

Document History

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HandIYcraft-SDD-.2.docx	-Update Introduction -Update Overall Description	Draft	8/5/14	Advisor	NK, PS
HandIYcraft-SDD-.3.docx	-System Architecture -Detailed Design	Draft	27/5/14	Advisor	NK, PS
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Chapter One | Introduction

1.1 Objective

HanDIYcraft is a web application, and mobile application for smartphone that supports Android operating system. It is an application that guide users the method how to recycle things by themselves. This application provides several tutorials for users to learn. Moreover, in case the users do not have the needed materials and have no idea where to buy, this application provides a feature to let the users check out the shops that sell related materials for making their DIY artworks and find the location of the shop via Google Maps. Apart from just exploring, the bloggers can directly communicate with the shopkeepers by sending private messages, and among each other by the comment. They can also share their favorite DIY tutorial to the social network like Facebook too.

This Software Design document contains the design of HanDIYcraft system, including the deep description for each design. So that, the developer could develop the system correctly towards the Software Requirement Specification.

1.2 Intended Audience an Reading Suggestions

This Software Design Document is designed for the people who are involved and related with the HanDIYcraft project. It may benefit to these people as followed:

Development Team

- Specifies the abilities and actions, including the scope of the system. From this point, it helps everyone to have the same understanding towards the project.
- Verifies and validates the working of software whether it works as it is defined in the document or not.
- Helps in achieving the quality of the product as much as possible.
- Used for the discussion among the related people about the project.

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Customer

- Ensure that the development team understands and interprets in the same thing, in order to satisfy the customer needs.
- Helps customer to understand the technical things such as the quality, scope and limitations.

1.3 Project Scope

- Provide tutorials for visitors and bloggers to explore.
- Provide the tutorial management system on mobile application, and web application for bloggers to manage their tutorials easier.
- Provide member system
- Let shopkeepers manage their shops in order to advertise them.
- Able to work with Google Maps to pin and see shops' location.
- Provide communication system to make an interaction among bloggers, and also with the shopkeepers.
- Able to work with Facebook in order to share tutorials.
- Provide understandable symbols and language.
- Available only in English.

1.4 Acronyms and Definitions

- Acronyms

PMP = Project Management Plan

SDD = Software Design Document

SRS = Software Requirement Specification

URS = User Requirement Specification

UC = Use Case

AD = Activity Diagram

SQ = Sequence Diagram

DB = Database

UI = User Interface

SW = Siraprapa Wattanakul

NK = Nahathai Kaewtatib

PS = Pimchanok Sripraphan

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Chapter Two | Overall Description

2.1 Product Perspective

HanDIYcraft is a software system that able to operate as web and Android mobile application. It helps users to obtain ideas to build DIY artworks. Plus, it also helps user to save their time to find the right place via Google Maps in order to get the material the want. More than that, it also helps the shopkeepers who sell DIY materials to advertise their shops too.

2.2 Product Features

Main features of HanDIYcraft are listed as follows:

Feature 1: User's Profile and Authorization Management

- Develop register, log in, and log out system for bloggers. (On both web and mobile)
- Develop register, log in, and log out system for shopkeepers. (On mobile)
- Display blogger's profile which contain profile picture, username, email, number of following and follower people, and created tutorials, and let the him/her edit their information.
- Display shopkeeper's profile, which contain profile picture, username, email, and created shops, and let him/her edit their information.

Feature 2: Tutorial Management (On both web and mobile)

- Add a tutorial which contain pictures, descriptions, and a video by blogger.
- Manage(edit/delete) tutorials by blogger.
- Search tutorials title by keyword.
- Display tutorials that exist in the database by random, popular, and following.
- Display tutorial's detail, which contain tutorial owner username, number of likes, tutorial title, pictures, material, descriptions, a video, and comments.

Feature 3: Shop Management (On Mobile)

- Add a shop which contain pictures, descriptions, and a video by shopkeeper.
- Manage(edit/delete) shops by shopkeeper.
- Search shop name by keyword.

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- Display shops that exist in the database randomly.
- Display shop's detail, which contain shop name, shop owner username, branch, telephone number, information, shop's pictures, and location.

Feature 4: Map Management (On Mobile)

- See the shop's location via Google Maps.
- See shops' location near by the user via Google Maps.
- Pin shop's location via Google Maps by shopkeeper.

Feature 5: Communication Management (On Mobile)

- See and add comments on tutorials by blogger
- Communicate via private messages
- Search bloggers by username by shopkeeper.
- Giving and undo likes on tutorials by blogger.
- Follow and unfollow bloggers by blogger.
- See list of follower and following bloggers.
- Share tutorials to Facebook

Feature 6: The system provides notifications. (On Mobile)

- Display list of news when there is new tutorial comment, tutorial like, or follower.
- Display a sign when there is a new message.

2.3 User Classes and Characteristics

There are three types of users for our system. Information and characteristics are listed below:

2.3.1 *Visitors*

These are the general users that did not register to the system. What they can do the most is just exploring the DIY tutorials that exist in the system.

2.3.2 *Bloggers*

These are the people who have registered as a blogger. Apart from just exploring, they are able to create their own tutorials and manage it. Besides, they can do the communication through comments and private messages too.

2.3.3 *Shopkeepers*

These are the people who have registered as a shopkeeper. They can advertise their own shops via the application. Apart from that, they can communicate with the bloggers through private message.

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2.4 Operation Environment

HanDIYcraft operates on both web and mobile application. Whenever the user requests any information to perform some tasks, the information will be requested from web application and response back to the mobile application.

Server Environment

Windows server platform is supported for this system. It is capable for web-server, database-server, and internet connection.

Client Environment

The system supports only Android OS, which has version 4.2 or later in order to run the system properly and be able to connect to the internet. It also requires GPS to identify location from Google Maps.

2.5 Design and Implementation Constraints

- The mobile application of the system is able to operate only on Android platform, version 4.2 or later.
- Require the internet connection.
- There is no security for inappropriate information.
- The users that did not log in can visit only some part of the system.

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Chapter Three | System Architecture

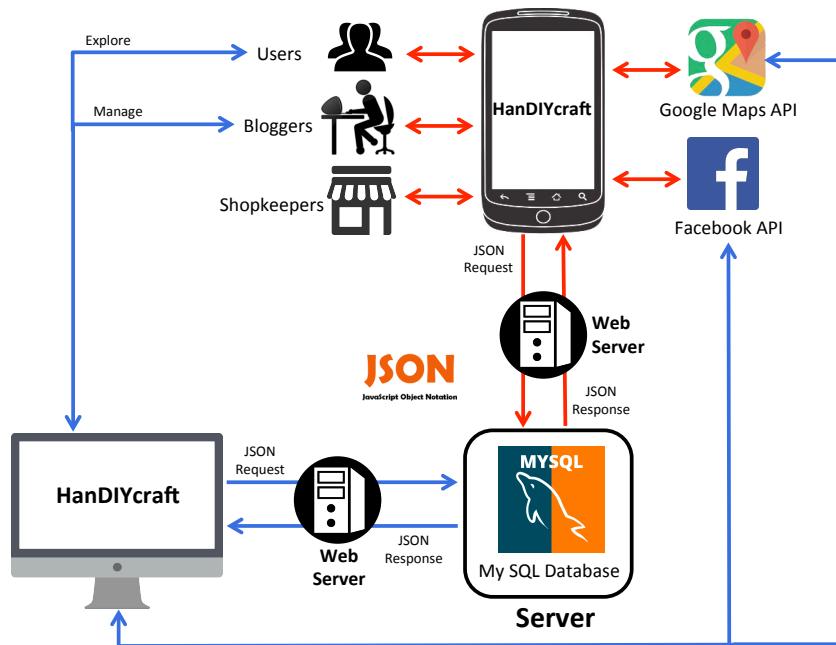


Figure 4.1.1: System Architecture

HanDIYcraft application is a social application on Android OS smart phones and web application. Whenever the user interacts with the application, the system will query data through JSON from MySQL database system and response the result back to the user via the application's user interface.

Users, bloggers and shopkeepers can access to the data differently.

- Users will be able to only explore tutorials and shops' location that are provided in the application.
- Bloggers can manage (create/edit/delete) tutorials. They can communicate among each other via the comments, and to the shopkeepers via private messages. Also, be able to explore others' tutorials just like the users. On the other hand, they can do those activities on the web application, and be able to interact with Facebook too.
- Shopkeepers can manage shops, and be able to communicate with the bloggers via private messages. They can search to a specific blogger by username.

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Chapter Four | Detailed Design

4.1 Class Diagram

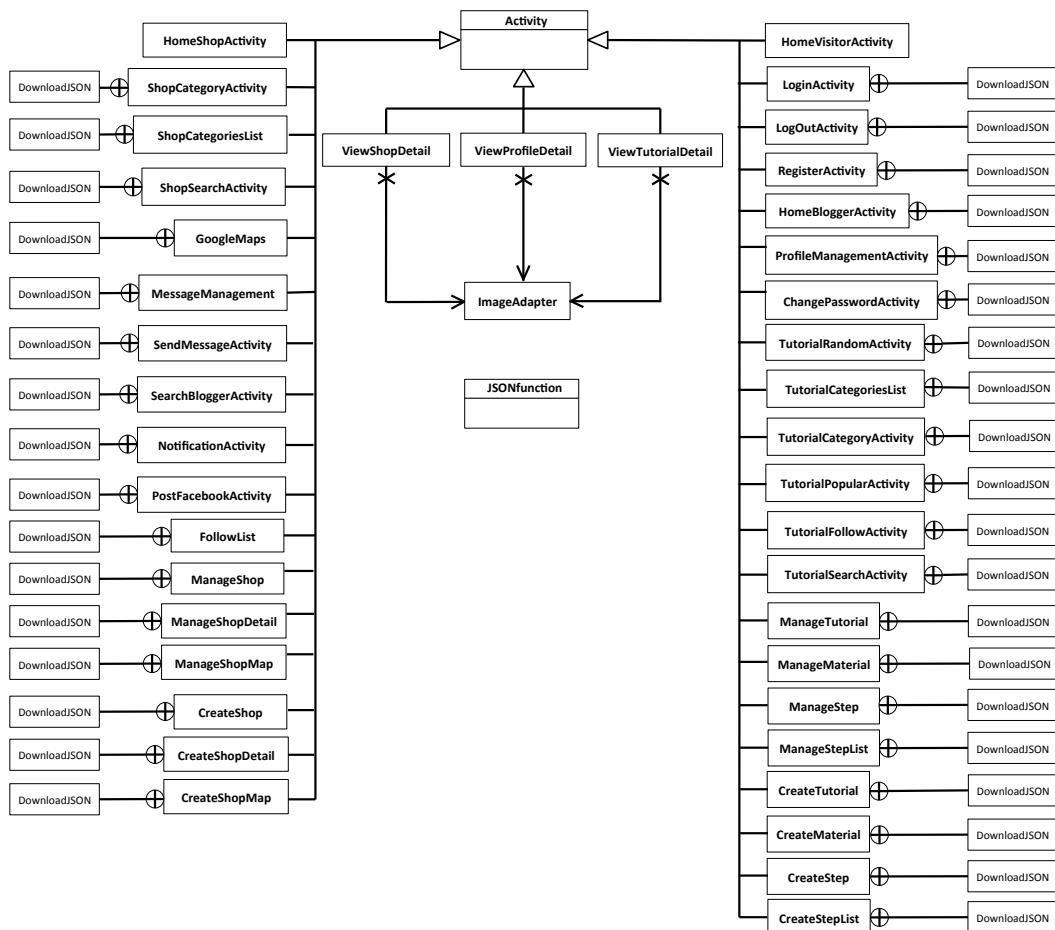


Figure 4.2.1: Android Application Class Diagram

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4.2 Android Application Class Diagram Description

Class Diagram ID: 01

Class Name: HomeVisitorActivity

HomeVisitorActivity
#OnCreate(savedInstanceState : Bundle) : void +random() : void

Property

ID	Name	Description	Remark
-	-	-	-

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	random() : void	Randomly get the data from database.	Return Type: void

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Class Diagram ID: 02
Class Name: LoginActivity

LoginActivity	
+username : String	
+password : String	
+result : String	
#OnCreate(savedInstanceState : Bundle) : void	
+login() : String	
-checkValidation() : boolean	

Property

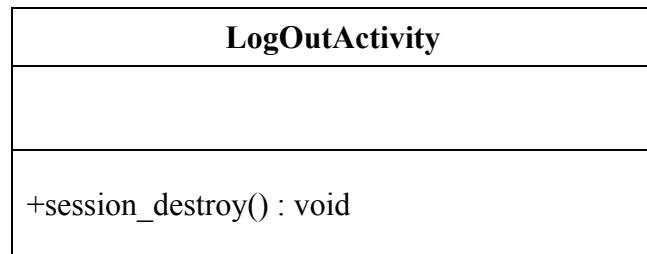
ID	Name	Description	Remark
1	username	Get username to verify.	Type: String
2	password	Get password to verify.	Type: String
3	result	Using in WebPageTask() class	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	login() : String	Get username and password into ArrayList, and send it to server using getHttpPost() method.	Return Type: String
3	checkValidation() : boolean	Validation checking of input information.	Return Type: void

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Class Diagram ID: 03
Class Name: LogOutActivity



Property

ID	Name	Description	Remark
-	-	-	-

Method

ID	Name	Description	Remark
1	session_destroy() : void	Destroy the log in session.	Return Type: void

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Class Diagram ID: 04
Class Name: RegisterActivity

RegisterActivity
-editext_username : EditText -editext_password : EditText -editext_rePassword : EditText -editext_email : EditText +result : String
#OnCreate(savedInstanceState : Bundle) : void +addData() : String -checkValidation() : boolean -uploadFile() : String

Property

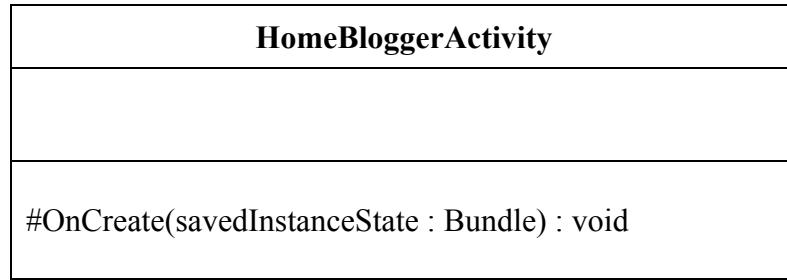
ID	Name	Description	Remark
1	editext_username	Inputting text for username.	Type: EditText
2	editext_password	Inputting text for password.	Type: EditText
3	editext_rePassword	Inputting text for re-password.	Type: EditText
4	editext_email	Inputting text for email.	Type: EditText
5	img_profile : String	Inputting picture for profile picture.	Type: String
6	result	Using in WebPageTask() class	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	addData() : String	Adding data to database.	Return Type: String
3	checkValidation() : boolean	Validation checking of input information.	Return Type: void
4	uploadFile() : String	Pictures uploading.	Return Type: String

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Class Diagram ID: 05
Class Name: HomeBloggerActivity



Property

ID	Name	Description	Remark
-	-	-	-

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState

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Class Diagram ID: 06**Class Name:** ViewBloggerProfileDetail

ViewBloggerProfileDetail	
- img_profile : String	
-username : String	
-follower_number : int	
-following_number : int	
-email : String	
-createdTutorialList : ArrayList <HashMap<string, string>>	
+result : String	
#OnCreate(savedInstanceState : Bundle) : void	
+showInfo() : void	
+follow() : void	

Property

ID	Name	Description	Remark
1	img_profile : String	Display user's profile picture	Type: String
2	username : String	Display user's username	Type: String
3	follower_number : int	Display user's follower number	Type: int
4	following_number : int	Display user's following number	Type: int
5	email : String	Display user's email	Type: String
6	createdTutorialList : ArrayList <HashMap<string, string>>	Display user's created tutorial	Type: String
7	result	Using in WebPageTask() class	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	showInfo() : void	Display information that exists in database.	Return Type: void

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3	follow() : void	Follow the blogger	Return Type: void
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Class Diagram ID: 07**Class Name:** ProfileManagementActivity

ProfileManagementActivity	
-edittext_email : EditText	
- img_profile : String	
+result : String	
#OnCreate(savedInstanceState : Bundle) : void	
+showInfo() : void	
+updateData () : Boolean	
+delete() : void	
-checkValidation() : boolean	

Property

ID	Name	Description	Remark
1	edittext_email	Inputting text for email.	Type: EditText
2	img_profile : String	Inputting picture for profile picture.	Type: String
3	result	Using in WebPageTask() class	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	showInfo() : void	Display information that exists in database.	Return Type: void
3	updateData () : boolean	Update data in database.	Return Type: boolean
4	delete() : void	Delete data in database	Return Type: void
5	checkValidation() : boolean	Validation checking of input information.	Return Type: void

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Class Diagram ID: 08**Class Name:** ChangePasswordActivity

ChangePasswordActivity
-editext_currentPassword : EditText -editext_newPassword : EditText -editext_reNewPassword : EditText +result : String
#OnCreate(savedInstanceState : Bundle) : void +updateData() : boolean -checkValidation() : boolean

Property

ID	Name	Description	Remark
1	editext_currentPassword	Inputting text for current password.	Type: EditText
2	editext_newPassword	Inputting text for new password.	Type: EditText
3	editext_reNewPassword	Inputting picture for re-new password.	Type: EditText
4	result	Using in WebPageTask() class	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	updateData() : boolean	Update data in database.	Return Type: boolean
3	checkValidation() : boolean	Validation checking of input information.	Return Type: void

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Class Diagram ID: 09**Class Name:** CreateTutorial

CreateTutorial
-editext_title : EditText -category : Checkbox -img_tutorial : String
#OnCreate(savedInstanceState : Bundle) : void +addData() : String +uploadFile() : String -checkValidation() : boolean

Property

ID	Name	Description	Remark
1	editext_title	Inputting text for title.	Type: EditText
2	category	Selecting a category.	Type: Checkbox
3	img_tutorial	Inputting picture for tutorial picture.	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	addData() : String	Adding data to database.	Return Type: String
3	uploadFile() : String	Pictures uploading.	Return Type: String
4	checkValidation() : boolean	Validation checking of input information.	Return Type: void

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Class Diagram ID: 10
Class Name: CreateMaterial

CreateMaterial
<pre>-editext_material: EditText -img_material : String</pre>
<pre>#OnCreate(savedInstanceState : Bundle) : void +addData() : String +uploadFile() : String -checkValidation() : boolean</pre>

Property

ID	Name	Description	Remark
1	editext_material	Inputting text for material description.	Type: EditText
2	img_material	Inputting picture for material picture.	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	addData() : String	Adding data to database.	Return Type: String
3	uploadFile() : String	Pictures uploading.	Return Type: String
4	checkValidation() : boolean	Validation checking of input information.	Return Type: void

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Class Diagram ID: 11
Class Name: CreateStep

CreateStep
- <code>step_number</code> : int - <code>editext_step</code> : EditText - <code>img_step</code> : String
<code>OnCreate(savedInstanceState : Bundle) : void</code> + <code>addData() : String</code> + <code>uploadFile() : String</code> - <code>checkValidation() : boolean</code>

Property

ID	Name	Description	Remark
1	<code>step_number</code>	Automated step number for the tutorial.	Type: int
2	<code>editext_step</code>	Inputting text for step description.	Type: EditText
3	<code>img_step</code>	Inputting picture for step picture.	Type: String

Method

ID	Name	Description	Remark
1	<code>OnCreate(savedInstanceState : Bundle) : void</code>	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	<code>addData() : String</code>	Adding data to database.	Return Type: String
3	<code>uploadFile() : String</code>	Pictures and video uploading.	Return Type: String
4	<code>checkValidation() : boolean</code>	Validation checking of input information.	Return Type: void

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Class Diagram ID: 12
Class Name: CreateStepList

CreateStepList
<pre>-img_step : String -step_number : int -step_description : String -vdo : String</pre>
<pre>#OnCreate(savedInstanceState : Bundle) : void +addData() : String +uploadFile() : String +uploadVdo() : String -checkValidation() : boolean</pre>

Property

ID	Name	Description	Remark
1	img_step	Inputting picture for step picture.	Type: String
2	step_number	Automated step number for the tutorial.	Type: int
3	step_description	Inputting number of steps for the tutorial.	Type: int
4	vdo	Inputting video for the tutorial.	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	addData() : String	Adding data to database.	Return Type: String
3	uploadFile() : String	Pictures uploading.	Return Type: String
4	uploadVdo() : String	Video uploading.	Return Type: String
5	checkValidation() : boolean	Validation checking of input information.	Return Type: void

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Class Diagram ID: 13**Class Name:** ManageTutorialActivity

ManageTutorialActivity
-editext_title : EditText
-category : Checkbox
-img_tutorial : String
#OnCreate(savedInstanceState : Bundle) : void
+showInfo() : void
+updateData () : boolean
-checkValidation() : boolean

Property

ID	Name	Description	Remark
1	editext_title	Inputting text for title.	Type: EditText
2	category	Selecting a category.	Type: Checkbox
3	img_tutorial	Inputting picture for tutorial picture.	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	showInfo() : void	Display information that exists in database.	Return Type: void
3	updateData () : boolean	Update data in database.	Return Type: boolean
4	checkValidation() : boolean	Validation checking of input information.	Return Type: void

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Class Diagram ID: 14**Class Name:** ManageMaterialActivity

ManageMaterialActivity
-editext_material: EditText
-img_material : String
#OnCreate(savedInstanceState : Bundle) : void
+showInfo() : void
+updateData () : boolean
-checkValidation() : boolean

Property

ID	Name	Description	Remark
1	editext_material	Inputting text for material description.	Type: EditText
2	img_material	Inputting picture for material picture.	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	showInfo() : void	Display information that exists in database.	Return Type: void
3	updateData () : boolean	Update data in database.	Return Type: boolean
4	checkValidation() : boolean	Validation checking of input information.	Return Type: void

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Class Diagram ID: 15
Class Name: ManageStepActivity

ManageStepActivity	
-step_number : int	
-editext_step: EditText	
-img_step : String	
-vdo : String	
#OnCreate(savedInstanceState : Bundle) : void	
+showInfo() : void	
+updateData () : boolean	
-checkValidation() : boolean	

Property

ID	Name	Description	Remark
1	step_number	Automated step number for the tutorial.	Type: int
2	editext_step	Inputting text for step description.	Type: EditText
3	img_step	Inputting picture for step picture.	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	showInfo() : void	Display information that exists in database.	Return Type: void
3	updateData () : boolean	Update data in database.	Return Type: boolean
4	checkValidation() : boolean	Validation checking of input information.	Return Type: void

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Class Diagram ID: 16
Class Name: ManageStepList

ManageStepList
- <code>img_step</code> : String - <code>step_number</code> : int - <code>step_description</code> : String - <code>vdo</code> : String
<code>OnCreate(savedInstanceState : Bundle) : void</code> + <code>updateData() : String</code> + <code>uploadFile() : String</code> + <code>uploadVdo() : String</code> + <code>delete() : void</code> - <code>checkValidation() : boolean</code>

Property

ID	Name	Description	Remark
1	<code>img_step</code>	Inputting picture for step picture.	Type: String
2	<code>step_number</code>	Automated step number for the tutorial.	Type: int
3	<code>step_description</code>	Inputting number of steps for the tutorial.	Type: int
4	<code>vdo</code>	Inputting video for the tutorial.	Type: String

Method

ID	Name	Description	Remark
1	<code>OnCreate(savedInstanceState : Bundle) : void</code>	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	<code>addData() : String</code>	Adding data to database.	Return Type: String
3	<code>uploadFile() : String</code>	Pictures and video uploading.	Return Type: String
4	<code>delete() : void</code>	Delete data in database	Return Type: void
4	<code>uploadVdo() : String</code>	Video uploading.	Return Type: String
5	<code>checkValidation() : boolean</code>	Validation checking of input information.	Return Type: void

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Class Diagram ID: 17**Class Name:** TutorialRandomActivity

TutorialRandomActivity
-arrayList : ArrayList <HashMap<string, string>>
#OnCreate(savedInstanceState : Bundle) : void +random() : String

Property

ID	Name	Description	Remark
1	-arrayList : ArrayList <HashMap<string, string>>	Object of ArrayList	Type: ArrayList

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	random() : String	Randomly get the data and display list of tutorials that exist in database.	Return Type: String

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Class Diagram ID: 18**Class Name:** TutorialCategoryActivity

TutorialCategoryActivity
-arrayList : ArrayList <HashMap<string, string>>
#OnCreate(savedInstanceState : Bundle) : void +category() : String

Property

ID	Name	Description	Remark
1	-arrayList : ArrayList <HashMap<string, string>>	Object of ArrayList	Type: ArrayList

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	category() : String	Get the tutorials and display according to each category from database.	Return Type: String

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Class Diagram ID: 19

Class Name: TutorialCategoriesList

TutorialCategoriesList
-arrayList : ArrayList <HashMap<string, string>>
#OnCreate(savedInstanceState : Bundle) : void +categoryList() : String

Property

ID	Name	Description	Remark
1	-arrayList : ArrayList <HashMap<string, string>>	Object of ArrayList	Type: ArrayList

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	category() : String	Get the tutorials and display according to each category from database.	Return Type: String

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Class Diagram ID: 20**Class Name:** TutorialPopularActivity

TutorialPopularActivity
-arrayList : ArrayList <HashMap<string, string>>
#OnCreate(savedInstanceState : Bundle) : void +popular() : String

Property

ID	Name	Description	Remark
1	-arrayList : ArrayList <HashMap<string, string>>	Object of ArrayList	Type: ArrayList

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	popular() : String	Get the most liked tutorials and display list of them that exist in database.	Return Type: String

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Class Diagram ID: 21
Class Name: TutorialFollowActivity

TutorialFollowActivity
-arrayList : ArrayList <HashMap<string, string>>
#OnCreate(savedInstanceState : Bundle) : void +Tutorialfollow() : String

Property

ID	Name	Description	Remark
1	-arrayList : ArrayList <HashMap<string, string>>	Object of ArrayList	Type: ArrayList

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	follow() : String	Get the tutorials of following bloggers from database and display list of them.	Return Type: String

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Class Diagram ID: 22**Class Name:** TutorialSearchActivity

TutorialSearchActivity
-arrayList : ArrayList <HashMap<string, string>>
#OnCreate(savedInstanceState : Bundle) : void +search() : String

