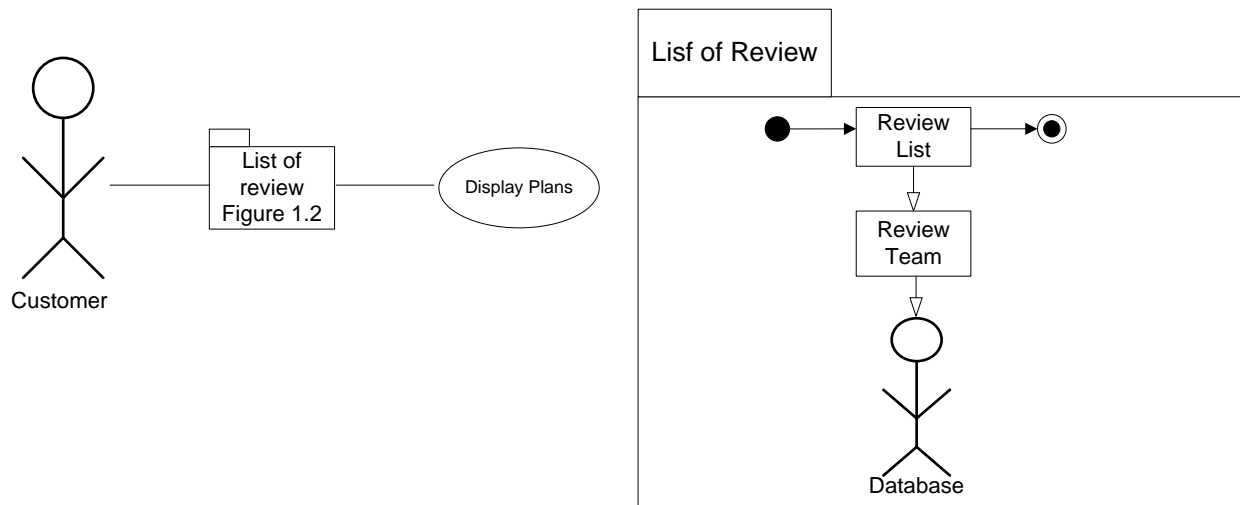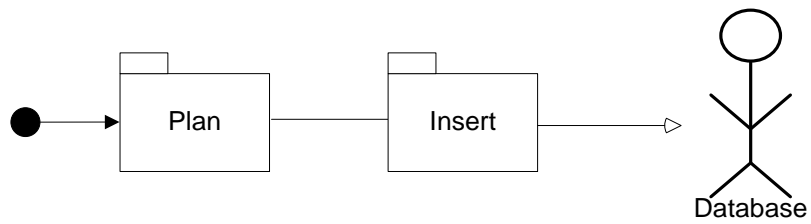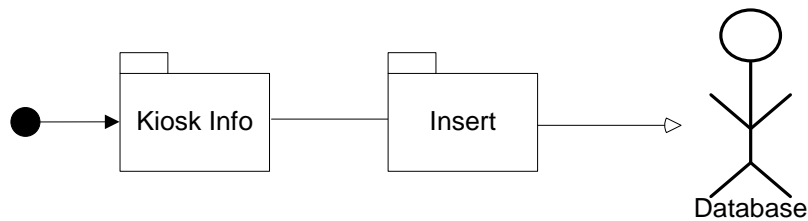### 4.7. List of Review Dependency Diagram
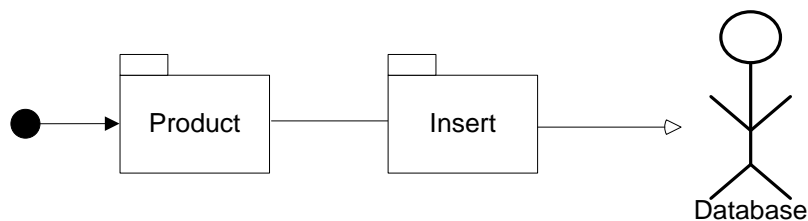

Diagram 5.6(Figure 5)