Property

ID	Name	Description	Remark
1	-arrayList : ArrayList <HashMap<string, string>>	Object of ArrayList	Type: ArrayList

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	search() : String	Get the tutorials that contain the searched character or keyword from database and display list of them.	Return Type: String

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Class Diagram ID: 23
Class Name: ViewTutorialDetail

ViewTutorialDetail	
<pre>-title : String -category : String -img_tutorial : String -material: String -img_material : String -step_number : int -step_description: String -img_step : String -vdo : String</pre>	
<pre>#OnCreate(savedInstanceState : Bundle) : void +showInfo() : void +showComment(): void +addComment(): void +like():void +step():void +vdo():void</pre>	

Property

ID	Name	Description	Remark
1	title	Title of the called tutorial.	Type: String
2	category	Category of the called tutorial.	Type: String
3	img_tutorial	Tutorial picture of the called tutorial.	Type: String
4	material	Material description of the called tutorial.	Type: String
5	img_material	Material picture of the called tutorial.	Type: String
6	step_number	Number of step of the called tutorial.	Type: int
7	step_description	Step description of the called tutorial.	Type: String
8	img_step	Step pictures of the called tutorial.	Type: String
9	vdo	Video of the called tutorial.	Type: String

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Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	showInfo() : void	Display information that exists in database.	Return Type: void
3	showComment() : void	Display comment of the selected tutorial that exists in database.	Return Type: void
4	addComment() : void	Add new comment for the tutorial.	Return Type: void
5	like() : void	Add like to the selected tutorial.	Return Type: void
6	step() : void	Display steps of the selected tutorial that exists in database.	Return Type: void
7	vdo() : void	Display video of the selected tutorial that exists in database.	Return Type: void

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Class Diagram ID: 24**Class Name:** ImageAdapter

ImageAdapter	
~context : Context	
~inflater : LayoutInflater	
~data : ArrayList<HashMap<String, String>>	
~imageLoader : ImageLoader	
+ImageAdapter(context : Context, arraylist : ArrayList<HashMap<String, String>>)	
+getCount() : int	
+getItem(position : Int) : Object	
+getItemId(position : Int) : long	
+getView(position : Int, convertView : View, parent : ViewGroup) : View	

Property

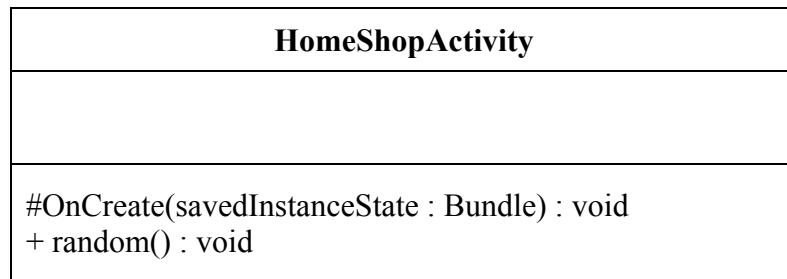
ID	Name	Description	Remark
1	context	Object of Context	Type: Context
2	inflater	Object of LayoutInflater	Type: LayoutInflater
3	data	ArrayList of data	Type: ArrayList
4	imageLoader	Object of ImageLoader class	Type: ImageLoader

Method

ID	Name	Description	Remark
1	ImageAdapter(context : Context, arraylist : ArrayList<HashMap<String, String>>)	Constructor of ImageAdapter	Return Type: - Parameter: Context, ArrayList
2	getCount() : int	Count the data that represented in this adapter.	Return Type: int
3	getItem(position : int) : Object	Get position of on click item.	Return Type: Object
4	getItemId(position : int) : long	Get position of on click item.	Return Type: long
5	getView(position : int, convertView : View, parent : ViewGroup) : View	Get the view of data according to the specified position.	Return Type: View Parameter: int, View, ViewGroup

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Class Diagram ID: 25
Class Name: HomeShopActivity



Property

ID	Name	Description	Remark
-	-	-	-

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	random() : void	Randomly get the data from database.	Return Type: void

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Class Diagram ID: 26
Class Name: CreateShop

CreateShop
-editext_name : EditText -category : Checkbox -img_shop : String
#OnCreate(savedInstanceState : Bundle) : void +addData() : String +uploadFile() : String -checkValidation() : boolean

Property

ID	Name	Description	Remark
1	editext_name	Inputting text for title.	Type: EditText
2	category	Selecting a category.	Type: Checkbox
3	img_shop	Inputting picture for shop picture.	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	addData() : String	Adding data to database.	Return Type: String
3	uploadFile() : String	Pictures uploading.	Return Type: String
4	checkValidation() : boolean	Validation checking of input information.	Return Type: void

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Class Diagram ID: 27
Class Name: CreateShopDetail

CreateShopDetail
-branch: EditText -telephone_number : EditText -information : EditText -picture: String
#OnCreate(savedInstanceState : Bundle) : void +addData() : String +uploadFile() : String -checkValidation() : boolean

Property

ID	Name	Description	Remark
1	branch	Inputting text for branch.	Type: EditText
2	telephone_number	Inputting text for telephone number.	Type: EditText
3	information	Inputting text for information.	Type: EditText
4	picture	Inputting picture for shop picture.	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	addData() : String	Adding data to database.	Return Type: String
3	uploadFile() : String	Pictures uploading.	Return Type: String
4	checkValidation() : boolean	Validation checking of input information.	Return Type: void

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Class Diagram ID: 28
Class Name: CreateShopMap

CreateShopMap
-latitude : String -longitude : String
#OnCreate(savedInstanceState : Bundle) : void +addData() : String -checkValidation() : boolean

Property

ID	Name	Description	Remark
1	latitude	Pining the location by latitude	Type: String
2	longitude	and longitude number	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	addData() : String	Adding data to database.	Return Type: String
3	checkValidation() : boolean	Validation checking of input information.	Return Type: void

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Class Diagram ID: 29
Class Name: ManageShopActivity

ManageShopActivity
-editext_name : EditText
-category : Checkbox
-img_tutorial : String
#OnCreate(savedInstanceState : Bundle) : void
+showInfo() : void
+updateData () : boolean
-checkValidation() : boolean

Property

ID	Name	Description	Remark
1	editext_name	Inputting text for title.	Type: EditText
2	category	Selecting a category.	Type: Checkbox
3	img_tutorial	Inputting picture for shop picture.	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	showInfo() : void	Display information that exists in database.	Return Type: void
3	updateData () : boolean	Update data in database.	Return Type: boolean
4	checkValidation() : boolean	Validation checking of input information.	Return Type: void

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Class Diagram ID: 30
Class Name: MangeShopDetail

ManageShopDetail
-branch: EditText -telephone_number : EditText -information : EditText -picture: String
#OnCreate(savedInstanceState : Bundle) : void +addData() : String +uploadFile() : String -checkValidation() : boolean

Property

ID	Name	Description	Remark
1	branch	Inputting text for branch.	Type: EditText
2	telephone_number	Inputting text for telephone number.	Type: EditText
3	information	Inputting text for information.	Type: EditText
4	picture	Inputting picture for shop picture.	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	addData() : String	Adding data to database.	Return Type: String
3	uploadFile() : String	Pictures uploading.	Return Type: String
4	checkValidation() : boolean	Validation checking of input information.	Return Type: void

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Class Diagram ID: 31
Class Name: ManageShopMap

ManageShopMap
-latitude : String -longitude : String
#OnCreate(savedInstanceState : Bundle) : void +showInfo() : void +updateData () : boolean -checkValidation() : boolean

Property

ID	Name	Description	Remark
1	latitude	Pining the location by latitude and longitude number	Type: String
2	longitude		Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	showInfo() : void	Display information that exists in database.	Return Type: void
3	updateData () : boolean	Update data in database.	Return Type: boolean
4	checkValidation() : boolean	Validation checking of input information.	Return Type: void

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Class Diagram ID: 32**Class Name:** ShopCategoryActivity

ShopCategoryActivity
-arrayList : ArrayList <HashMap<string, string>>
#OnCreate(savedInstanceState : Bundle) : void +category() : String

Property

ID	Name	Description	Remark
1	-arrayList : ArrayList <HashMap<string, string>>	Object of ArrayList	Type: ArrayList

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	category() : String	Get the shops according to each category from database and display list of them.	Return Type: String

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Class Diagram ID: 33
Class Name: ShopCategoriesList

ShopCategoriesList
-arrayList : ArrayList <HashMap<string, string>>
#OnCreate(savedInstanceState : Bundle) : void +categoryList() : String

Property

ID	Name	Description	Remark
1	-arrayList : ArrayList <HashMap<string, string>>	Object of ArrayList	Type: ArrayList

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	categoryList() : String	Get the tutorials and display according to each category from database.	Return Type: String

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Class Diagram ID: 34
Class Name: ShopSearchActivity

ShopSearchActivity
-arrayList : ArrayList <HashMap<string, string>>
#OnCreate(savedInstanceState : Bundle) : void +search() : String

Property

ID	Name	Description	Remark
1	-arrayList : ArrayList <HashMap<string, string>>	Object of ArrayList	Type: ArrayList

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	search() : String	Get the tutorials that contain the searched character or keyword from database and display list of them.	Return Type: String

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Class Diagram ID: 35
Class Name: ViewShopDetail

ViewShopDetail	
-name : String -category : String -owner : String -branch: String -telephone_number : String -information : String -picture: String -location : String	
#OnCreate(savedInstanceState : Bundle) : void +showInfo() : void	

Property

ID	Name	Description	Remark
1	name	Name of the called shop.	Type: String
2	category	Category of the called shop.	Type: String
3	owner	Owner (shopkeeper) of the called shop.	Type: String
4	branch	Branch of the called shop.	Type: String
5	telephone_number	Telephone number of the called shop.	Type: String
6	information	Information of the called shop.	Type: String
7	picture	Pictures of the called shop.	Type: String
8	location	Location of the called shop.	Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	showInfo() : void	Display information that exists in database.	Return Type: void

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Class Diagram ID: 36
Class Name: SendMessageActivity

SendMessageActivity
-username : String -receiver : String -message_detail : String -time : DATETIME
#OnCreate(savedInstanceState : Bundle) : void +getMessage() : String

Property

ID	Name	Description	Remark
1	username	Username of the sender	Type: String
2	receiver	Username of the receiver	Type: String
3	message_detail	The message that has been sent.	Type: String
4	time	The time that the message has been sent.	Type: DATETIME

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	getMessage() : String	Call the message detail	Return Type: String

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Class Diagram ID: 37
Class Name: MessageDetailActivity

MessageDetailActivity	
-username : String	
-receiver : String	
-message_detail : String	
-time : DATETIME	
#OnCreate(savedInstanceState : Bundle) : void	
+showMessage() : void	
+deleteMessage() : void	

Property

ID	Name	Description	Remark
1	username	Username of the sender	Type: String
2	receiver	Username of the receiver	Type: String
3	message_detail	The message that has been sent.	Type: String
4	time	The time that the message has been sent.	Type: DATETIME

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	showMessage() : void	Display the message	Return Type: void
3	deleteMessage() : void	Delete the message	Return Type: void

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Class Diagram ID: 38**Class Name:** ViewShopkeeperProfileDetail

ViewShopkeeperProfileDetail
- img_profile : String -username : String -email : String -createdShopList : ArrayList <HashMap<string, string>> +result : String
#OnCreate(savedInstanceState : Bundle) : void +showInfo() : void

Property

ID	Name	Description	Remark
1	img_profile : String	Display user's profile picture	Type: String
2	username : String	Display user's username	Type: String
5	email : String	Display user's email	Type: String
6	createdShopList : ArrayList <HashMap<string, string>>	Display user's created shop	Type: String
7	result	Using in WebPageTask() class	Type: String

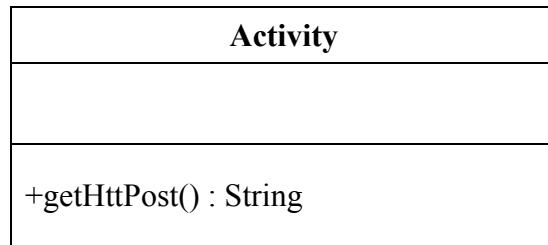
Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	showInfo() : void	Display information that exists in database.	Return Type: void

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Class Diagram ID: 39

Class Name: Activity



Property

ID	Name	Description	Remark
-	-	-	-

Method

ID	Name	Description	Remark
1	+getHttpPost() : String	Send data to the server by following URL.	Return Type: String

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Class Diagram ID: 40

Class Name: GoogleMaps

GoogleMaps
-myMap : GoogleMap
#OnCreate(savedInstanceState : Bundle) : void - connect() : void

Property

ID	Name	Description	Remark
1	-myMap	GoogleMaps API that will be used to display the map for the system.	Return Type: GoogleMap

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	connect() : void	Connecting the system with Google Map	Return Type: void

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Class Diagram ID: 41
Class Name: PostFacebookActivity

PostFacebookActivity
-mFacebook : Facebook -mFacebookCb : CheckBox -mProgress : ProgressDialog -mRunOnUi : Handler = new Handler() -APP_ID : String ~rimg: String
#OnCreate(savedInstanceState : Bundle) : void -postToFacebook (review : String) : void

Property

ID	Name	Description	Remark
1	-mFacebook	Object of Facebook	Return Type: Facebook Object
2	-mFacebookCb	Object of CheckBox	Return Type: CheckBox Object
3	-mProgress	Object of ProgressDialog	Return Type: ProgressDialog Object
4	-mRunOnUi	Object of Handler	Return Type: Handler Object
5	-APP_ID	String of Facebook API ID	Return Type: String
6	~rimg	Set tutorial image	Return Type: String

Method

ID	Name	Description	Remark
1	OnCreate(savedInstanceState : Bundle) : void	It will be called when there is an activity creating.	Return Type: void Parameter: savedInstanceState
2	postToFacebook (review : String)	The system will call this method to post the tutorial on user's Facebook wall.	Return Type: void

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4.3 Sequence Diagram

4.3.1 Web Application

W-SQ-01 Registration

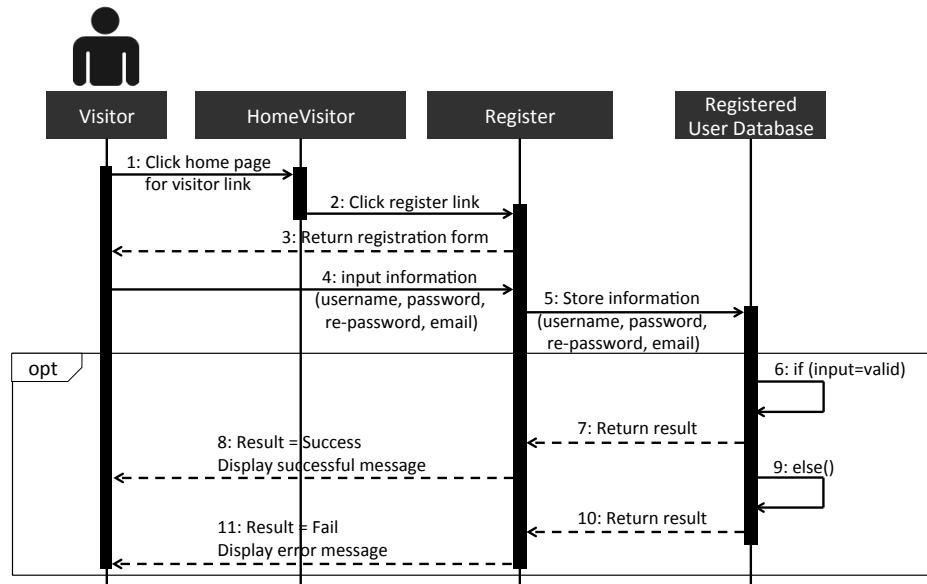


Figure 4.3.1: W-SQ-01 Registration

W-SQ-02 Log in

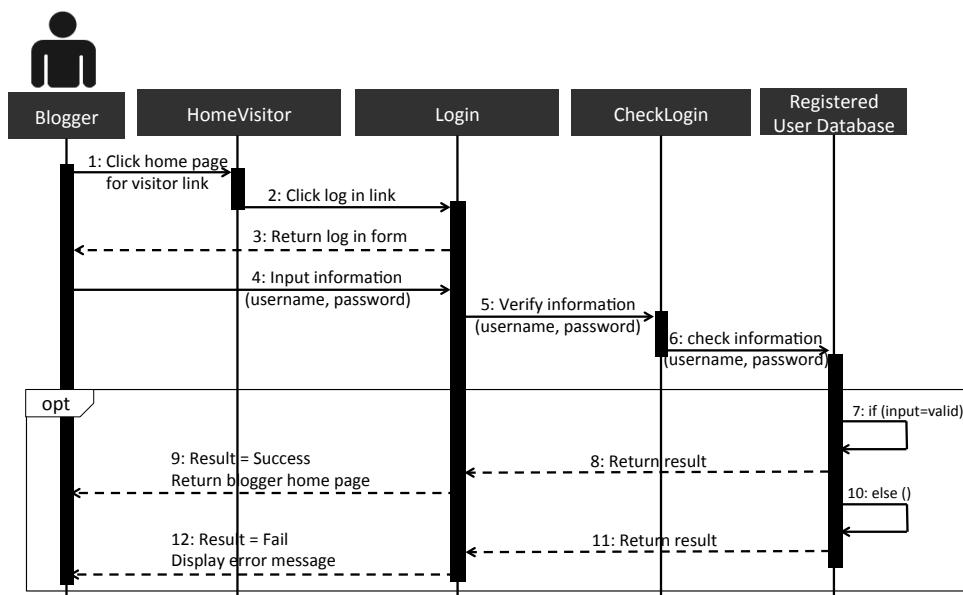
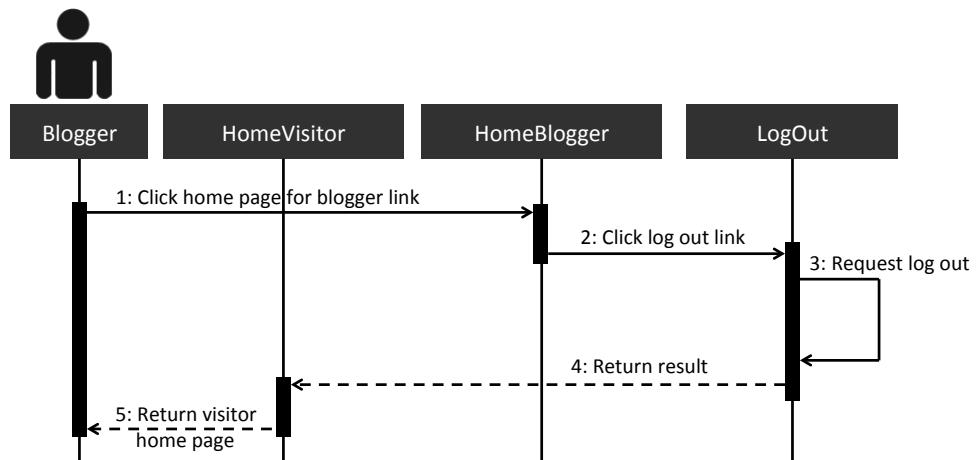
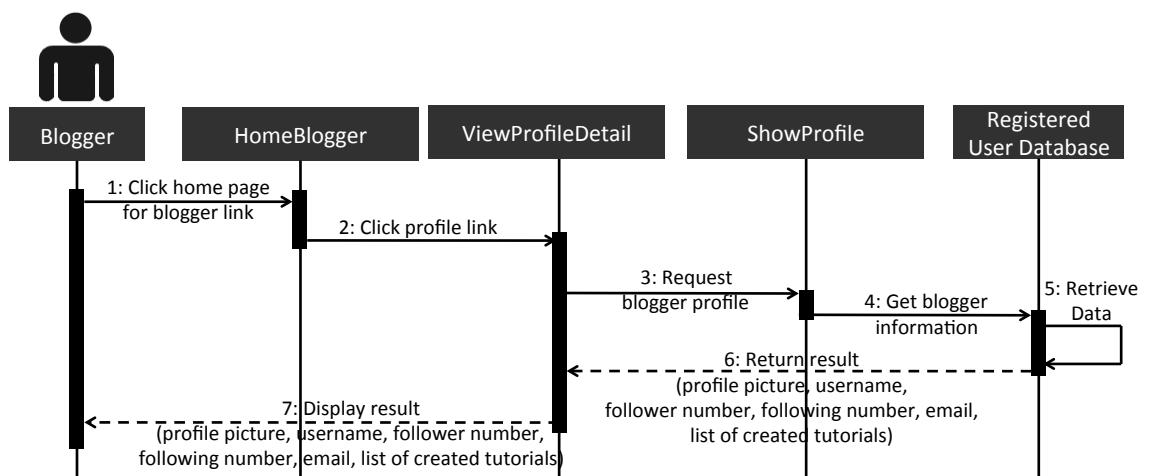
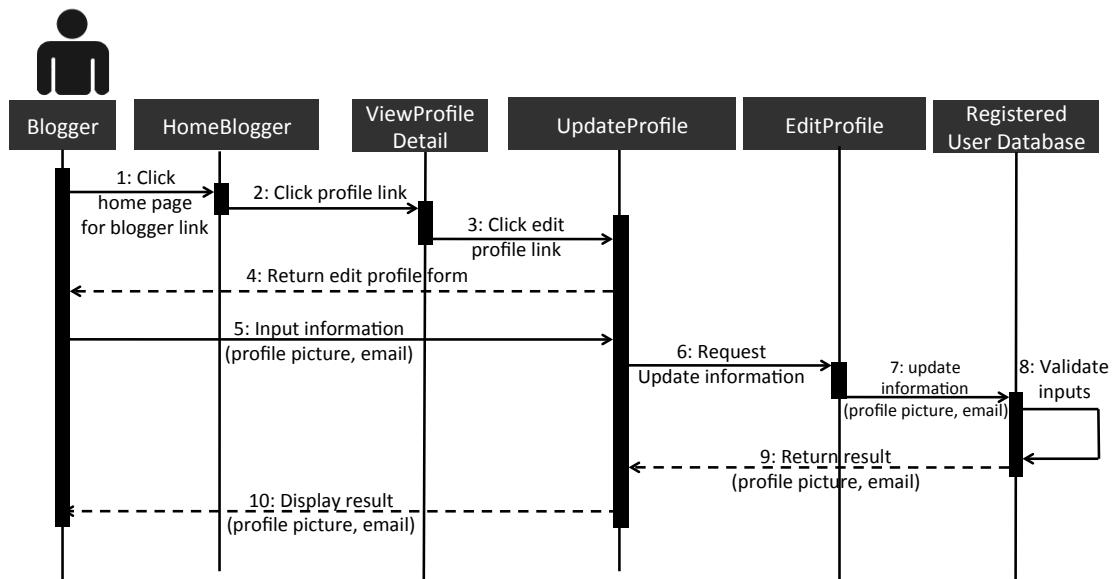
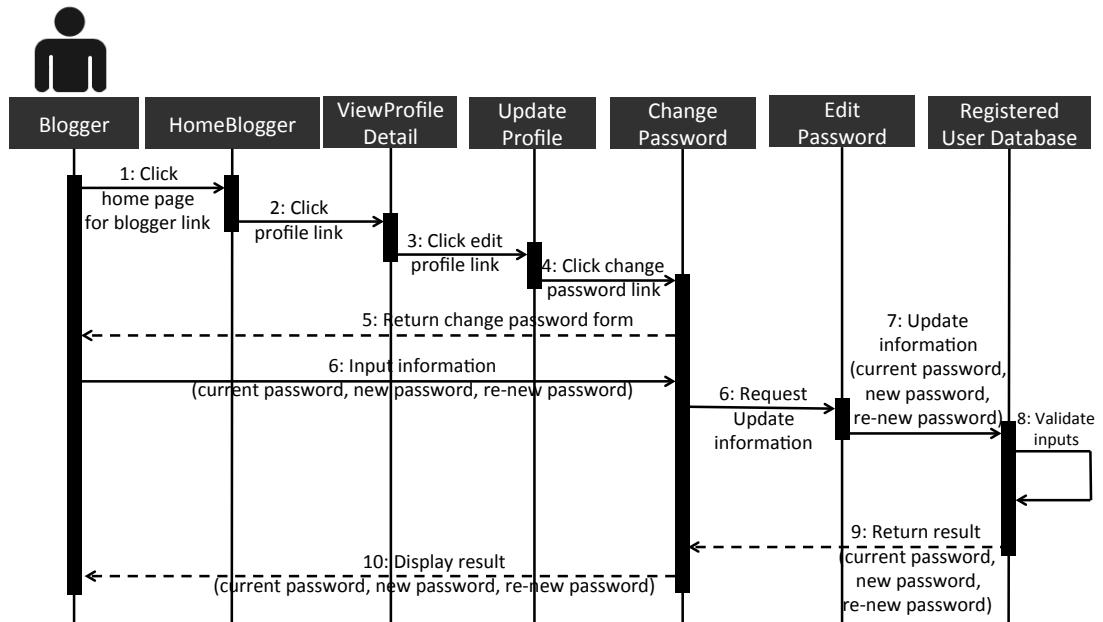


Figure 4.3.2: W-SQ-02 Log in

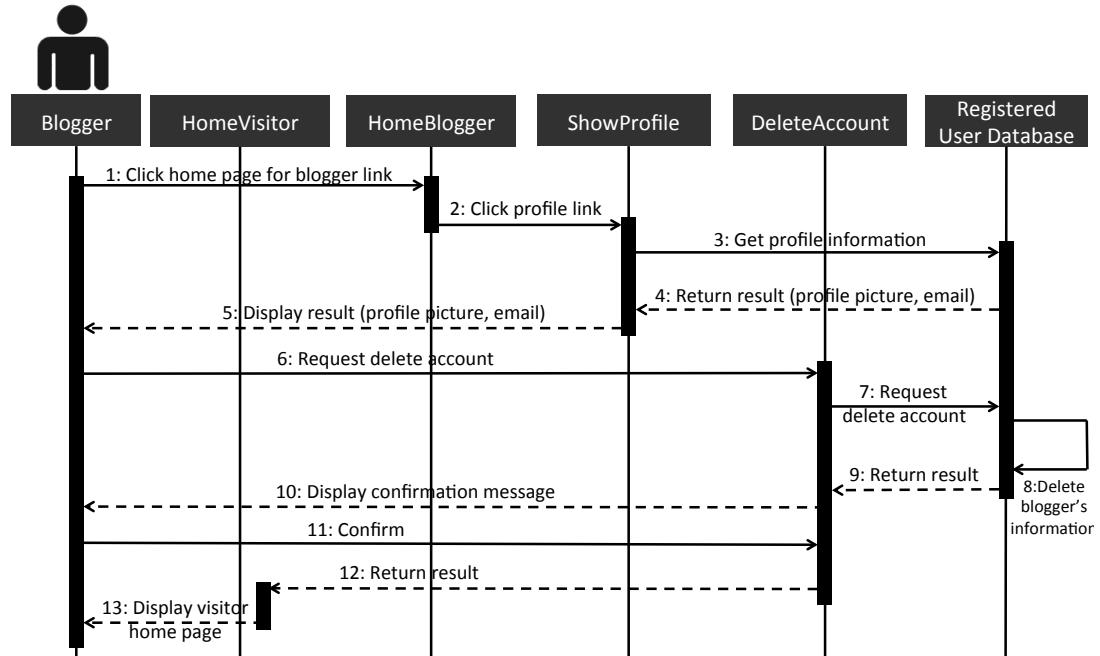
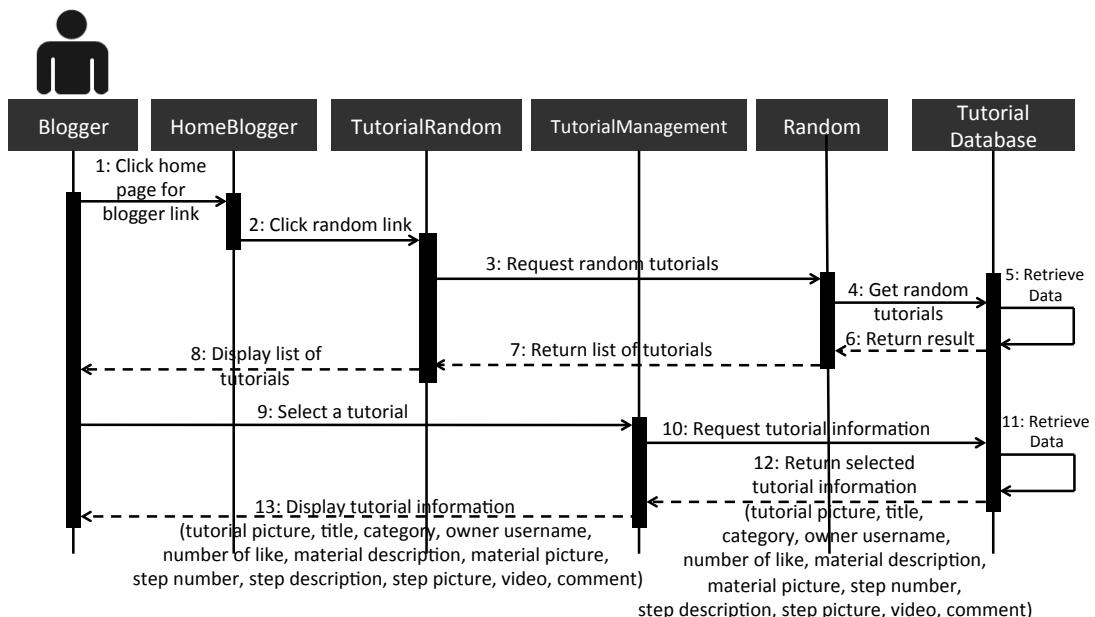
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W-SQ-03 Log out**Figure 4.3.3: W-SQ-03 Log out****W-SQ-04 View profile****Figure 4.3.4: W-SQ-04 View profile**

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W-SQ-05 Edit profile**Figure 4.3.5: W-SQ-05 Edit profile****W-SQ-06 Change password****Figure 4.3.6: W-SQ-06 Change password**

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W-SQ-07 Delete account**Figure 4.3.7: W-SQ-07 Delete account****W-SQ-08 Explore tutorials by random and see tutorial detail****Figure 4.3.8: W-SQ-08 Explore tutorials by random and see tutorial detail**

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W-SQ-09 Explore popular tutorials and see tutorial detail

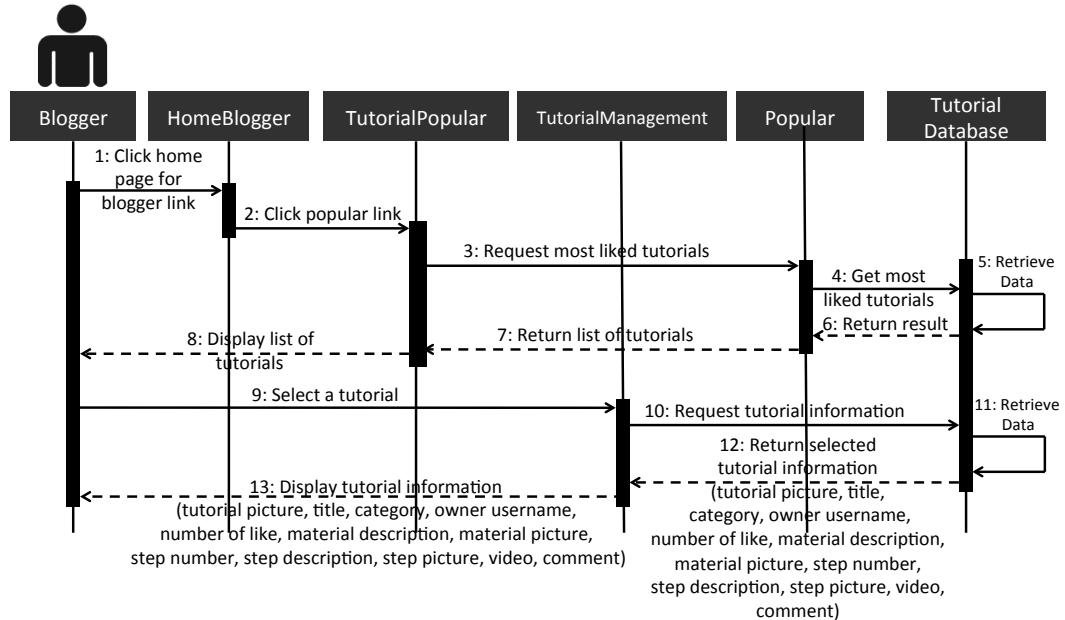


Figure 4.3.9: W-SQ-09 Explore popular tutorials and see tutorial detail

W-SQ-10 Explore tutorials by category and see tutorial detail

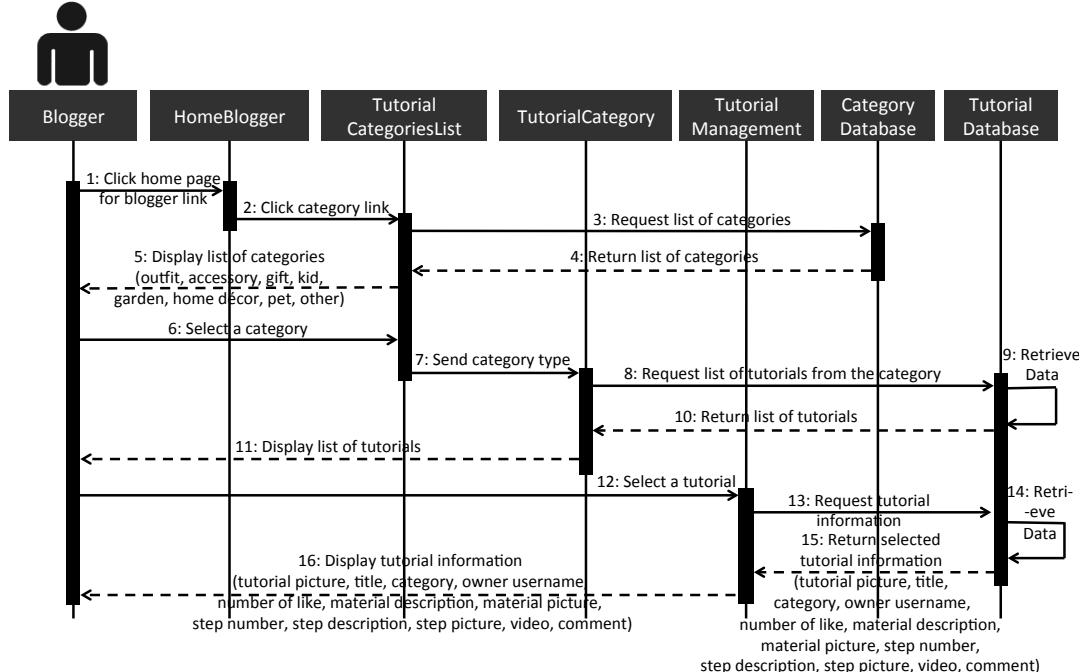


Figure 4.3.10: W-SQ-10 Explore tutorials by category and see tutorial detail

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W-SQ-11 Explore following tutorials and see tutorial detail

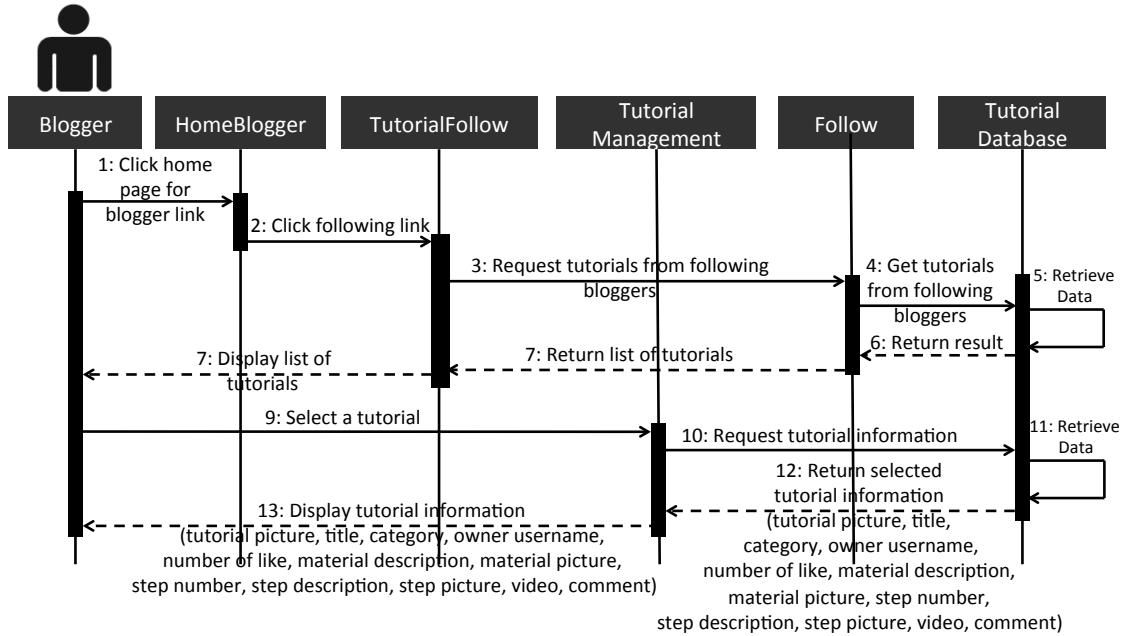


Figure 4.3.11: W-SQ-11 Explore following tutorials and see tutorial detail

W-SQ-12 Search tutorials and see tutorial detail

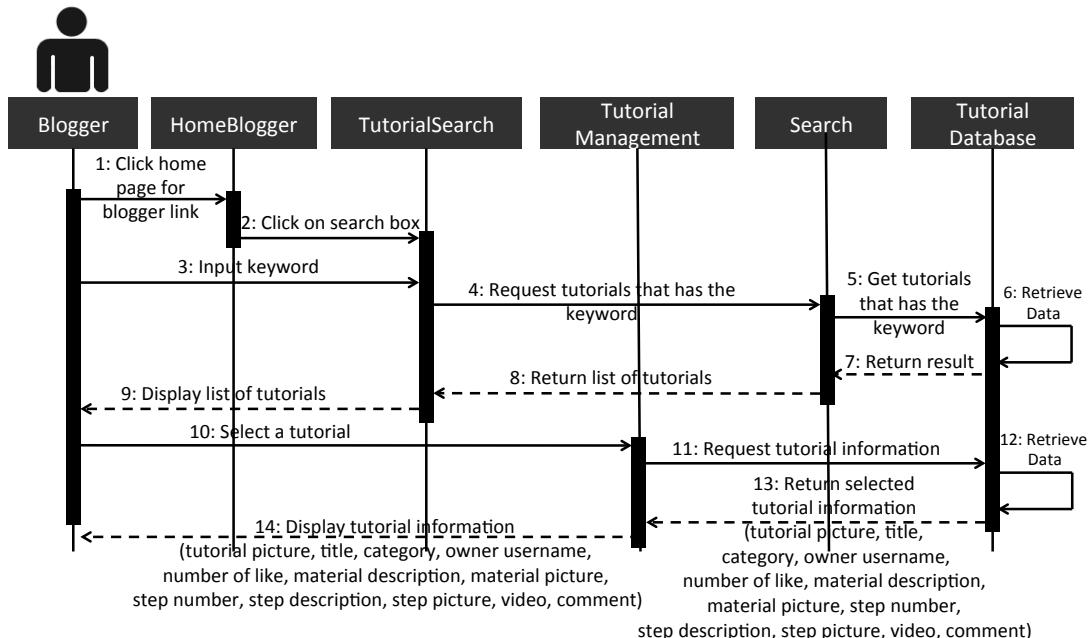
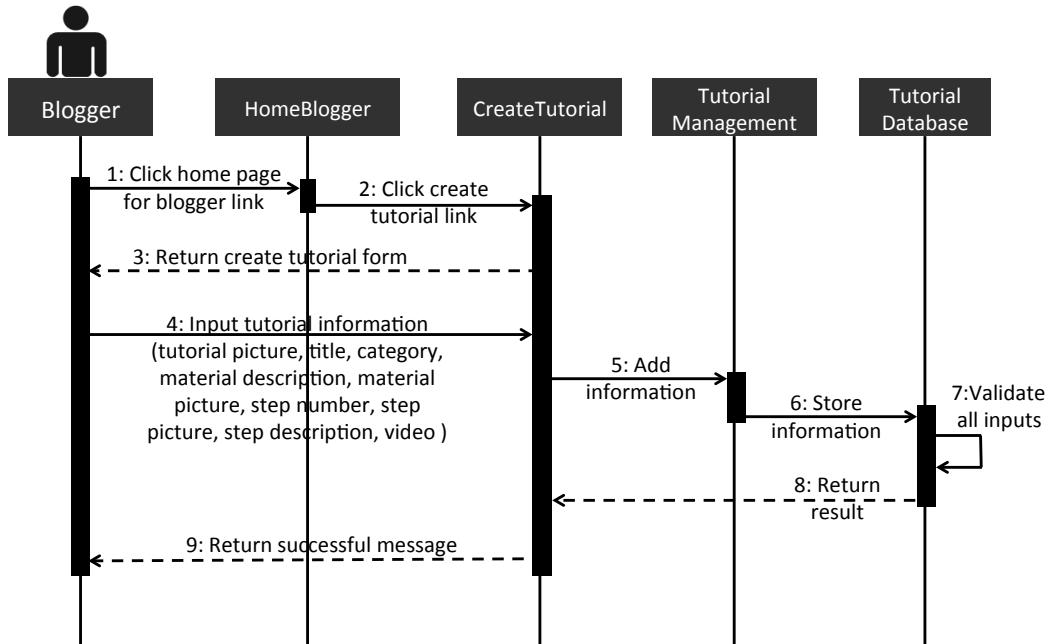
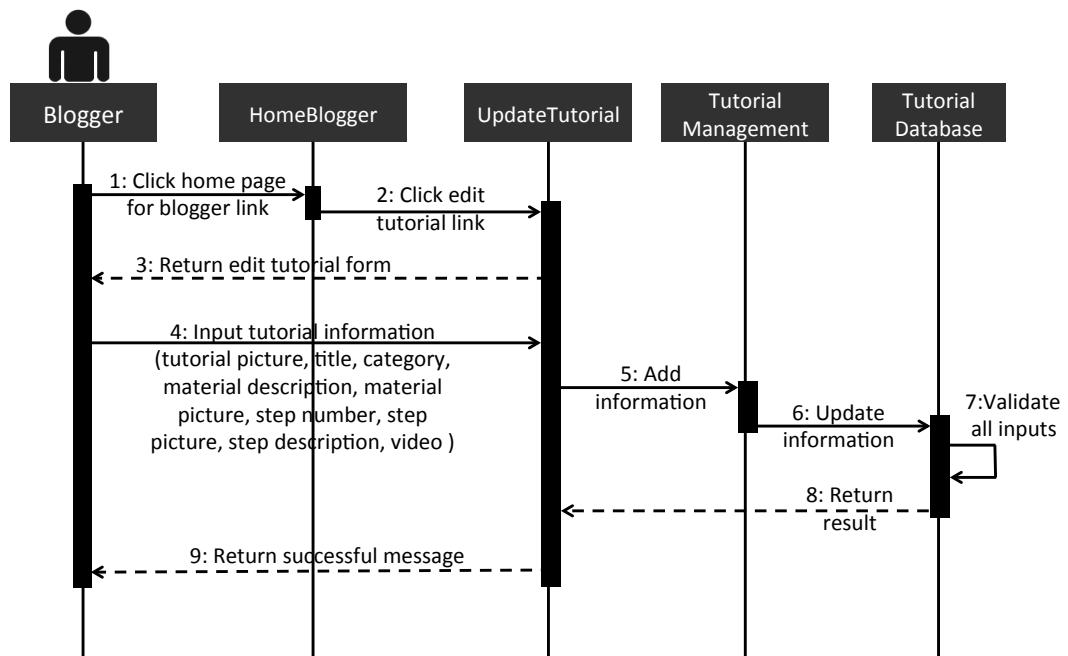


Figure 4.3.12: W-SQ-12 Search tutorials and see tutorial detail

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W-SQ-13 Create tutorial**Figure 4.3.13: W-SQ-13 Create tutorial****W-SQ-14 Edit tutorial****Figure 4.3.14: W-SQ-13 Edit tutorial**

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W-SQ-15 Delete tutorial

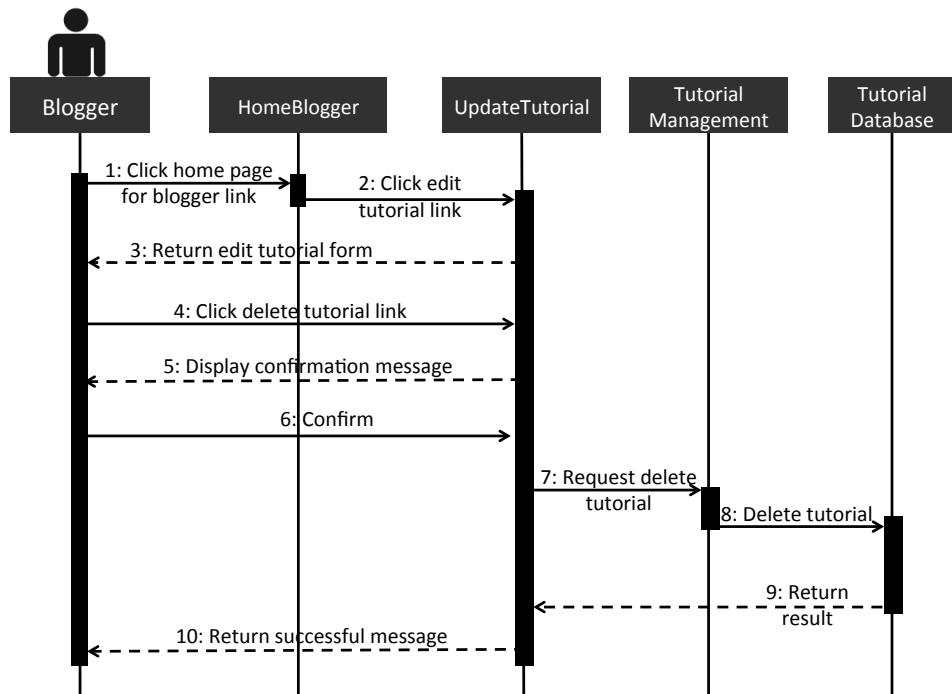


Figure 4.3.15: W-SQ-15 Delete tutorial

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4.3.2 Mobile Application

M-SQ-01 Registration

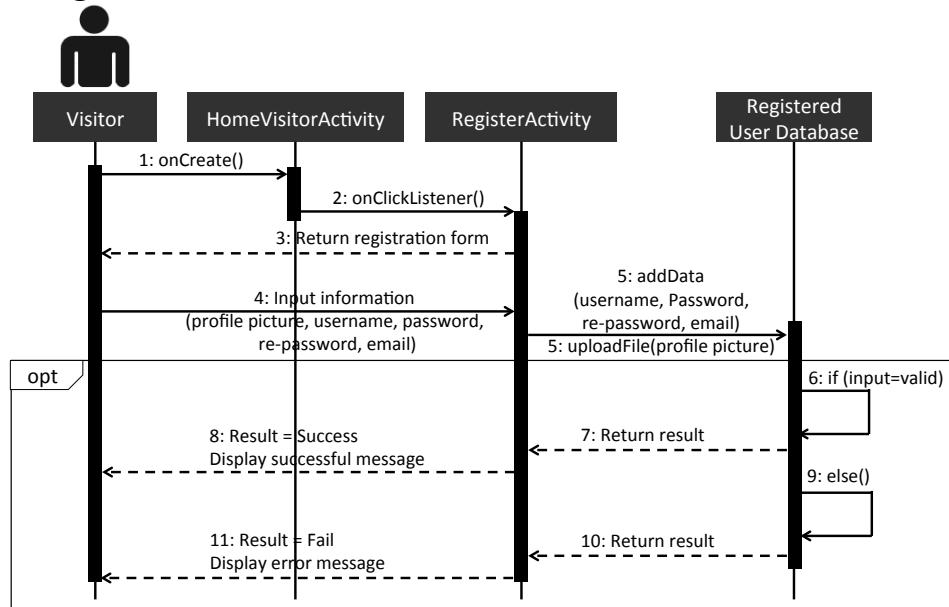


Figure 4.4.1: M-SQ-01 Registration

M-SQ-02 Log in for blogger

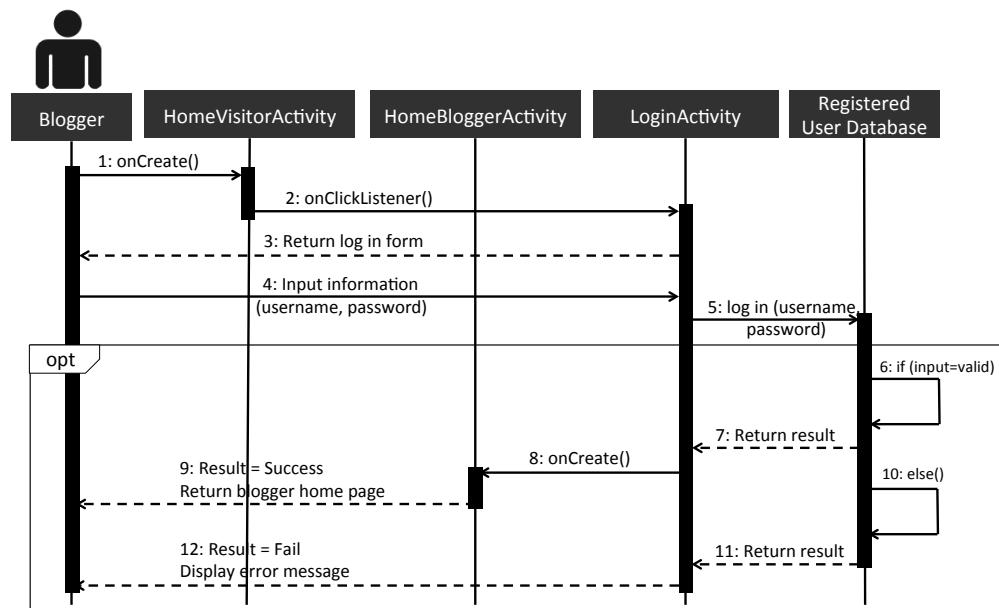


Figure 4.4.2: M-SQ-02 Log in for blogger

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M-SQ-03 Log in for shopkeeper

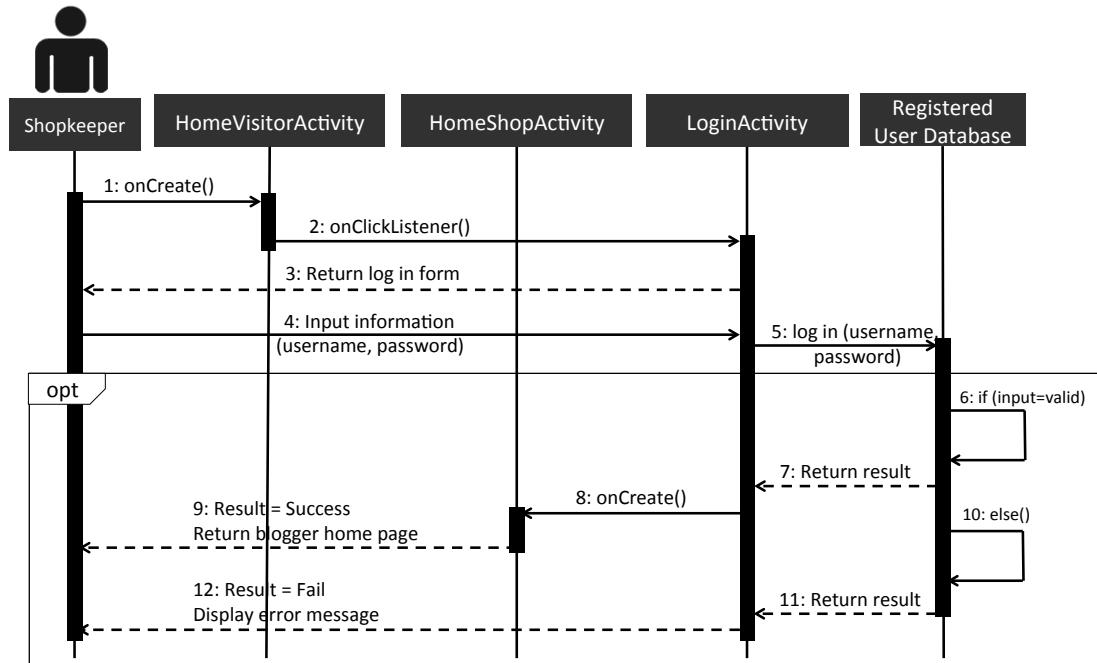


Figure 4.4.3: M-SQ-03 Log in for shopkeeper

M-SQ-04 Log out for blogger

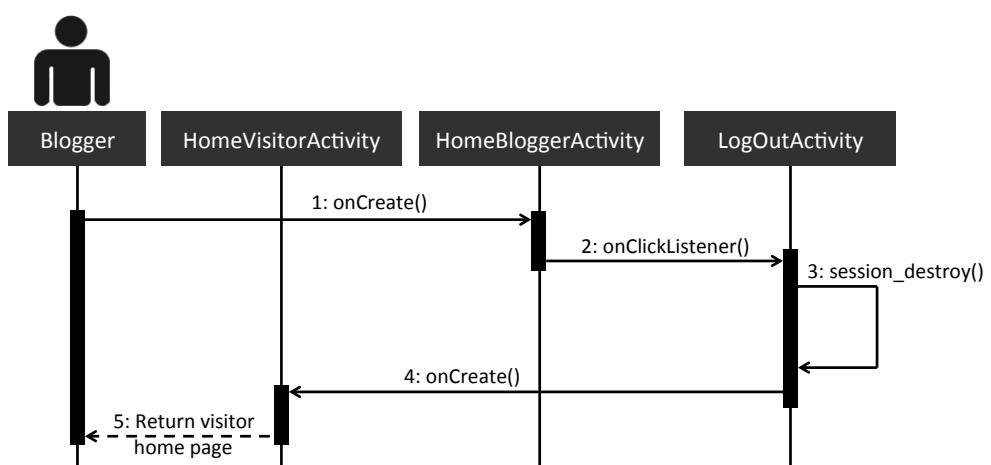


Figure 4.4.4: M-SQ-04 Log out for blogger

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M-SQ-05 Log out for shopkeeper