4.8. Plan Dependency Diagram

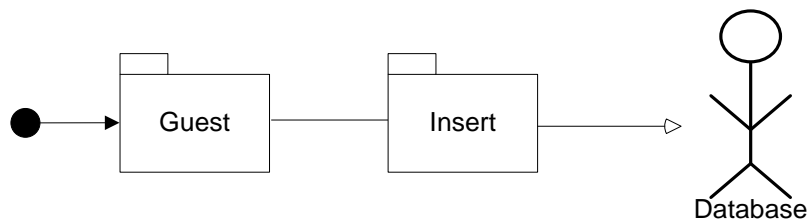**Diagram 5.7(Figure 5)**

4.9. Kiosk info Dependency Diagram
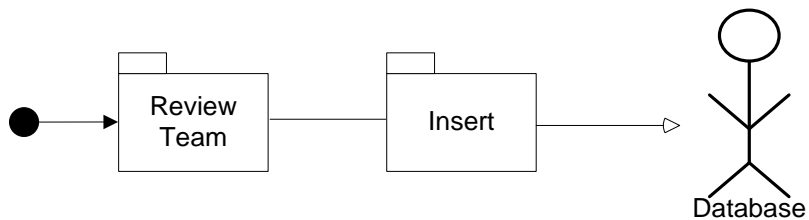

Diagram 5.8(Figure 5)

4.10.   Product Dependency Diagram
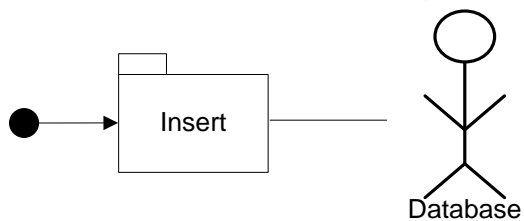

Diagram 5.9(Figure 5)

4.11.　　Guest Dependency Diagram

Diagram 5.10(Figure 5)

4.12.　　Review Team Dependency Diagram

Diagram 5.11(Figure 5)

4.13.　　Insert Dependency Diagram

Diagram 5.12(Figure 5)

5. Detailed Design
   5.1. Customer Detailed Design

Customer
+getPlan (in type:string [1]= "1"):Plans +getKiosk (in KioskName:string [1]= "Caguas1"):KioskInfo +addGuest ():void +getProduct (in model:string [1]= "Curve 8520"):Product +getReview ():ReviewTeam

   5.2. Plans Detailed Design

Plans
- minutes: string[*] = " " - prices: string[*] = " " - sms: string[*] = " " - ld: string[*] = " " - roaming: string[*] = " " - mms: string[*] = " " - category: string[*] = " "
+addPlan ():void

   5.3. PlanList Detailed Design

PlanList
-plan:Plans [4]= " "
+getPlan (in category:string [1]= "1"):Plan

   5.4. KioskInfo Detailed Design

KioskInfo
- kioskName: string[*] = " " - kioskLocation: string[*] = " " - kioskPhone: string[*] = " " - kioskEmail: string[*] = " " - inventory: string[*] = " " - kioskPicture: string[*] =" "
+addKiosk ():void

5.5. KioskList Detailed Design

KioskList
-kiosk:KioskInfo[1..*]= " "
+getKiosk (in kioskName: string [1]= "1"):KioskInfo

5.6. Guest Detailed Design

Guest
- comments: string[*] = " "
- date: string[*] = " "
- time: string[*] = " "
+addGuest():void

5.7. GuestList Detailed Design

GuestList
-guest:Guest[*]= " "
+getGuest ():Guest

5.8. Product Detailed Design

Product
- brand: string[*] = " "
- model: string[*] = " "
- totalQuantity: string[*] = " "
- kioskQuantity: string[*] = " "
- price: string[*] = " "
+addProduct():void

5.9. ProductList Detailed Design

ProductList
-product:Product[*]= " "
+getProduct(in model:string [1] = "Curve 8520"):Products

5.10. Record Detailed Design

Record
- whoEdit: string[*] = " "
- date: string[*] = " "
- time: string[*] = " "
- placeTheReview: string[*] = " "

5.11. Edit Table Detailed Design

EditTable
+addTuple():void
+removeTuple():void
+renameTuple():void

5.12. AddIngo Detailed Design

AddInfo
+addNewInfo():void
+modifyInfo():void

5.13. Database Detailed Design

Database
+storePlanList():void
+storeKioskList():void
+storeGestList():void
+storeProductList():void
+storeReviewList():void
+retreivePlanList():void
+retreiveKioskList():void
+retreiveGuestList():void
+retreiveProductList():void
+retreiveReviewList():void

5.14. ReviewTeam Detailed Design

ReviewTeam
-review: string[*] = " "
+addReview():void

5.15. ReviewList Detailed Design

ReviewList
-review:ReviewTeam[*]= " "
+getReview():ReviewTeam

6. Detailed Data Design
6.1. Customer Detailed Data Design