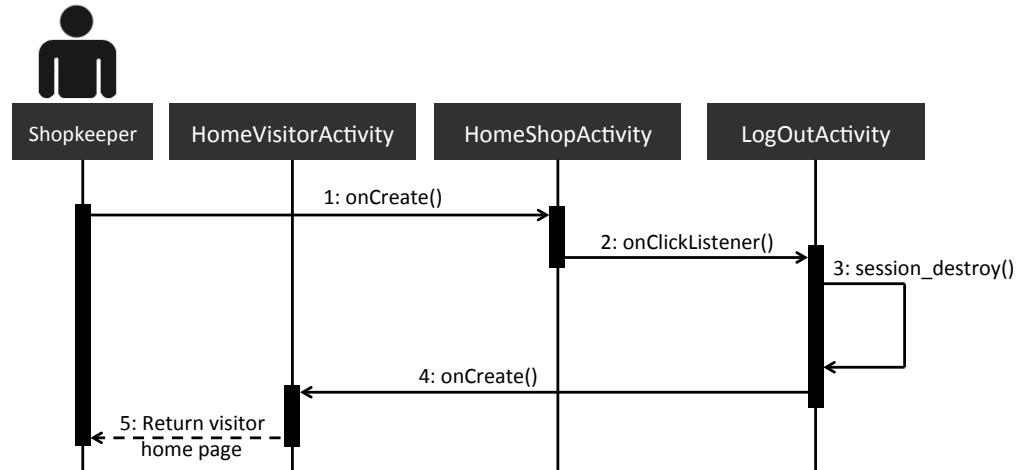


Figure 4.4.5: M-SQ-05 Log out for shopkeeper

M-SQ-06 View profile for blogger

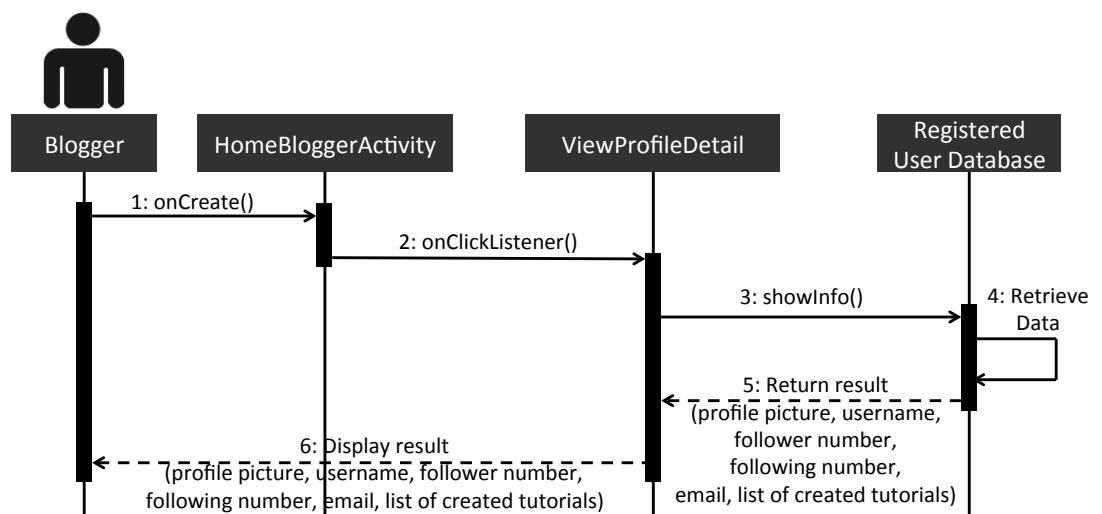


Figure 4.4.6: M-SQ-06 View profile for blogger

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M-SQ-07 View profile for shopkeeper

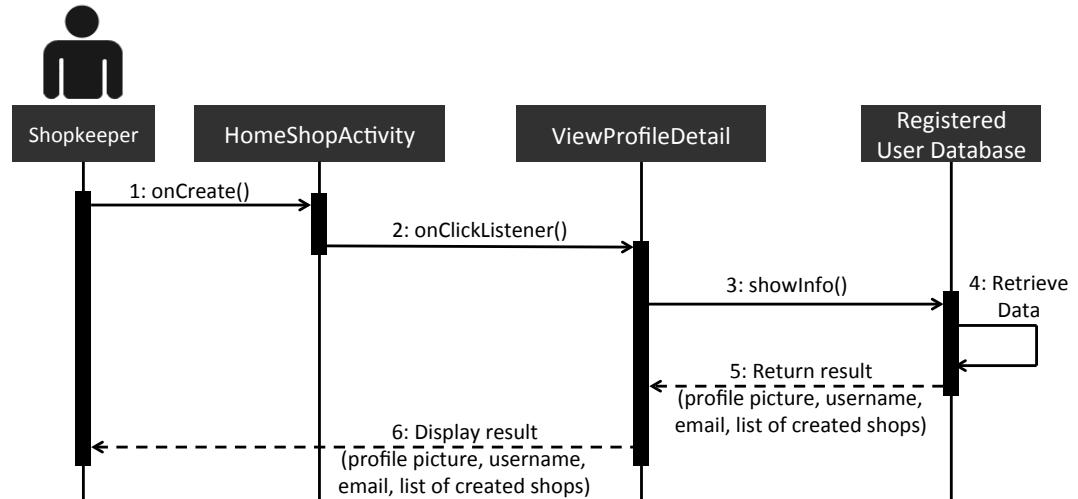


Figure 4.4.7: M-SQ-07 View profile for shopkeeper

M-SQ-08 Edit profile for blogger

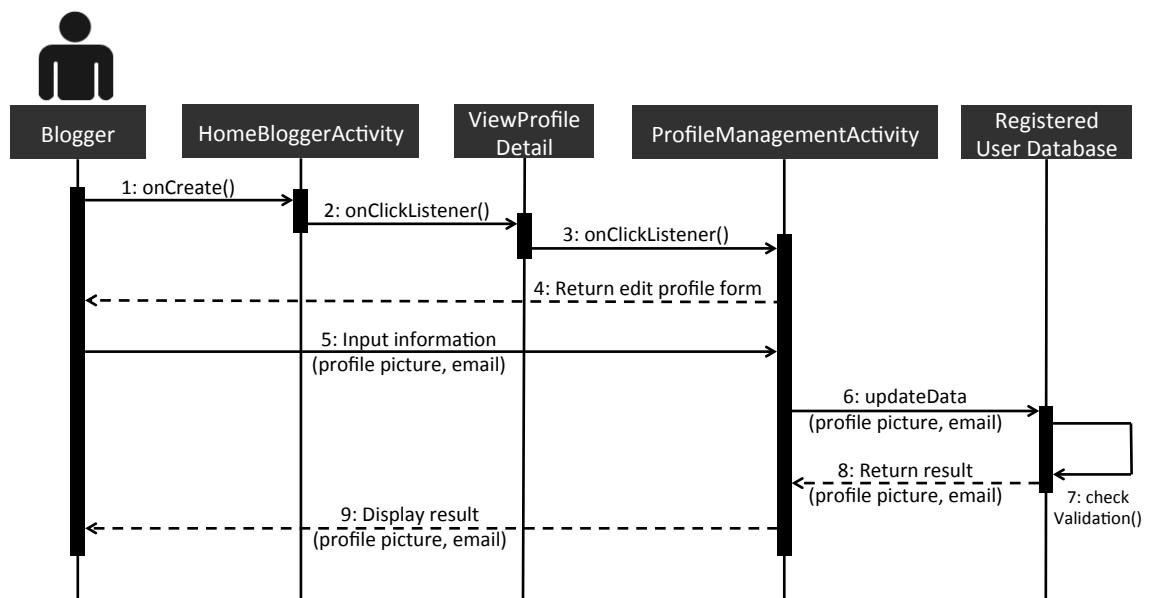


Figure 4.4.8: M-SQ-08 Edit profile for blogger

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M-SQ-09 Edit profile for shopkeeper

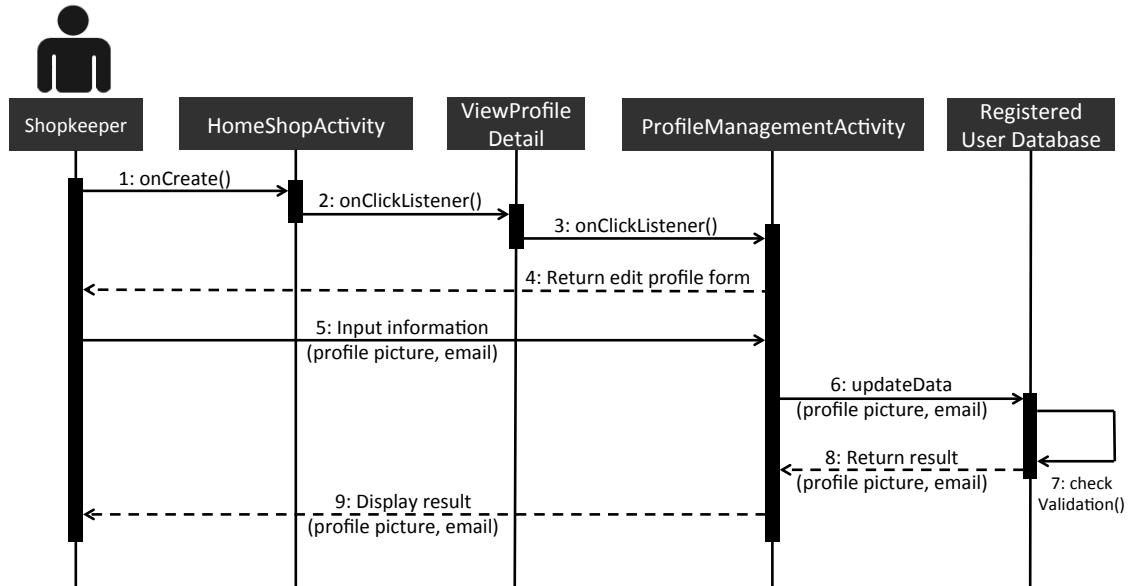


Figure 4.4.9: M-SQ-09 Edit profile for shopkeeper

M-SQ-10 Change password for blogger

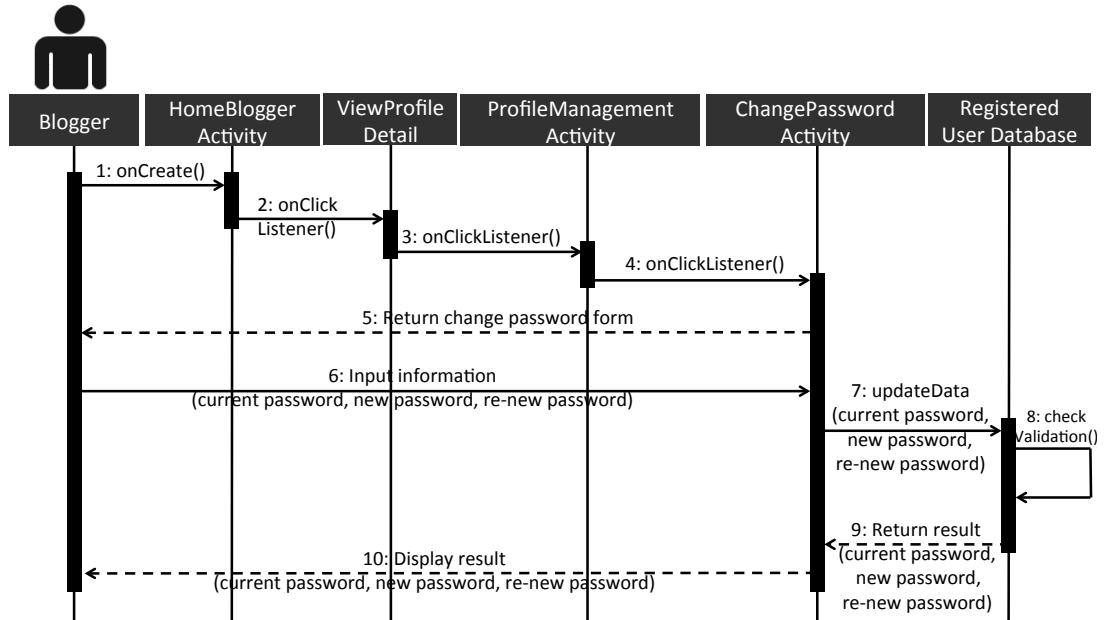


Figure 4.4.10: M-SQ-10 Change password for blogger

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M-SQ-11 Change password for shopkeeper

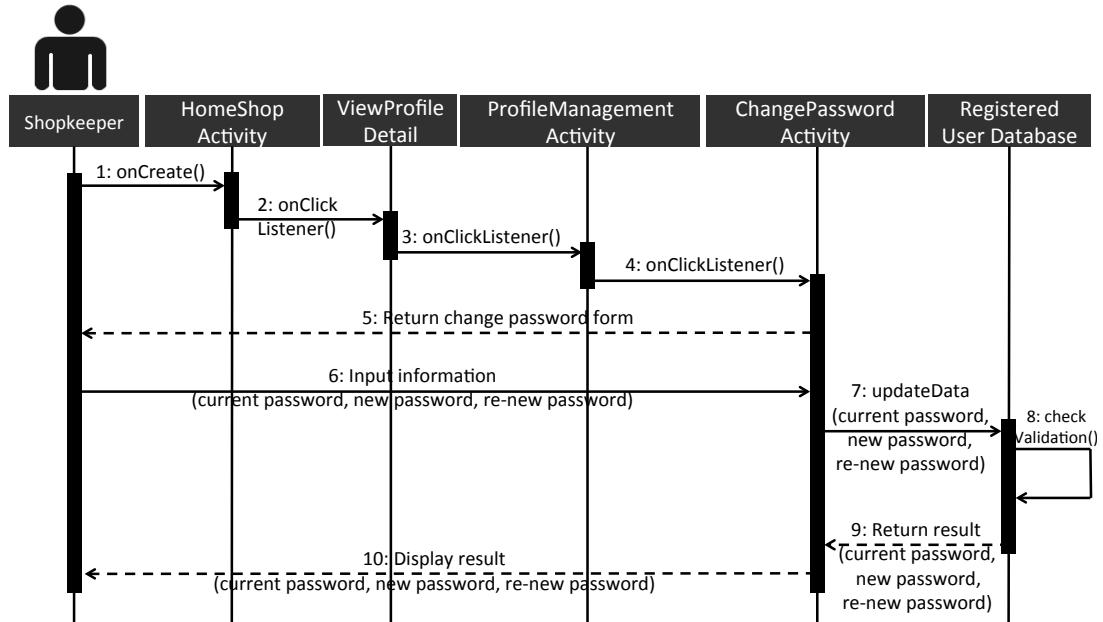


Figure 4.4.11: M-SQ-11 Change password for shopkeeper

M-SQ-12 Delete account for blogger

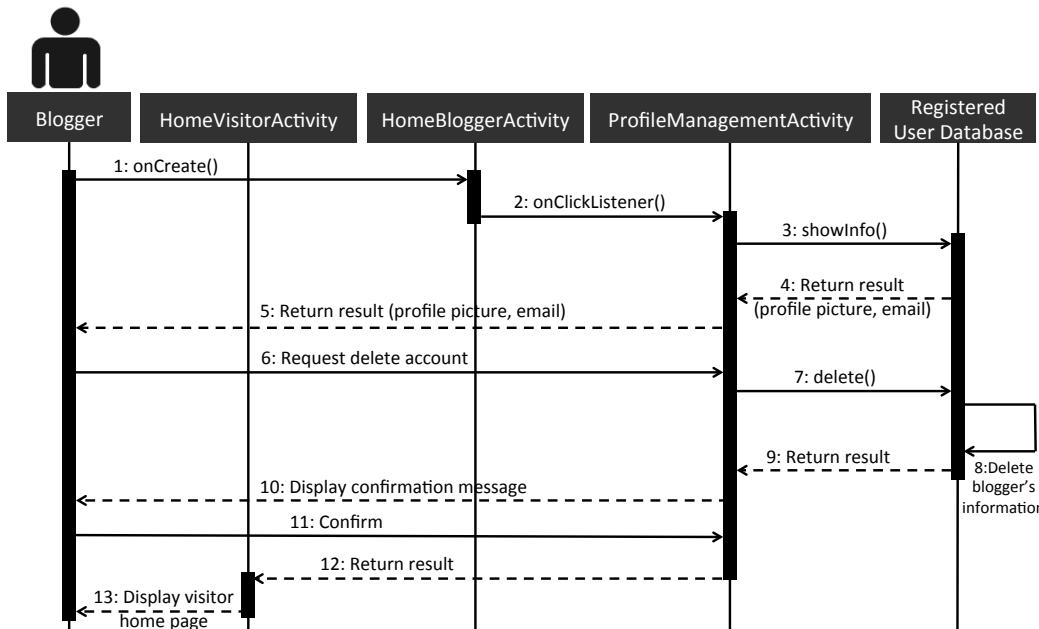


Figure 4.4.12: M-SQ-12 Delete account for blogger

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M-SQ-13 Delete account for shopkeeper

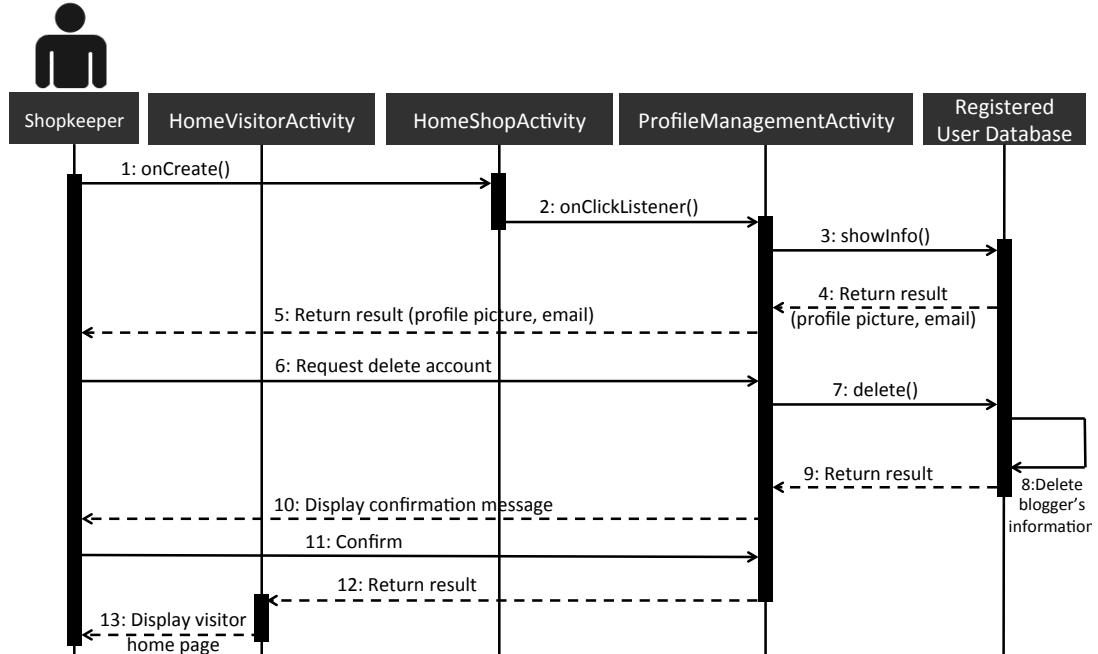


Figure 4.4.13: M-SQ-13 Delete account for shopkeeper

M-SQ-14 Explore random tutorials and see tutorial detail

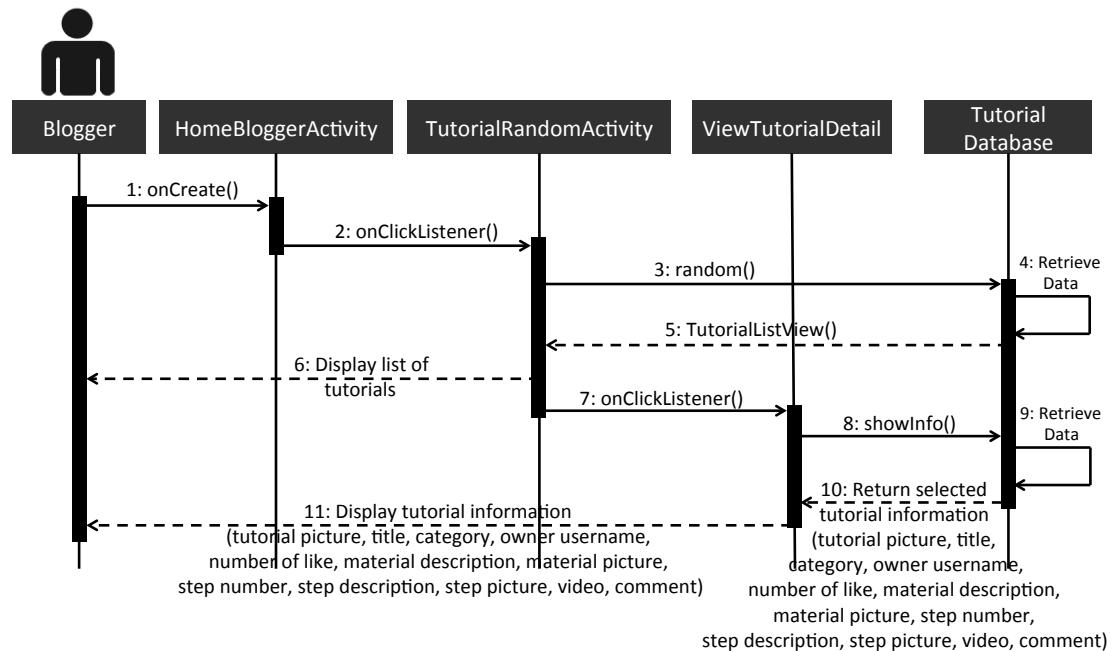


Figure 4.4.14: M-SQ-14 Explore random tutorials and see tutorial detail

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M-SQ-15 Explore popular tutorials and see tutorial detail

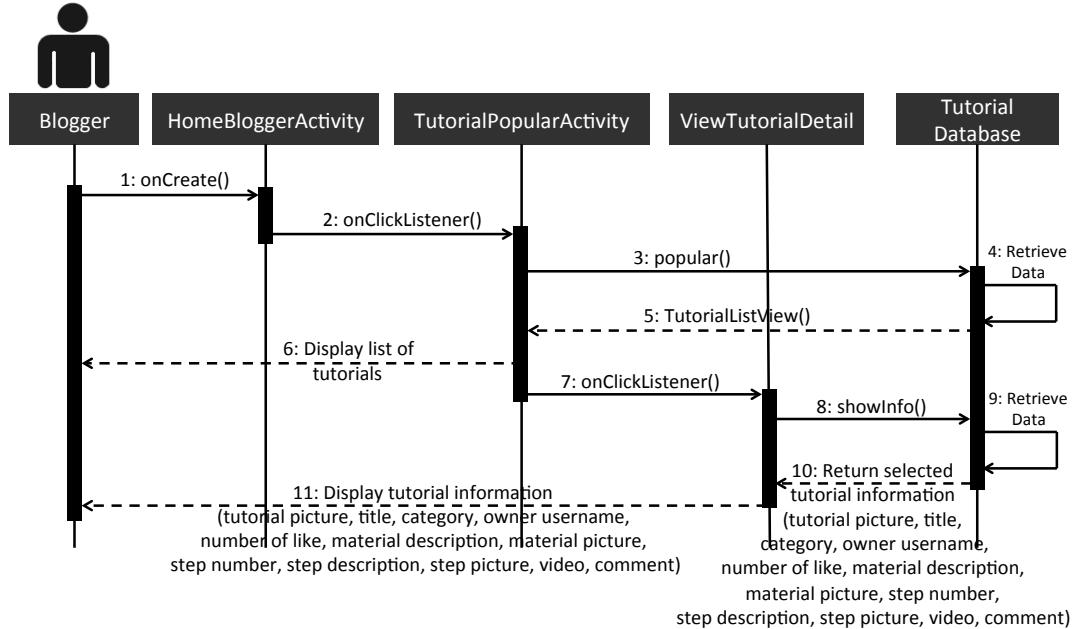


Figure 4.4.15: M-SQ-15 Explore popular tutorials and see tutorial detail

M-SQ-16 Explore tutorials by category and see tutorial detail

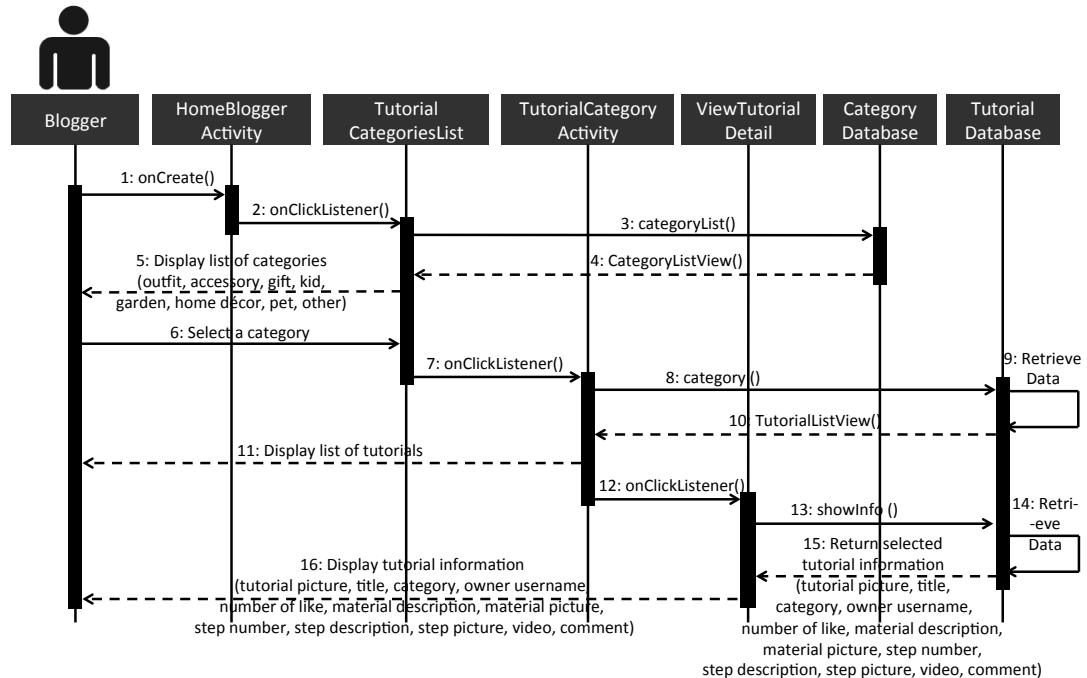


Figure 4.4.16: M-SQ-16 Explore tutorials by category and see tutorial detail

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M-SQ-17 Explore following tutorials and see tutorial detail

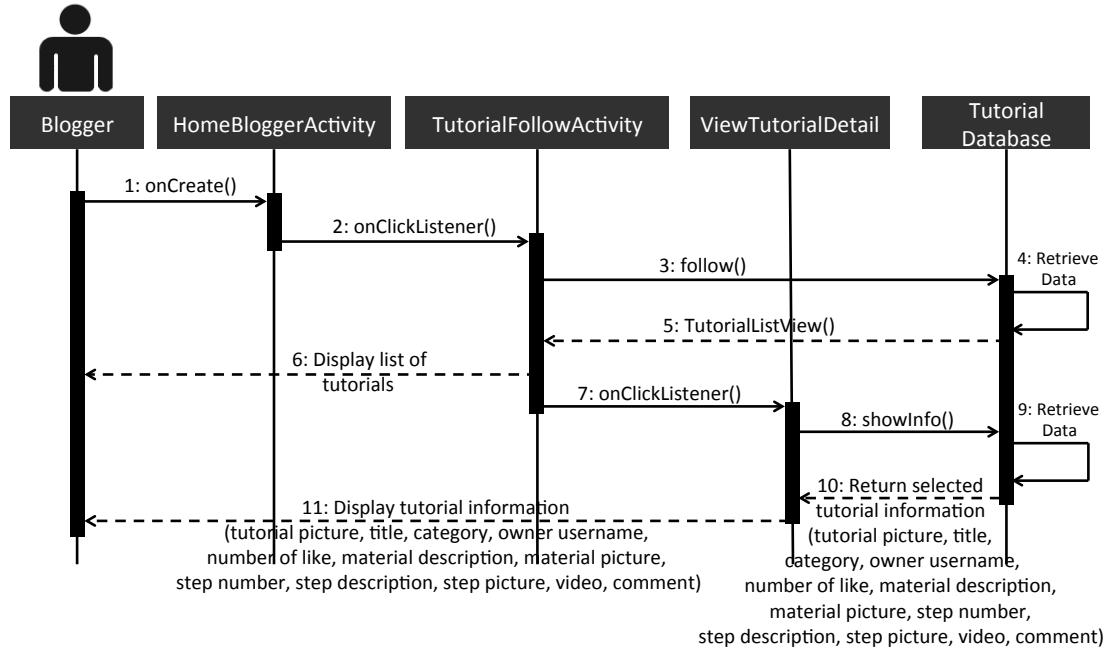


Figure 4.4.17: M- SQ-17 Explore following tutorials and see tutorial detail

M-SQ-18 Search tutorials and see tutorial detail

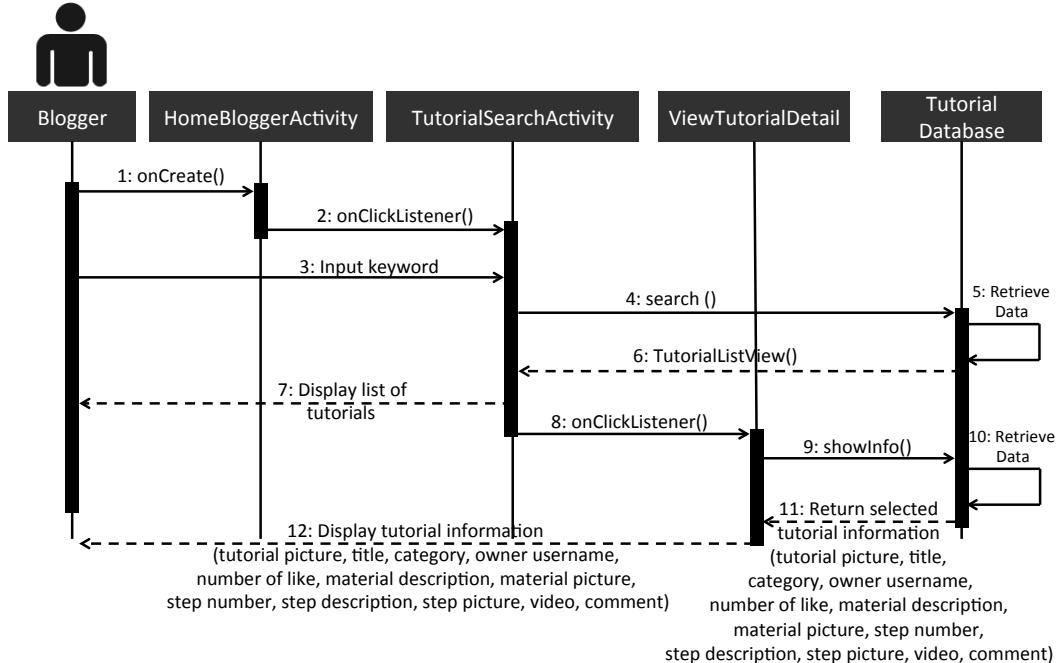
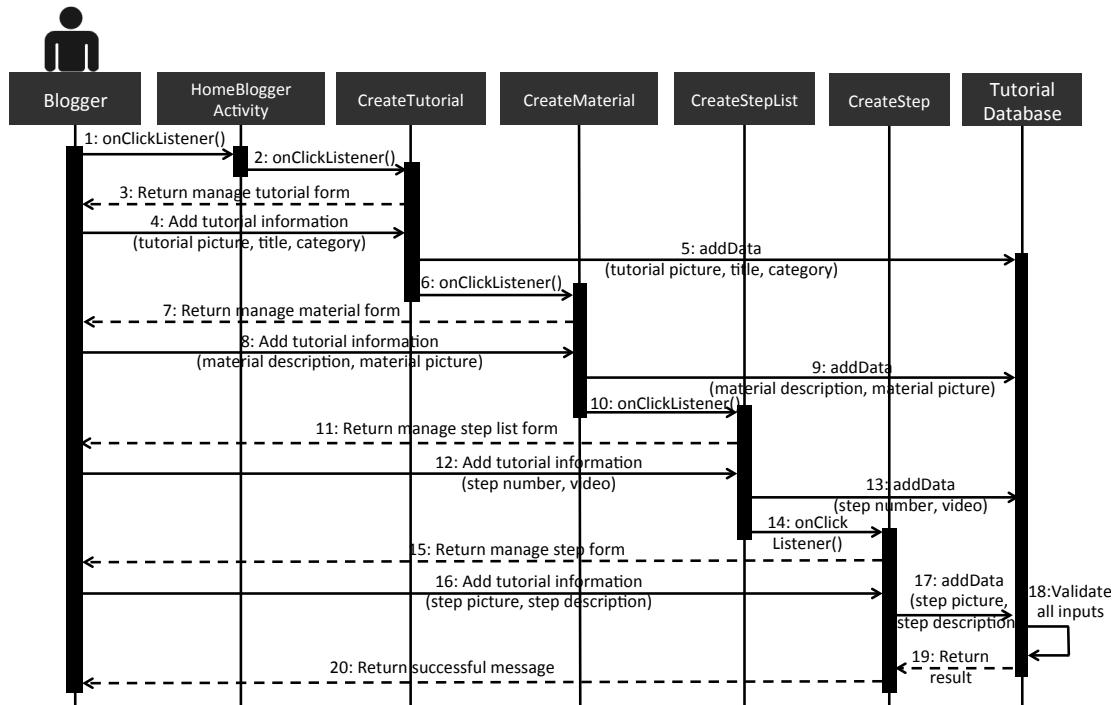
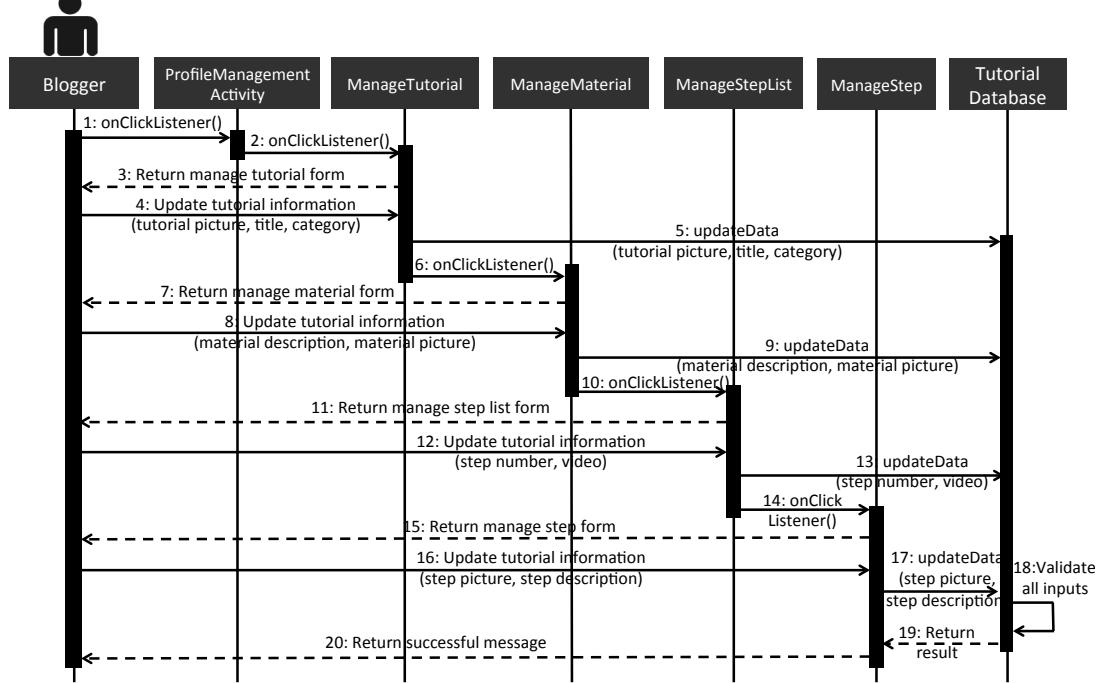
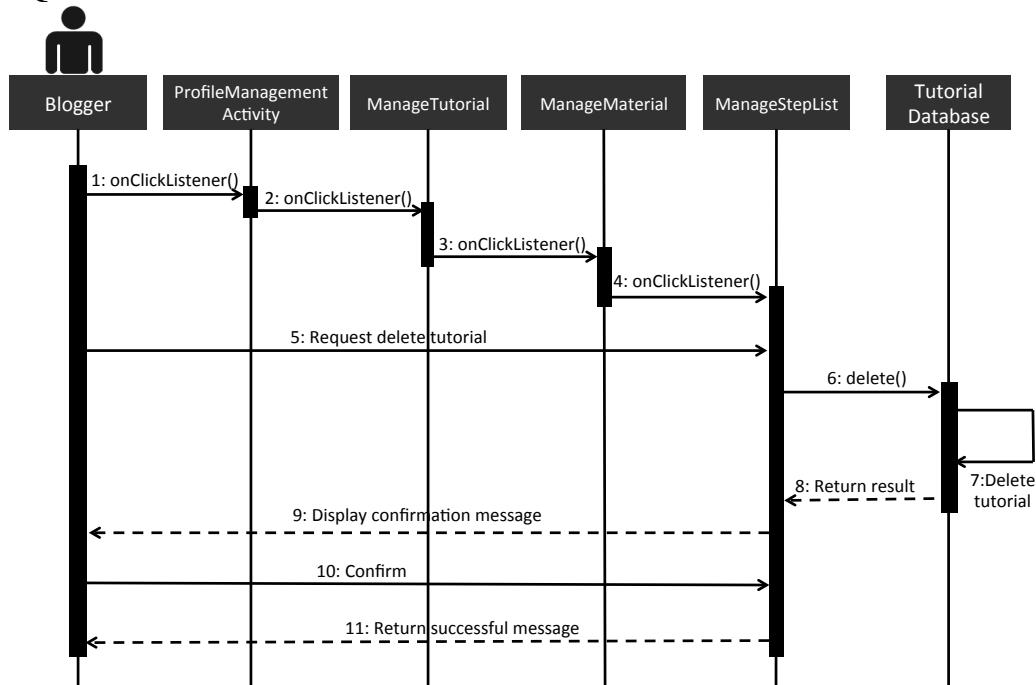
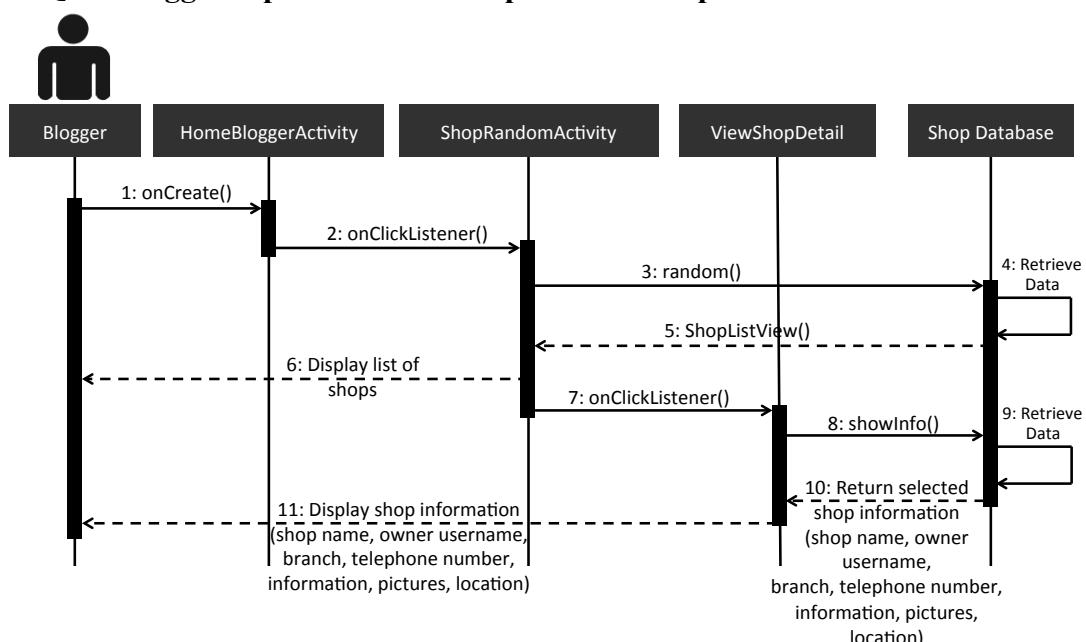


Figure 4.4.18: M-SQ-18 search tutorials and see tutorial detail

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M-SQ-19 Create a tutorial**Figure 4.4.19: M-SQ-19 Create tutorial****M-SQ-20 Edit a tutorial****Figure 4.4.20: M-SQ-20 Edit tutorial**

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M-SQ-21 Delete tutorial**Figure 4.4.21: M-SQ-21 Delete tutorial****M-SQ-22 Blogger explore random shops and see shop detail****Figure 4.4.22: M-SQ-22 Blogger explore random shops and see shop detail**

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M-SQ-23 Blogger explore shops by category and see shop detail

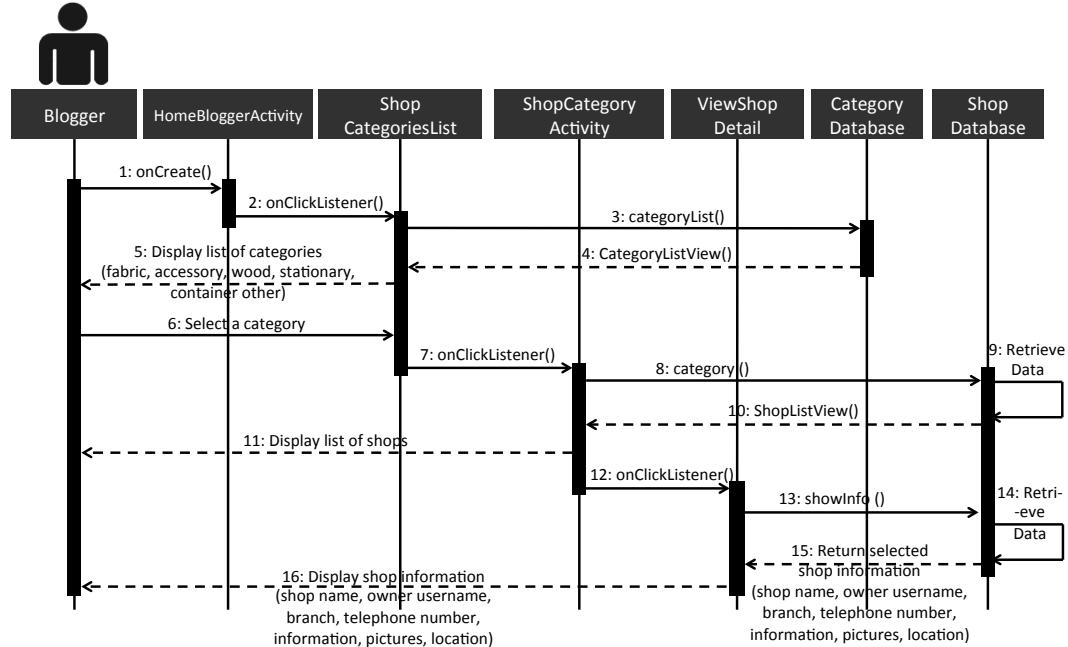


Figure 4.4.23: M-SQ-23 Blogger explore shops by category and see shop detail

M-SQ-24 Blogger search shops and see shop detail

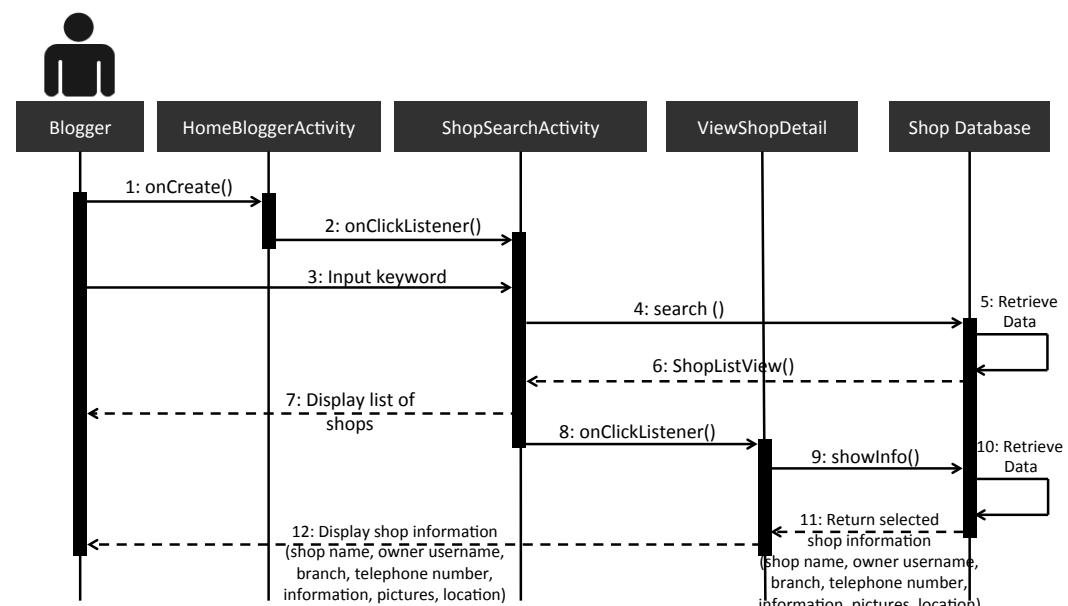


Figure 4.4.24: M-SQ-24 Blogger search shops and see shop detail

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M-SQ-25 Shopkeeper explore random shops and see shop detail

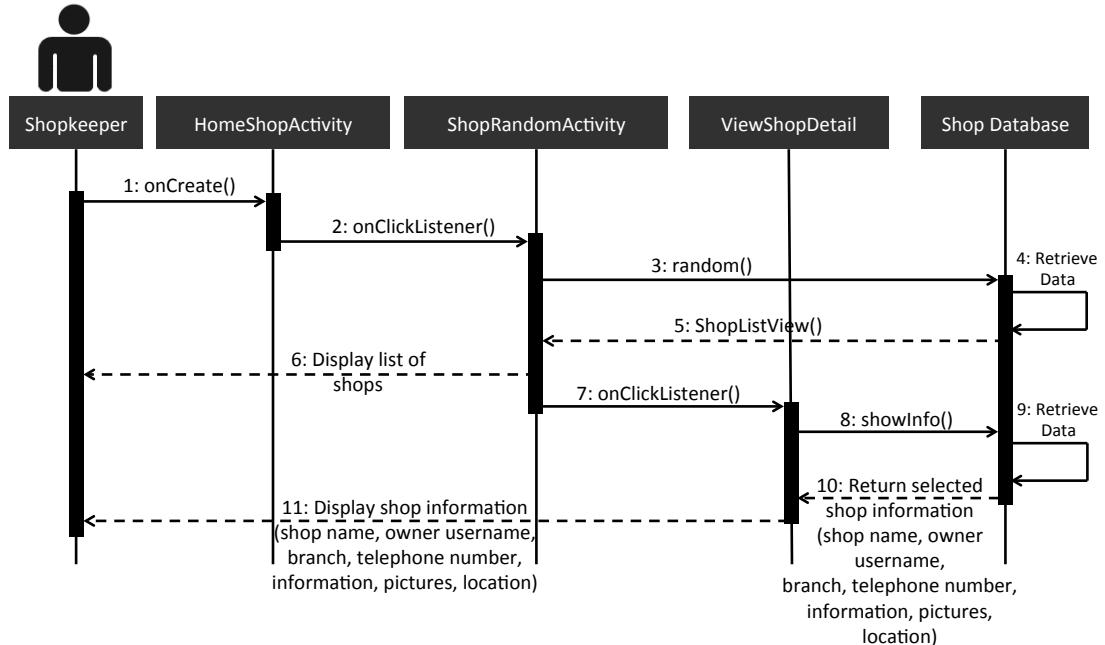


Figure 4.4.25: M-SQ-25 Shopkeeper explore random shops and see shop detail

M-SQ-26 Shopkeeper explore shops by category and see shop detail

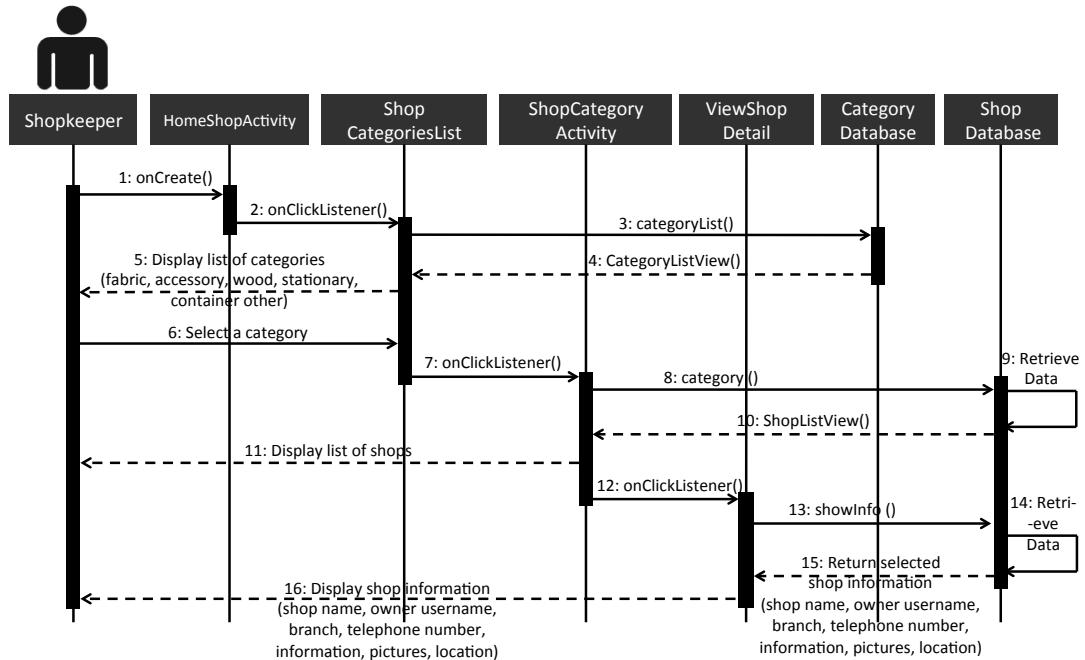


Figure 4.4.26: M-SQ-26 Shopkeeper explore shops by category and see shop detail

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M-SQ-27 Shopkeeper search shops and see shop detail

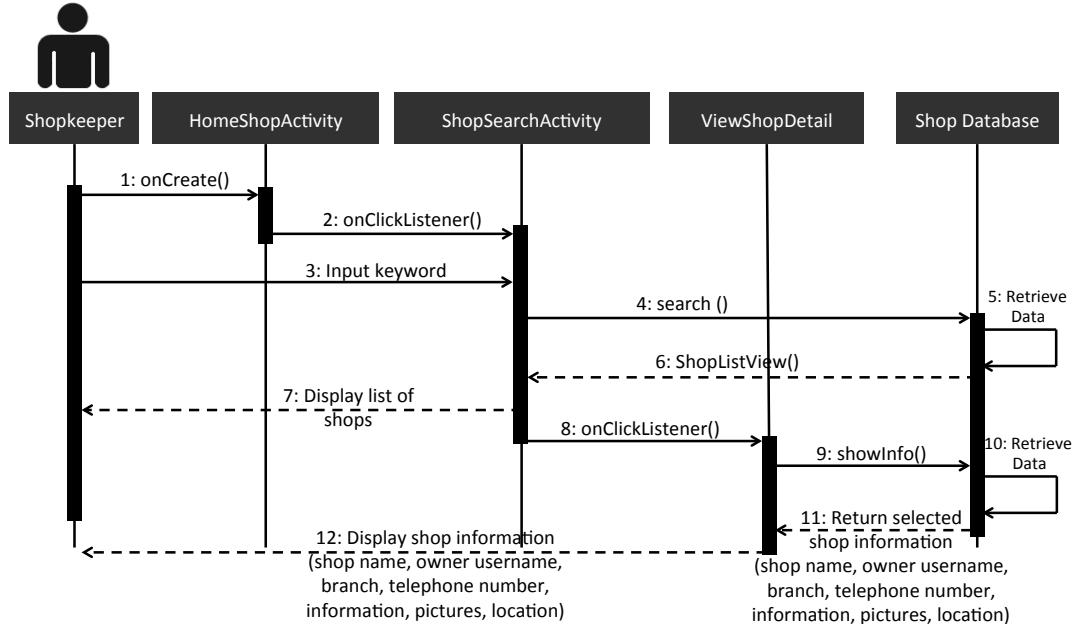


Figure 4.4.27: M-SQ-27 Shopkeeper search shops and see shop detail

M-SQ-28 Create a shop

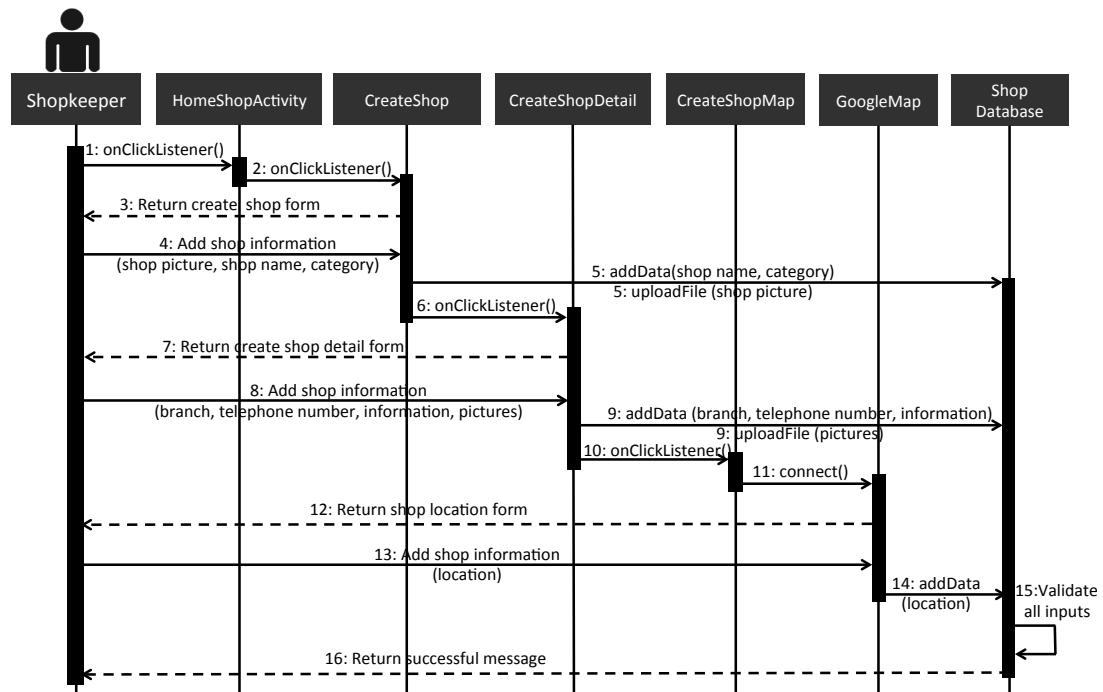
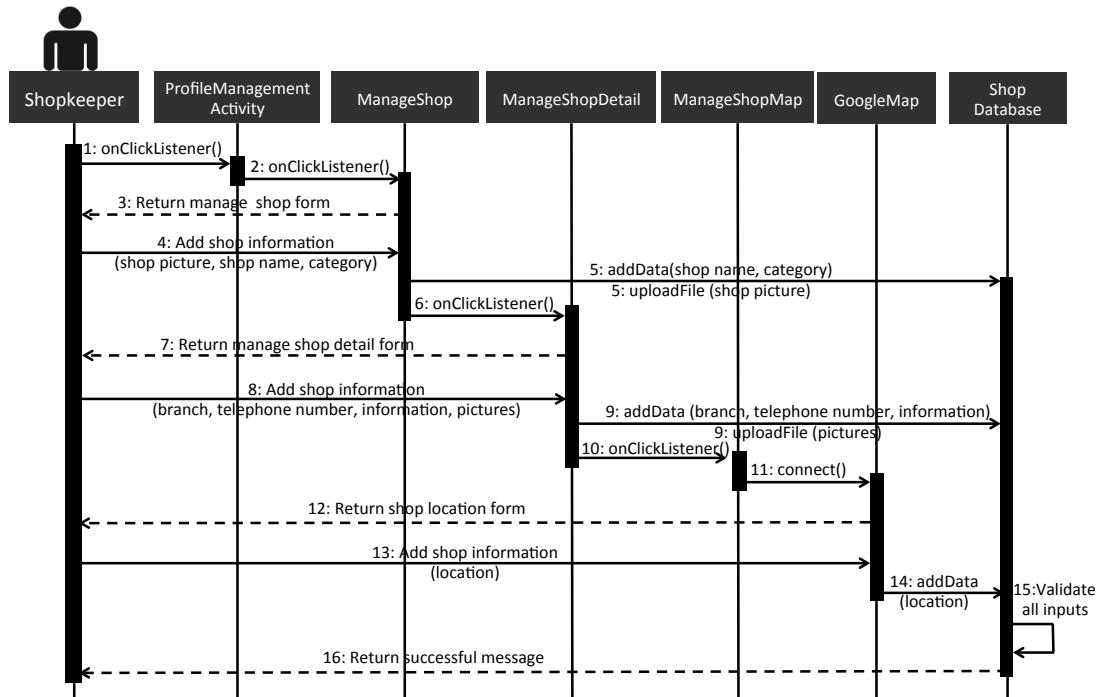
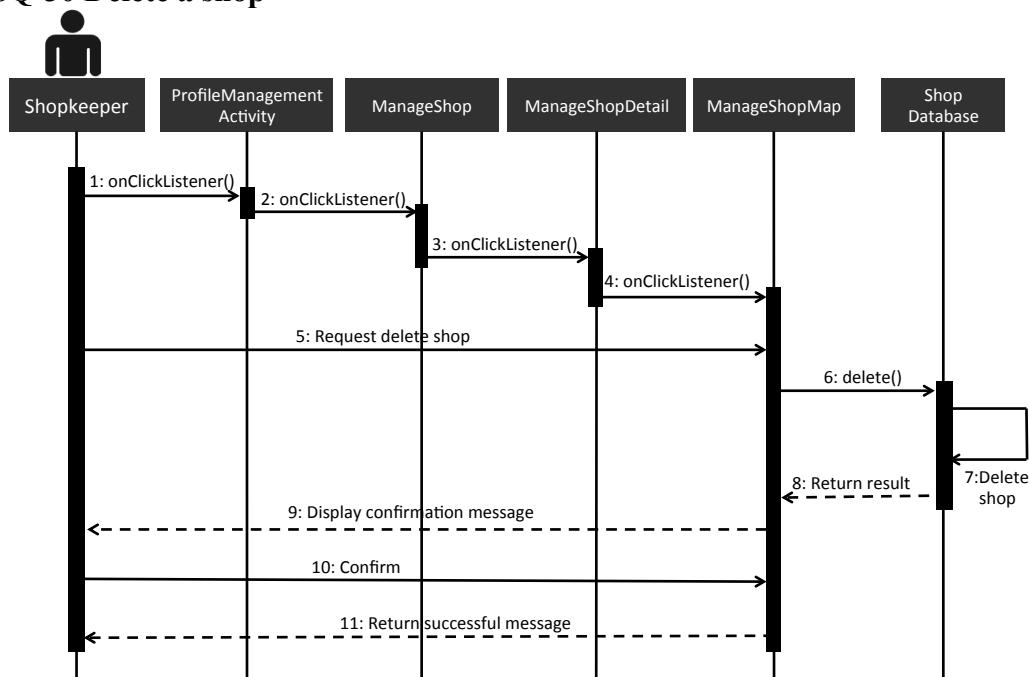
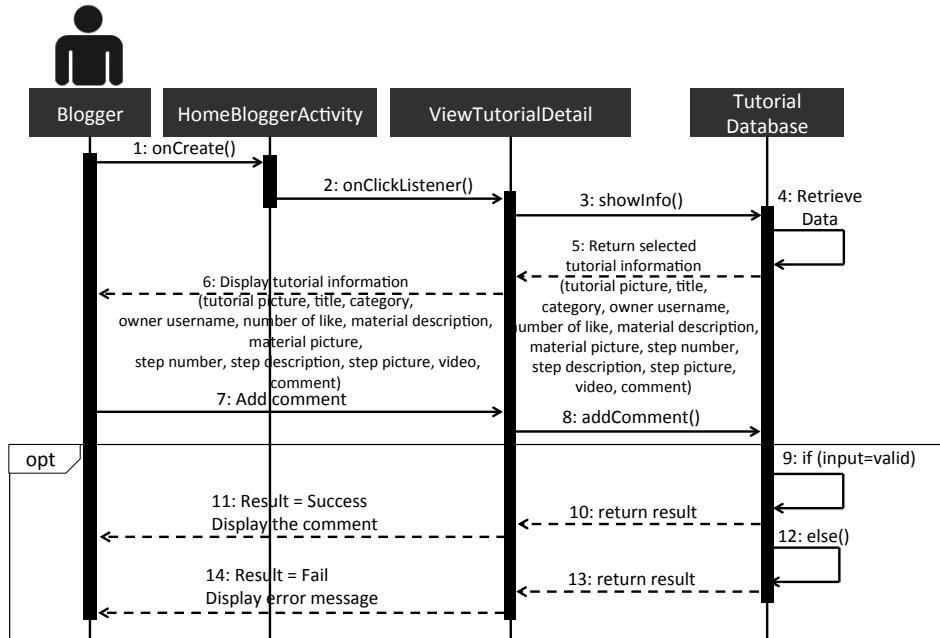
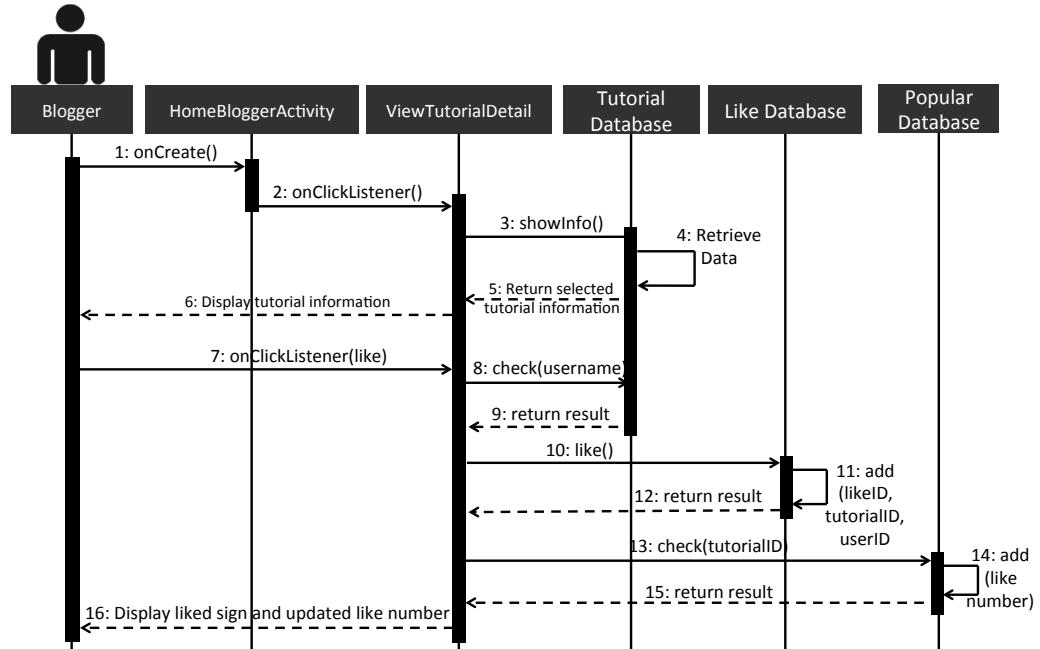


Figure 4.4.28: M-SQ-28 Create a shop

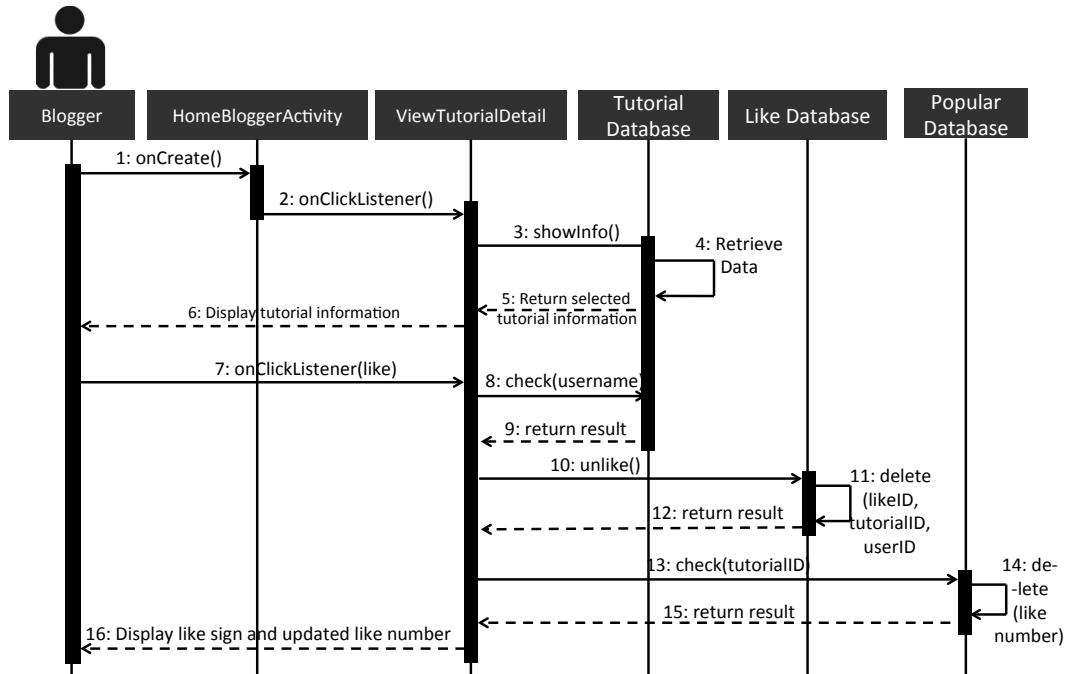
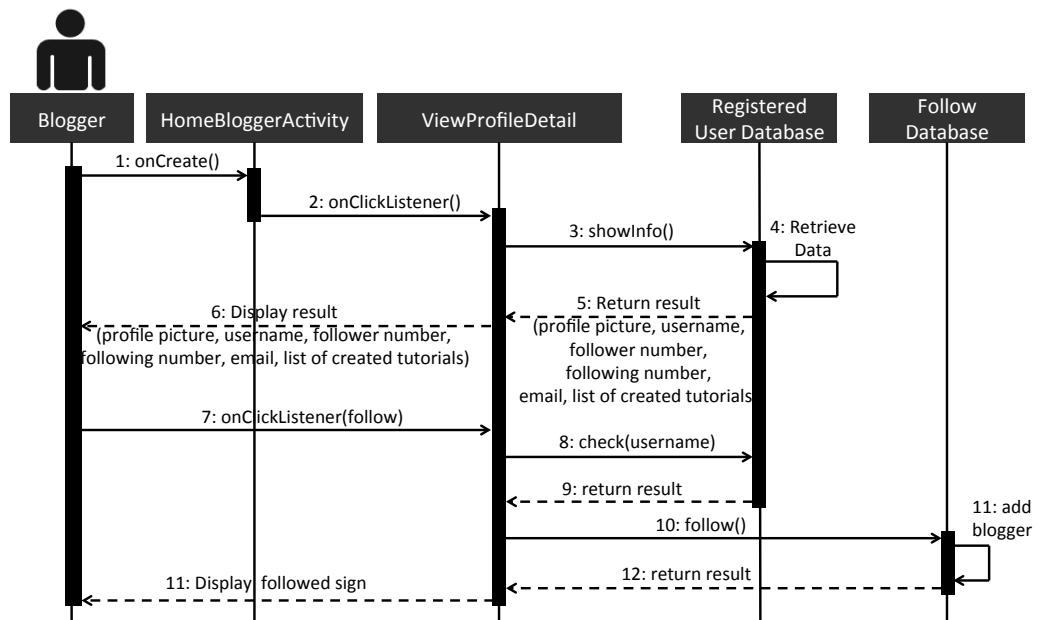
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M-SQ-29 Manage a shop**Figure 4.4.29: M-SQ-29 Manage a shop****M-SQ-30 Delete a shop****Figure 4.4.30: M-SQ-30 Delete a shop**

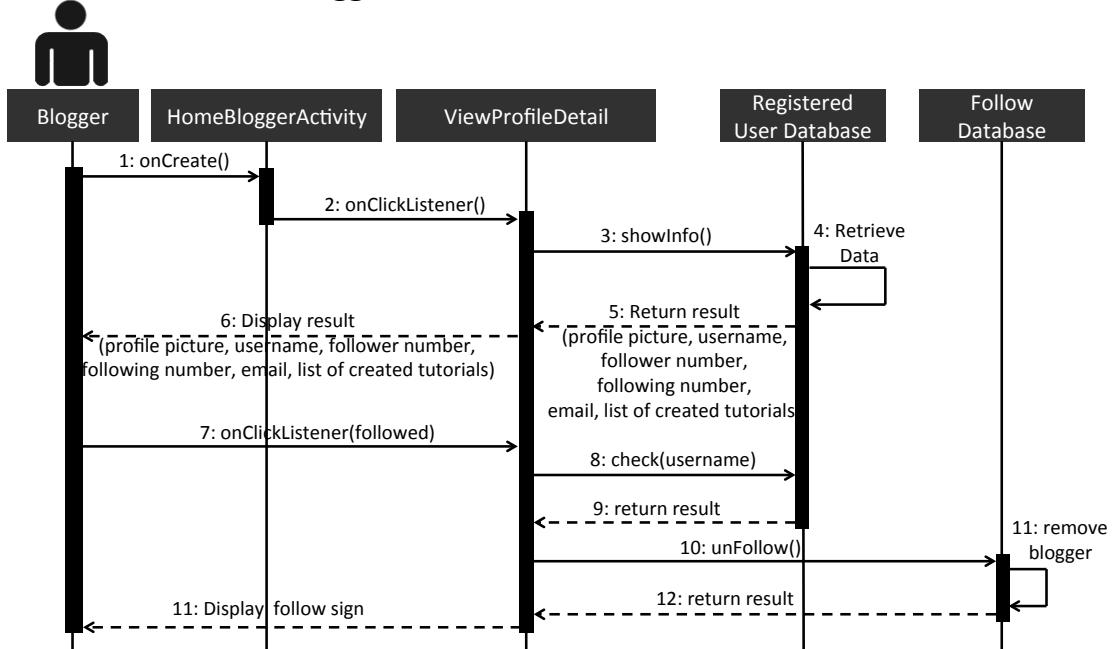
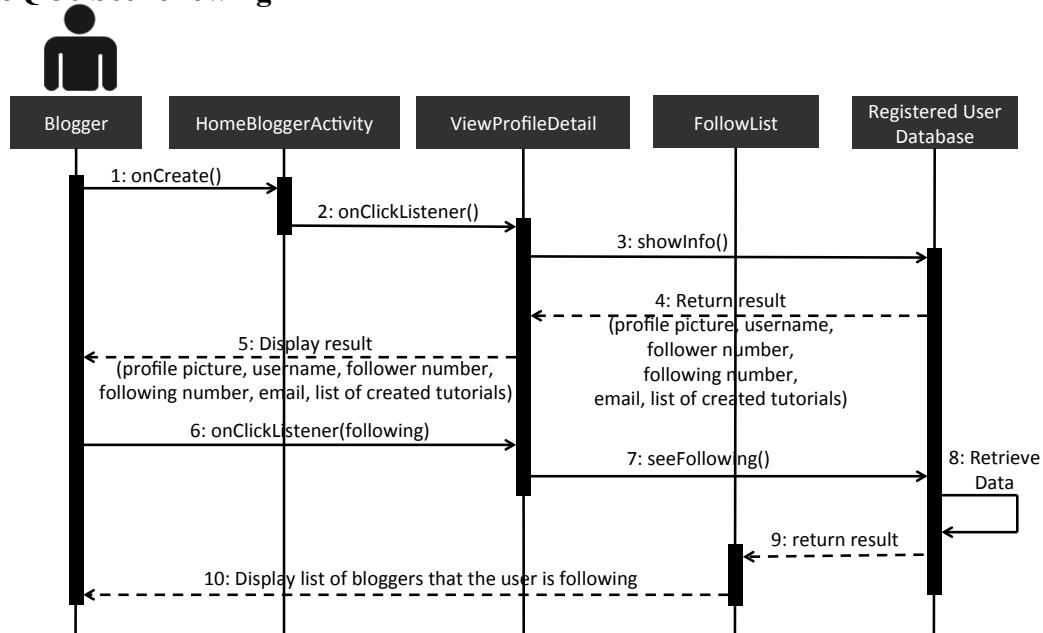
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M-SQ-31 Add comment**Figure 4.4.31: M-SQ-31 Add comment****M-SQ-32 Like a tutorial****Figure 4.4.32: M-SQ-32 Like a tutorial**

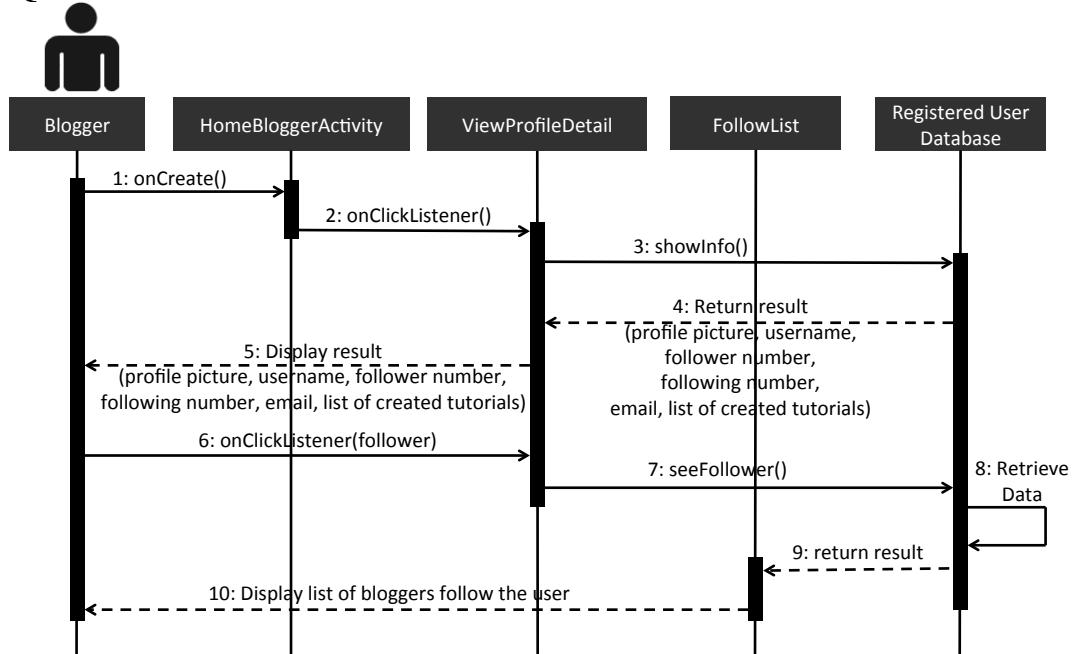
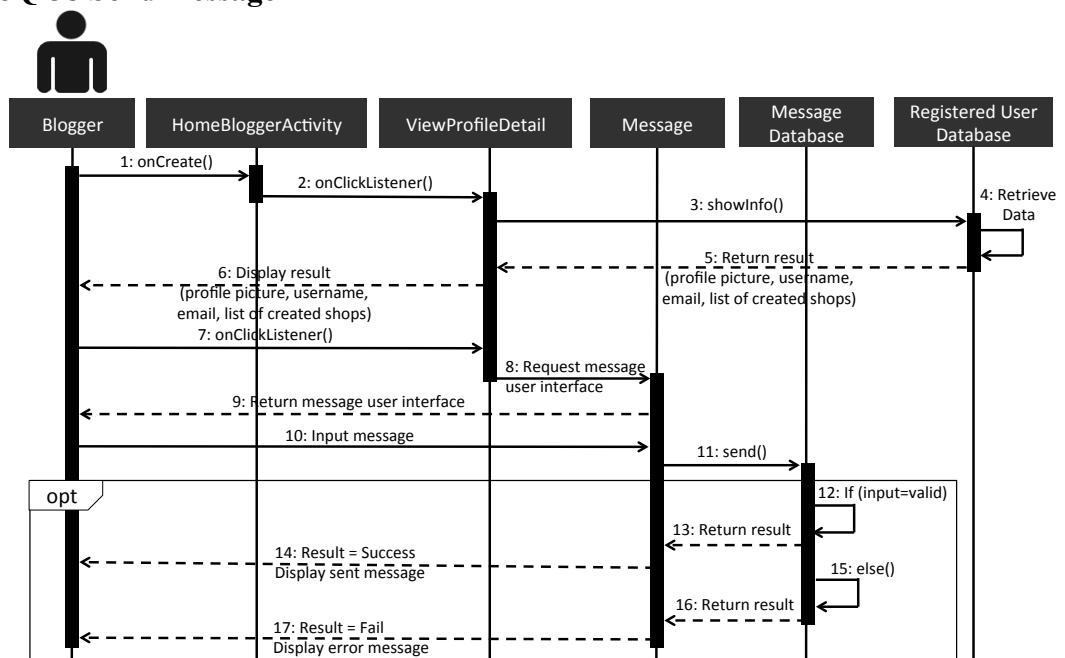
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M-SQ-33 Undo like a tutorial**Figure 4.4.33: M-SQ-33 Undo like a tutorial****M-SQ-34 Follow a blogger****Figure 4.4.34: M-SQ-34 Follow a blogger**

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M-SQ-35 Undo follow a blogger**Figure 4.4.35: M-SQ-35 Undo follow a blogger****M-SQ-36 See following****Figure 4.4.36: M-SQ-36 See following**

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M-SQ-37 See follower**Figure 4.4.37: M-SQ-37 See follower****M-SQ-38 Send message****Figure 4.4.38: M-SQ-38 Send message**

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M-SQ-39 See list of conversation and see message detail

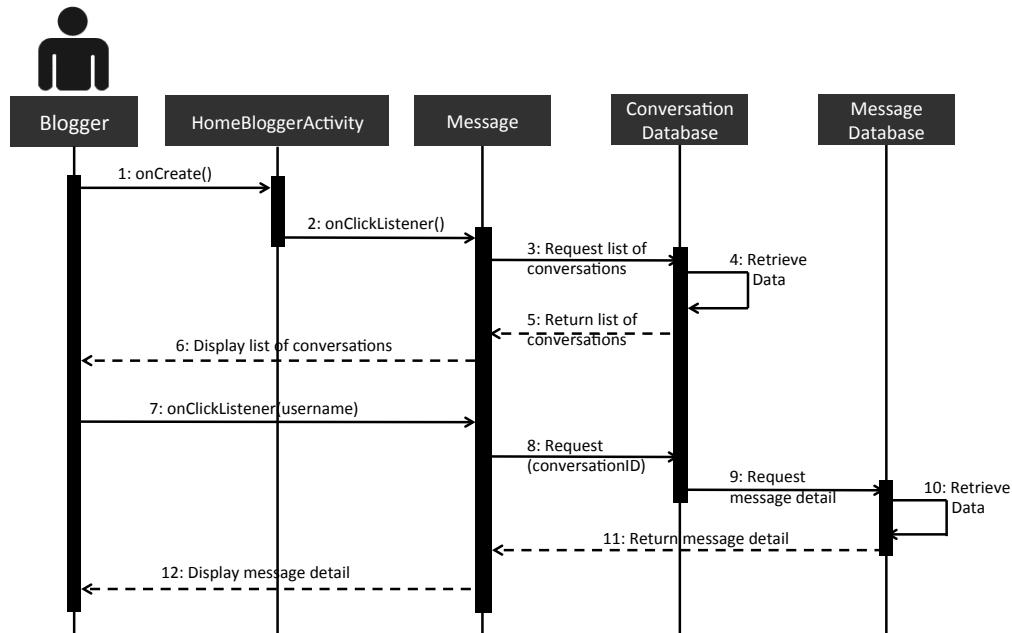


Figure 4.4.39: M-SQ-39 See list of conversation and see message detail

M-SQ-40 Post a tutorial to Facebook

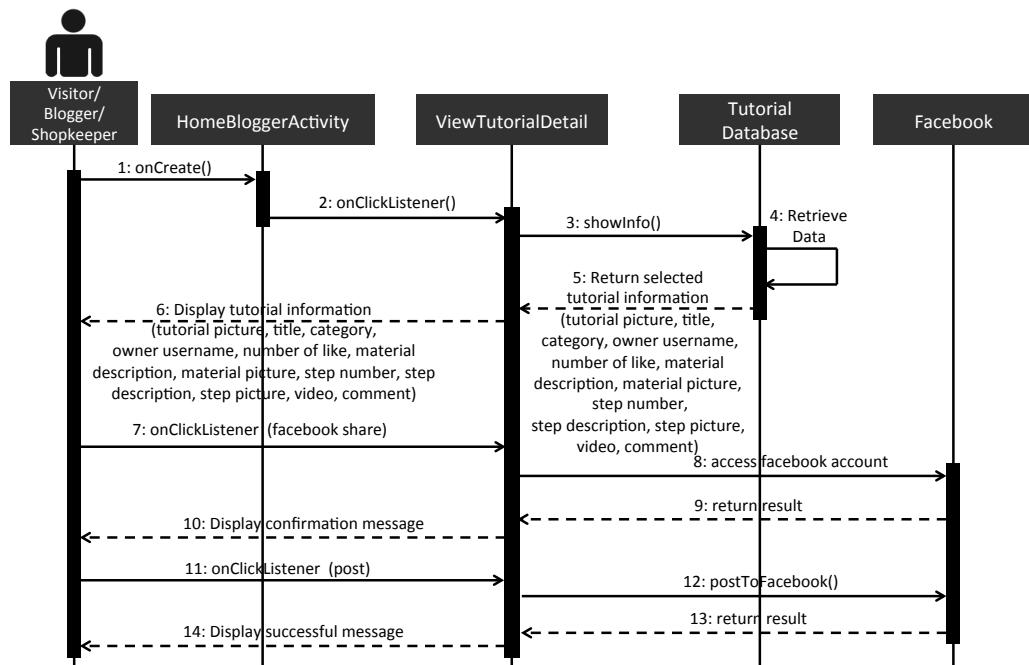


Figure 4.4.40: M-SQ-40 Post a tutorial to Facebook

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M-SQ-41 Shopkeeper search bloggers and see the selected blogger's profile

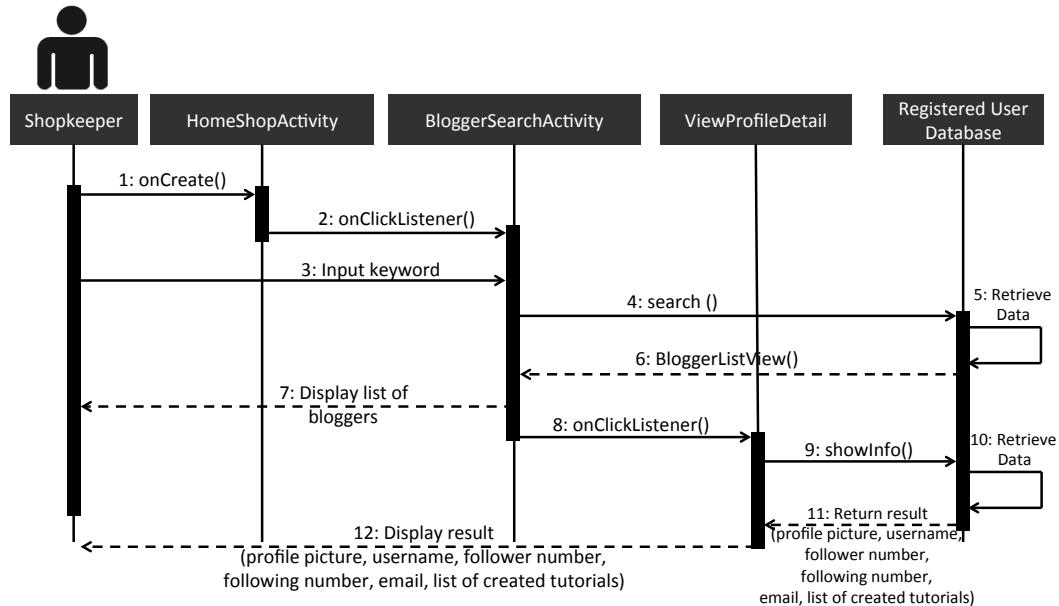


Figure 4.4.41: M-SQ-41 Shopkeeper search bloggers and see the selected blogger's profile

M-SQ-42 See shops near by

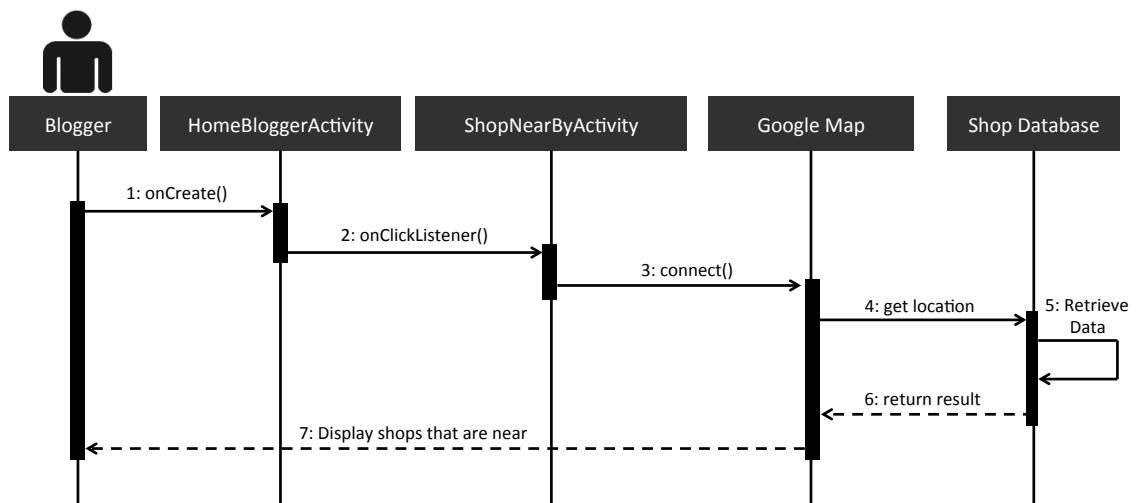


Figure 4.4.42: M-SQ-42 See shops near by

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M-SQ-43 See notifications list

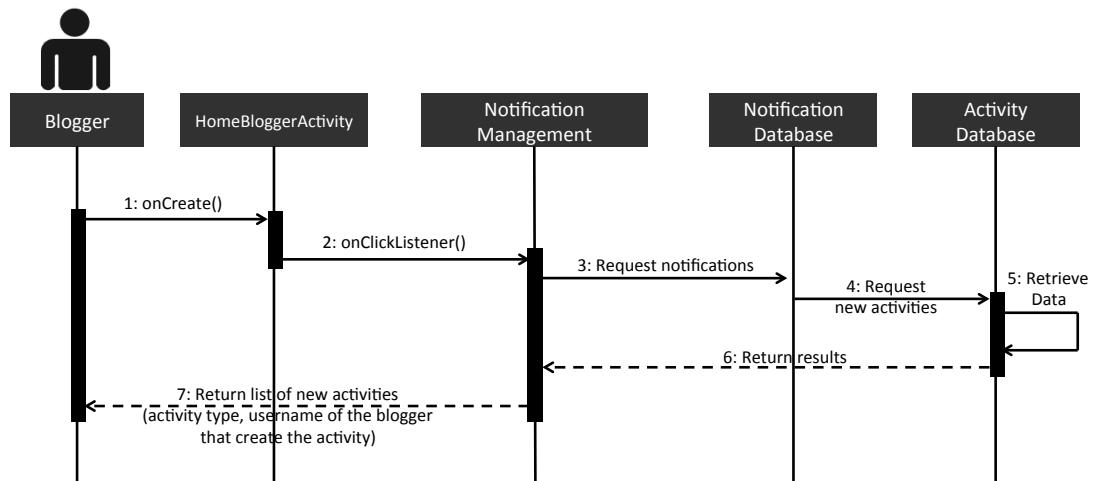


Figure 4.4.43: M-SQ-43 See notifications list

M-SQ-44 Select an activity, which is like or comment

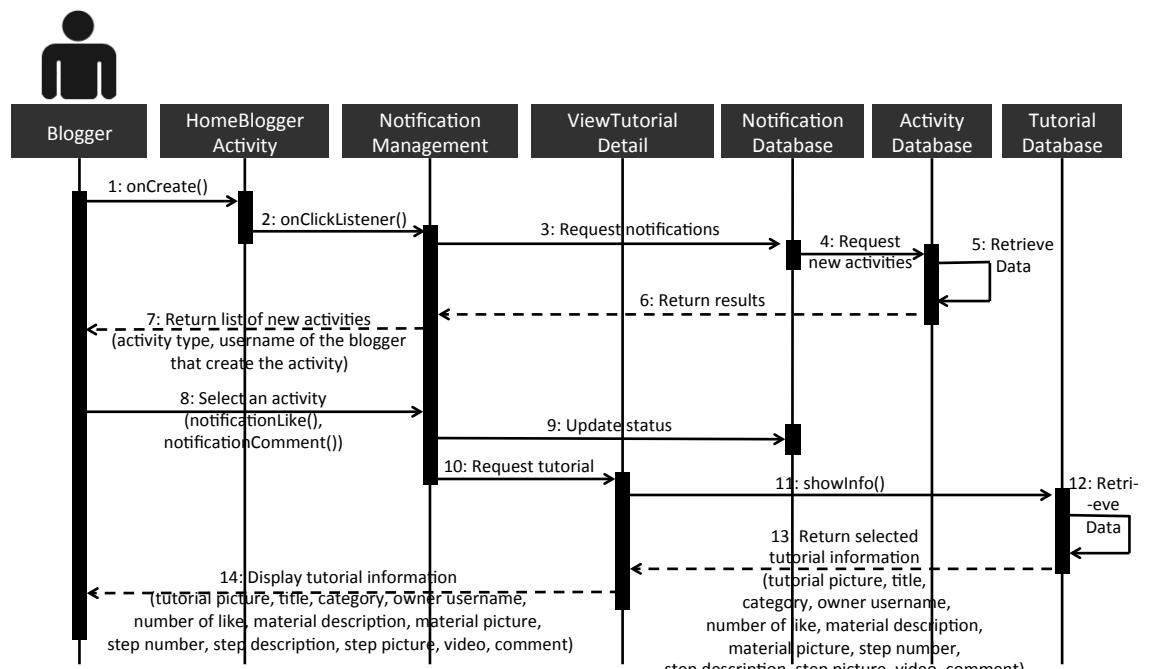


Figure 4.4.44: M-SQ-44 Select an activity, which is like or comment

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M-SQ-45 Select an activity, which is follow

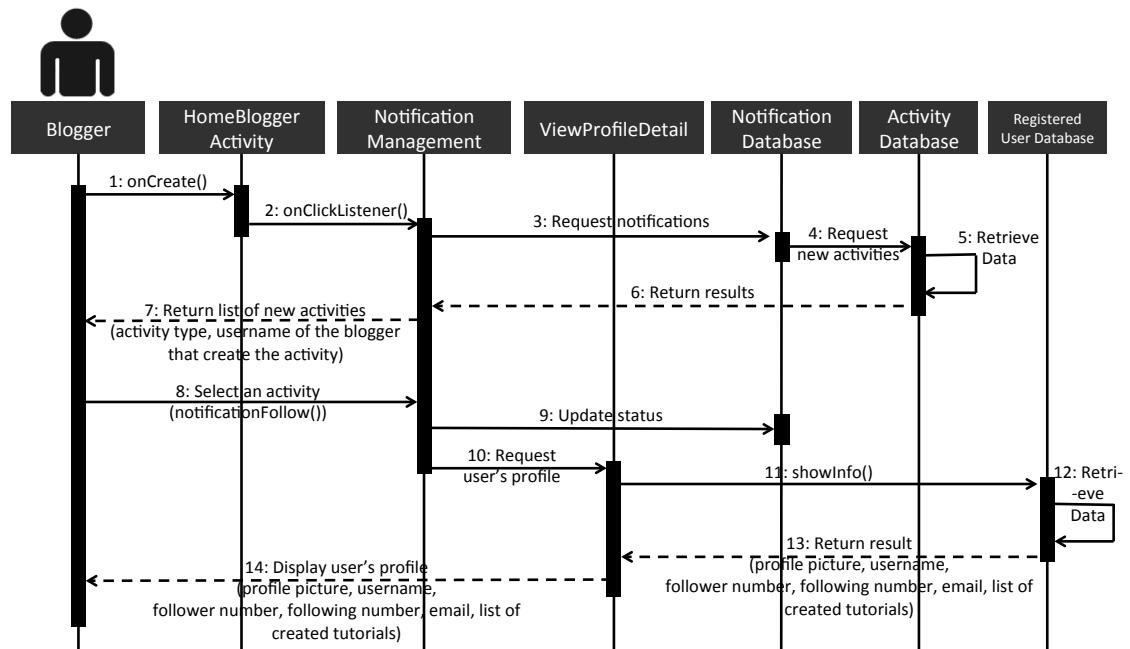


Figure 4.4.45: M-SQ-45 Select an activity, which is follow

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Chapter Five| Data Architecture

5.1 ER Diagram

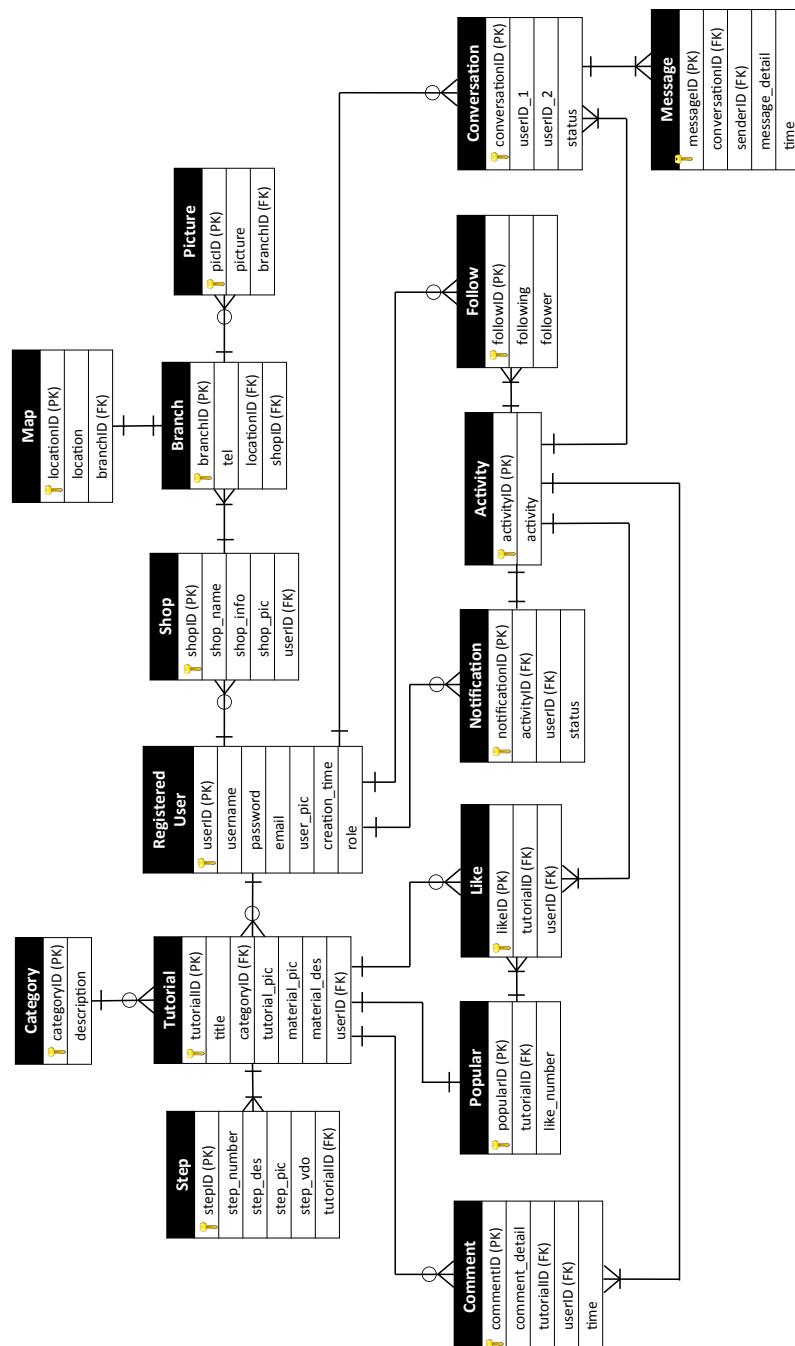


Figure 4.5.1: ER Diagram

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5.2 Database Diagram

DB-01 Registered User

This database stores information of the user who has registered as a member (either blogger or shopkeeper) of the system. The data stored will be used when the user wants to see one's profile.

Field	Type	Extra
userID (PK)	int(10)	Auto increment
username	varchar(20)	
password	varchar(20)	
email	varchar(30)	
user_pic	varchar(500)	
creation_time	time	
role	varchar (50)	

DB-02 Category

This database stores information of each category for tutorials. The data stored will be used when the user wants to see tutorials according to categories.

Field	Type	Extra
categoryID (PK)	int(10)	Auto increment
category_des	varchar(500)	

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DB-03 Tutorial

This database stores information of each tutorial that blogger creates. The data stored will be used when the user wants to see tutorial detail.

Field	Type	Extra
tutorialID (PK)	int(10)	Auto increment
title	varchar(50)	
categoryID (FK)	varchar(30)	
tutorial_pic	varchar(500)	
material_pic	varchar(500)	
material_des	varchar(255)	
userID (FK)	int(10)	

DB-04 Step

This database stores information of each step for a tutorial. The data stored will be used when the user creates a tutorial, which includes steps of it.

Field	Type	Extra
stepID (PK)	int(10)	Auto increment
step_des	varchar(255)	
step_pic	varchar(500)	
step_vdo	varchar(500)	
tutorialID (FK)	int(10)	

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DB-05 Message

This database stores information of messages between bloggers and shopkeepers. The data stored will be used when the user wants to see messages that has been sent and received between two users.

Field	Type	Extra
messageID (PK)	int(10)	Auto increment
conversationID (FK)	int(10)	
senderID (FK)	int(10)	
message_detail	varchar(500)	
time	DATETIME	

DB-06 Notification

This database stores information of new activities that happens with the blogger or shopkeeper. The data stored will be used when there is any new even occurred in the system.

Field	Type	Extra
notificationID (PK)	int(10)	Auto increment
activityID (FK)	int(10)	
status	int(2)	
userID (FK)	int(10)	

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DB-07 Shop

This database stores information of each shop that a shopkeeper creates. The data stored will be used when the user wants to see shop detail.

Field	Type	Extra
shopID (PK)	int(10)	Auto increment
shop_name	varchar(20)	
shop_info	varchar(255)	
shop_pic	varchar(500)	
userID (FK)	int(10)	

DB-08 Branch

This database stores information of each branch for a shop. The data stored will be used when the user wants to see shop detail.

Field	Type	Extra
branchID (PK)	int(10)	Auto increment
tel	int(10)	
location	varchar(500)	
shopID (FK)	int(10)	

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DB-09 Branch Picture

This database stores picture of shop for each branch. The data stored will be used when the user wants to see shop detail.

Field	Type	Extra
branch_picID (PK)	int(10)	Auto increment
branch_pic	varchar(500)	
branchID (FK)	int(10)	

DB-10 Activity

This database stores type of activities for bloggers. The data stored will be used to specify type of even occurred in the system.

Field	Type	Extra
activityID (PK)	int(10)	Auto increment
activity	varchar (50)	

DB-11 Map

This database stores location of shops. The data stored will be used when the user wants to see shop location.

Field	Type	Extra
locationID (PK)	int(10)	Auto increment
location	varchar (500)	

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DB-12 Comment

This database stores the information of comments on tutorials. The data stored will be used when the user wants to see or add comment on a tutorial.

Field	Type	Extra
commentID (PK)	int(10)	Auto increment
comment_detail	varchar(255)	
tutorialID (FK)	int(10)	
userID (FK)	int(10)	
time	DATETIME	

DB-13 Like

This database stores the information of like system. The data stored will be used when the user wants to give or remove likes on tutorials.

Field	Type	Extra
likeID (PK)	int(10)	Auto increment
tutorialID (FK)	int(10)	
userID (FK)	int(10)	

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DB-14 Follow

This database stores the information of follow system. The data stored will be used when the user wants to follow or undo follow bloggers.

Field	Type	Extra
followID (PK)	int(10)	Auto increment
following	varchar (50)	
follower	varchar (50)	

DB-15 Conversation

This database stores the information of follow system. The data stored will be used when the user wants to see who the user has been communicating with.

Field	Type	Extra
conversationID (PK)	int(10)	Auto increment
userID_1 (FK)	int(10)	
userID_2 (FK)	int(10)	
status	int(2)	

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DB-16 Popular

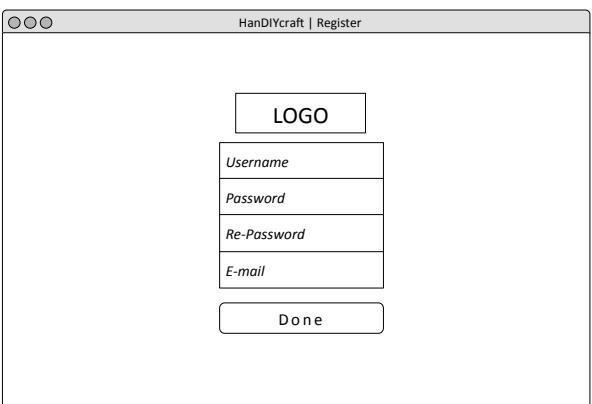
This database stores the information of follow system. The data stored will be used when the system gets popular tutorials to display.

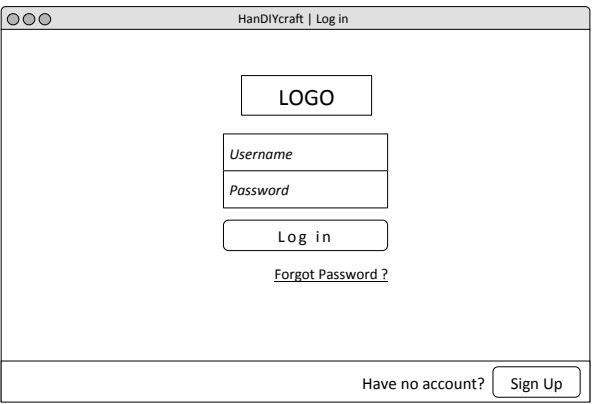
Field	Type	Extra
popularID (PK)	int(10)	Auto increment
tutorialID (FK)	int(10)	
like_number	int(10)	

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Chapter Six| User Interface Design

6.1 Web Application

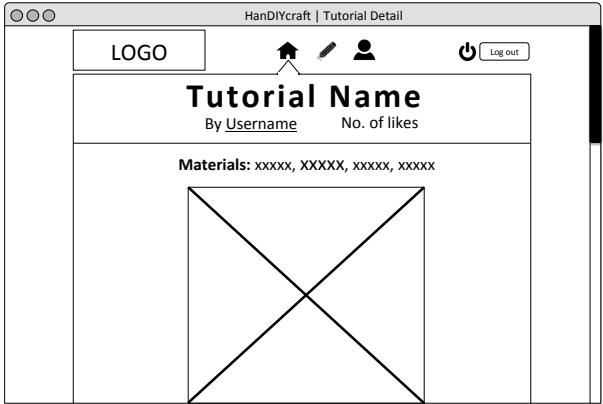
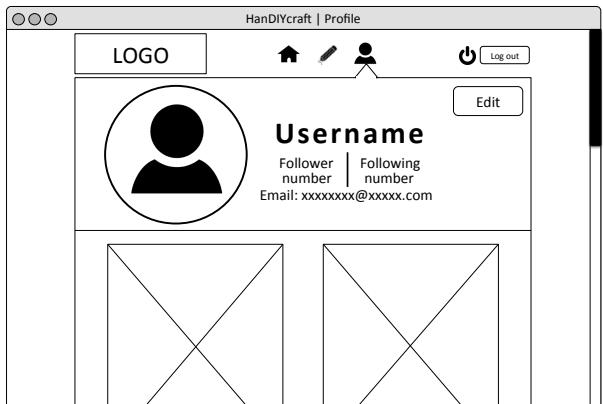
UI ID	UI	Description
W-UI-01		<p>This is the registration page of the web application. The user has to fill his/her information to register as a blogger.</p>

W-UI-02		<p>This is the log in page. The user has to input the username and password in order to access the system as a blogger.</p>
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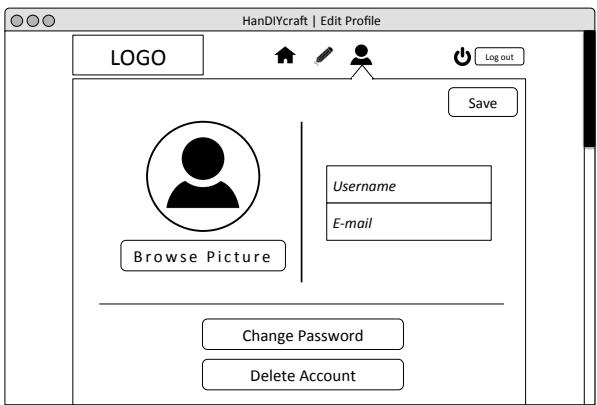
Document Name	HanDIYcraft-SDD-V.3.2.docx	Owner	NK, PS	Page	336 / 657
Document Type	Software Design Development	Release Date	22 December 2014	Print Date	26 December 2014

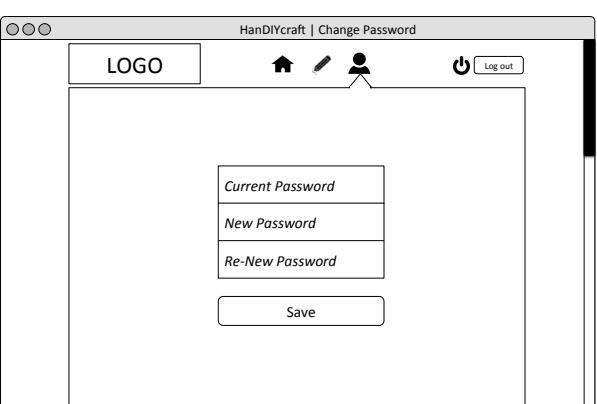
W-UI-03	<p>The wireframe shows the 'HanDIYcraft Home Page' window. At the top is a 'LOGO' box. Below it are two buttons: 'Random' and 'Popular'. To the right is a search bar with a magnifying glass icon and the placeholder '...Search...'. Below the search bar are eight categories with circular icons: Outfit, Accessory, Gift, Kid, Garden, Home Decor, Pet, and Other. Below these categories are two large rectangular boxes, each containing a large 'X' and the text 'Create your own tutorial !'. At the bottom are three buttons: 'Sign Up', 'Log in', and a power button icon.</p>	<p>This is the home page for the user. It will only allow the user to explore tutorials.</p>
W-UI-04	<p>The wireframe shows the 'HanDIYcraft Blogger Home Page' window. At the top is a 'LOGO' box. To the right are navigation icons: a house, a pencil, a person, and a power button, followed by a 'Log out' link. Below the navigation are three buttons: 'Random', 'Popular', and 'Following'. To the right is a search bar with a magnifying glass icon and the placeholder '...Search...'. Below the search bar are eight categories with circular icons: Outfit, Accessory, Gift, Kid, Garden, Home Decor, Pet, and Other. Below these categories are two large rectangular boxes, each containing a large 'X' and the text '"Tutorial Name" No. of likes'. The entire window has a header bar at the top.</p>	<p>This is the home page for the blogger. There will be menus up on the heading to let the blogger performs more function than the regular user.</p>

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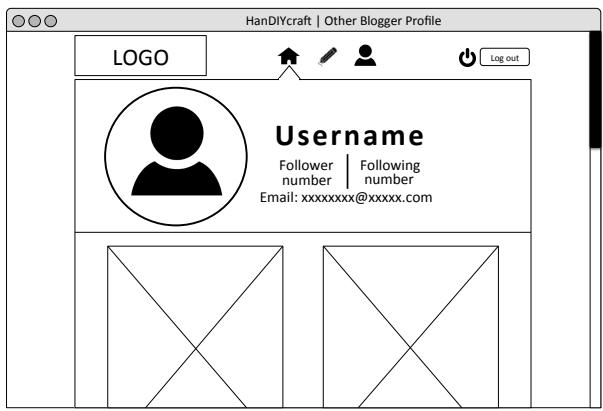
W-UI-05		<p>This page shows detail that exist in the database of the selected tutorial.</p>
W-UI-06		<p>This page let the blogger see his/her own profile including the tutorials that the blogger has created.</p>

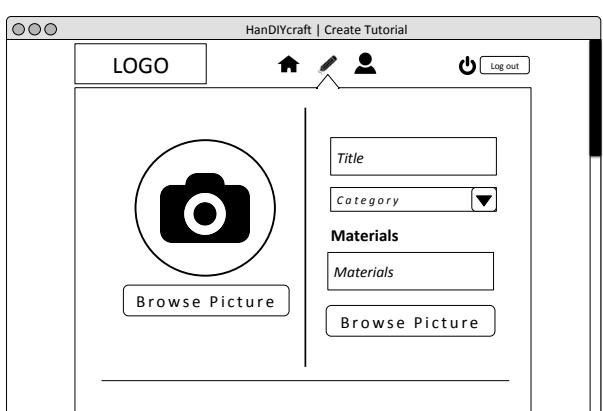
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W-UI-07		<p>This page let the blogger make some changes on his/her profile such as changing username, email, picture, and password. Also let he/she deletes the account.</p>
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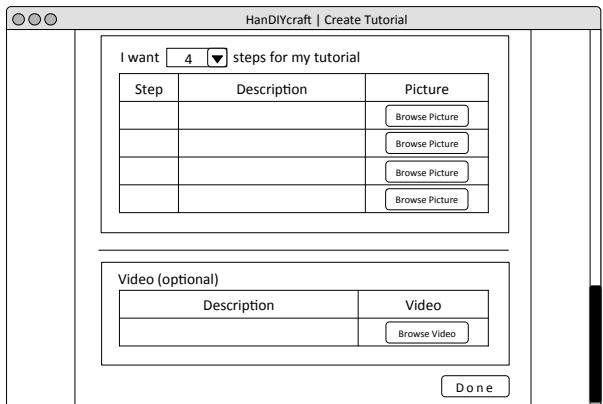
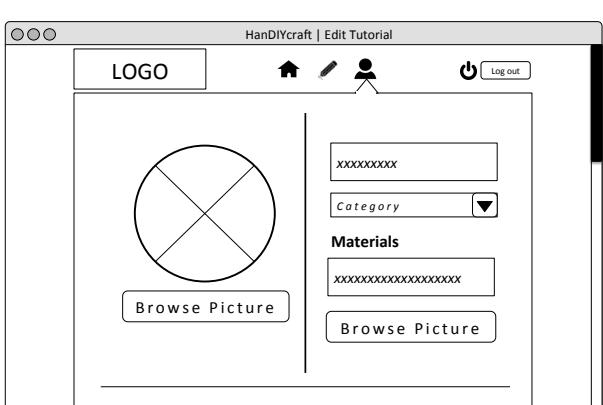
W-UI-08		<p>This page let the blogger change his/her password.</p>
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W-UI-09		<p>This page let the blogger see other blogger's profile.</p>
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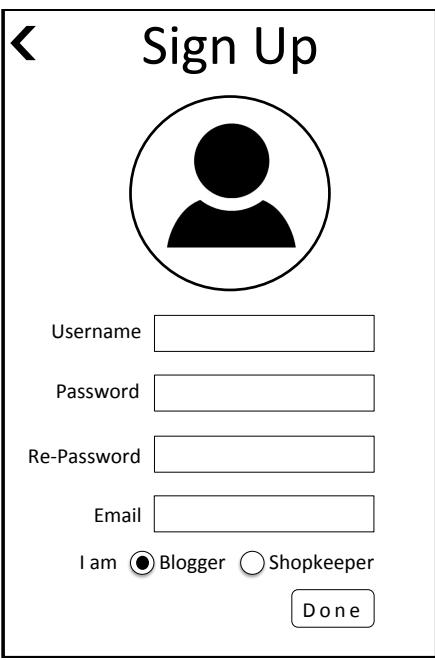
W-UI-10		<p>This page let the blogger creates a tutorial by inputting tutorial picture, title, materials, and define the category.</p>
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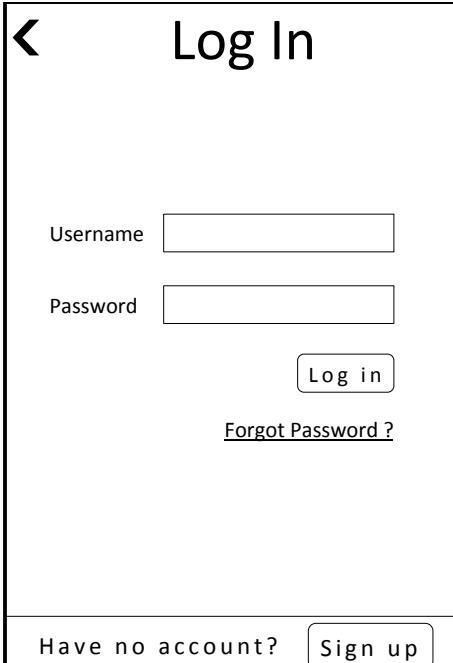
W-UI-11		<p>This page let the blogger input the tutorial information step by step.</p>
W-UI-12		<p>This page let the blogger make some changes with his/her own certain tutorial.</p>

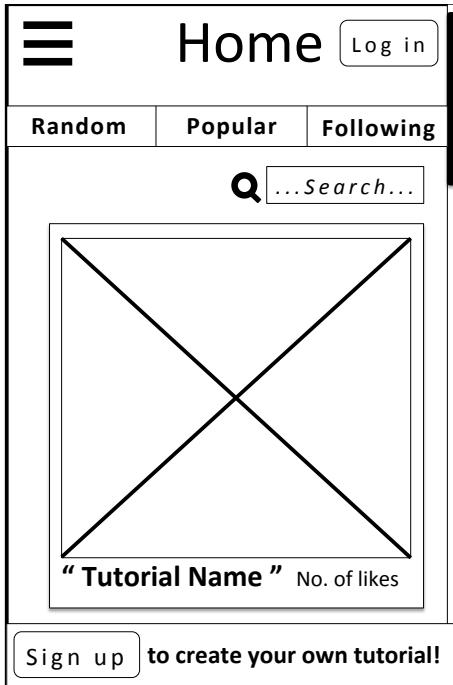
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6.2 Mobile Application

UI ID	UI	Description
M-UI-01	 <p>The image shows a mobile application's sign-up screen. At the top left is a back arrow icon, and at the top center is the text "Sign Up". Below this is a large circular profile picture placeholder with a black silhouette of a person. Below the placeholder are four input fields: "Username" (empty), "Password" (empty), "Re-Password" (empty), and "Email" (empty). At the bottom of the form is a row of two radio buttons labeled "I am" followed by "Blogger" (which is selected) and "Shopkeeper". Below the radio buttons is a blue rectangular button labeled "Done".</p>	<p>This is the registration page of the mobile application. The user has to fill his/her information to register as a blogger or shopkeeper.</p>

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M-UI-02	 <p>The image shows a login form titled "Log In". It features a back arrow icon, two input fields for "Username" and "Password", a "Log in" button, a "Forgot Password ?" link, and a "Have no account? Sign up" section at the bottom.</p>	<p>This is the log in page. The user has to input the username and password in order to access the system as a blogger or shopkeeper.</p>
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M-UI-03	 <p>The image shows a home page interface titled "Home". It includes a menu icon, a "Log in" button, three navigation tabs ("Random", "Popular", "Following"), a search bar with a magnifying glass icon and placeholder "...Search...", a large central area with a large "X" mark, and a "Sign up to create your own tutorial!" button at the bottom.</p>	<p>This is the home page for the user. It will only allow the user to explore tutorials.</p>
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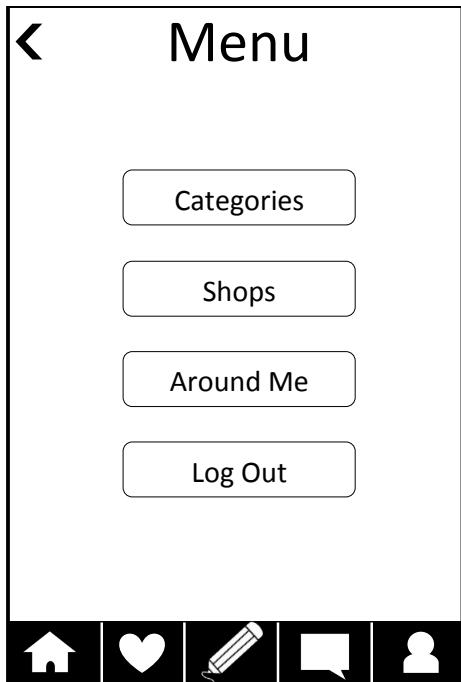
M-UI-04

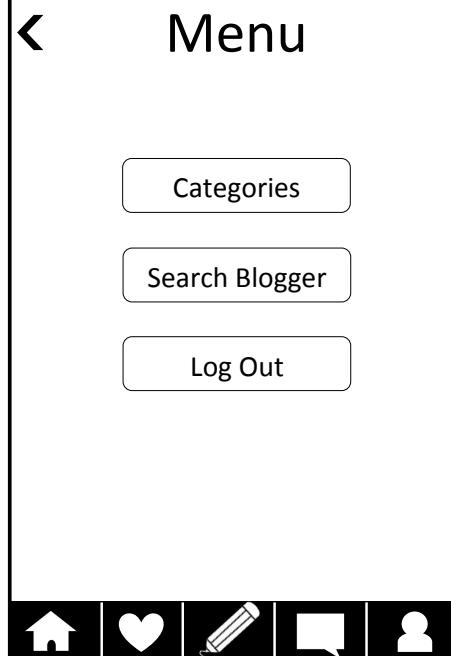
This is the home page for the blogger. There will be menus in the bottom of the screen to let the blogger performs more function than the regular user.

M-UI-05

This is the home page for the shopkeeper. There will be menus in the bottom of the screen to let the shopkeeper performs more function than the regular user.

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M-UI-06	 <p>Menu</p> <ul style="list-style-type: none"> Categories Shops Around Me Log Out <p>Home Heart Pencil Square Profile</p>	This is the menu page for the blogger to let him/her performs more function than the regular user.
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M-UI-07	 <p>Menu</p> <ul style="list-style-type: none"> Categories Search Blogger Log Out <p>Home Heart Pencil Square Profile</p>	This is the menu page for the shopkeeper to let him/her performs more function than the regular user.
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M-UI-08

Categories

Outfit Accessory

Gift Kid

Garden Home Decor

Home | Like | Share | Comment | Profile

This is the tutorial categories page to let blogger explore tutorials according to each category.

M-UI-09

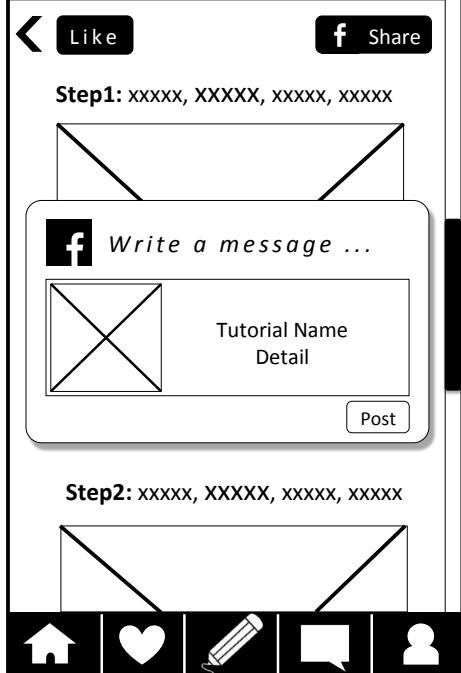
Tutorial Name
By Username No. of likes

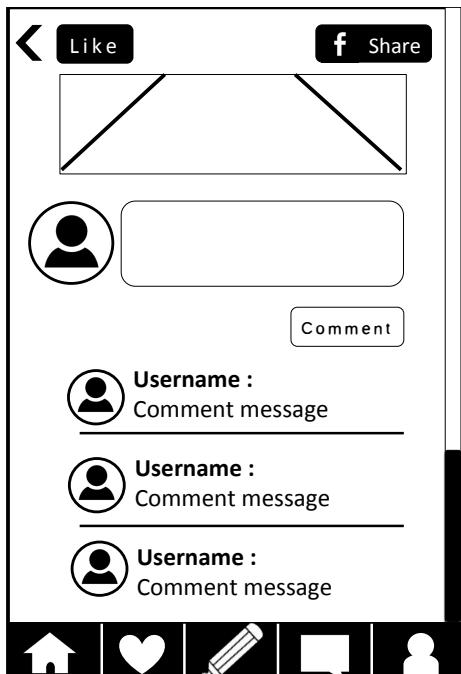
Materials: xxxxx, XXXXX, xxxx, xxxx

Home | Like | Share | Comment | Profile

This page shows detail of the tutorial that the user/blogger selected. From this page he/she can like or share the tutorial.

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M-UI-10	 <p>Step1: xxxxx, XXXXX, xxxx, xxxx</p> <p>Step2: xxxxx, XXXXX, xxxx, xxxx</p>	<p>This is the UI for tutorial sharing. The user/blogger/shop -keeper will be able to write some message before he/she shares it to Facebook.</p>
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M-UI-11	 <p>Comment</p> <p>Username : Comment message</p> <p>Username : Comment message</p> <p>Username : Comment message</p>	<p>This page is a part of tutorial detail. It displays comment of the tutorial. Also let the blogger add some comments.</p>
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M-UI-12	<p>What's New</p> <ul style="list-style-type: none"> Username Activity Username Activity Username Activity <p>Home Heart Pencil Comment Profile</p>	<p>This page shows list of new activities that happened with the blogger.</p>
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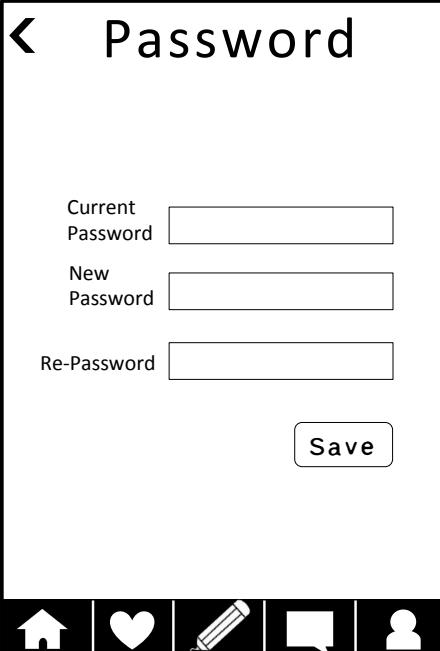
M-UI-13	<p>Profile Edit</p> <p> Username Follower number Following number Email: xxxxxxxx@xxxxx.com</p> <p>Tutorial Name No. of likes</p> <p>Home Heart Pencil Comment Profile</p>	<p>This page let the blogger see his/her own profile including the tutorials that the blogger has created.</p>
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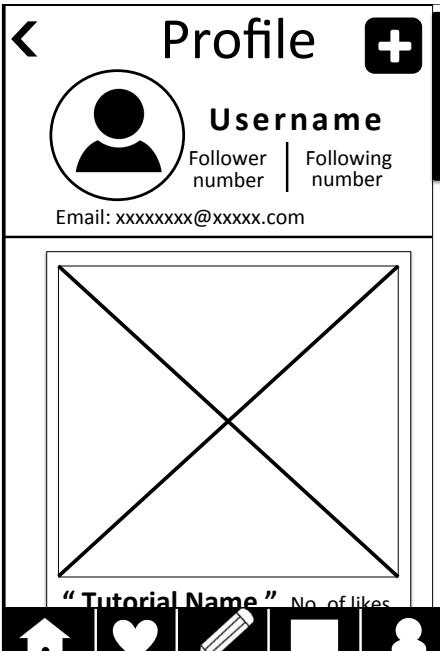
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M-UI-14	 <p>The screenshot shows a mobile application interface titled "Profile". At the top, there is a back arrow icon, the word "Profile", and an "Edit" button. Below this is a circular placeholder for a profile picture, followed by the text "Username" and "Email: shopismylife@gmail.com". A large black "X" is drawn across the entire middle section of the screen. At the bottom is a navigation bar with icons for Home, Heart, Pencil, Message, and Profile.</p>	<p>This page let the shopkeeper see his/her own profile including the shops that the shopkeeper has created.</p>
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M-UI-15	 <p>The screenshot shows a mobile application interface titled "Edit". At the top, there is a back arrow icon, the word "Edit", and a "Save" button. Below this is a circular placeholder for a profile picture. The screen contains two input fields: "Username" and "Email", each with a corresponding text entry box. Below these are two buttons: "Change password" and "Delete Account". At the bottom is a navigation bar with icons for Home, Heart, Pencil, Message, and Profile.</p>	<p>This page let the blogger/shopkeeper make some changes on his/her profile such as changing username, email, picture, and password. Also let he/she deletes the account.</p>
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M-UI-16	 <p>Password</p> <p>Current Password <input type="text"/></p> <p>New Password <input type="text"/></p> <p>Re-Password <input type="text"/></p> <p>Save</p> <p>Home Heart Pencil Comment User</p>	This page let the blogger/shopkeeper change his/her password.
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M-UI-17	 <p>Profile + +</p> <p>Username</p> <p>Follower number Following number</p> <p>Email: xxxxxxxx@xxxxx.com</p> <p>Tutorial Name No. of likes</p> <p>Home Heart Pencil Comment User</p>	This page let the blogger see other blogger's profile and follow him/her.
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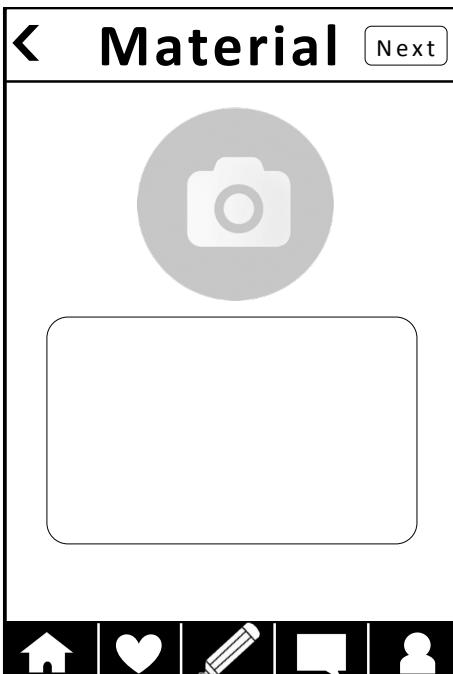
M-UI-18

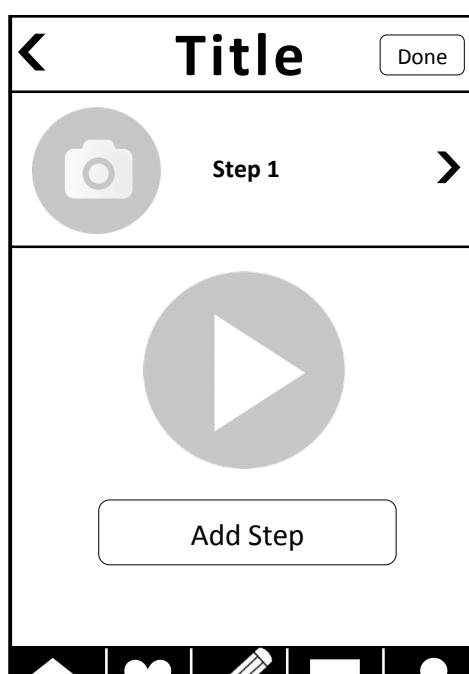
This page let the shopkeeper see other blogger's profile and message him/her.

M-UI-19

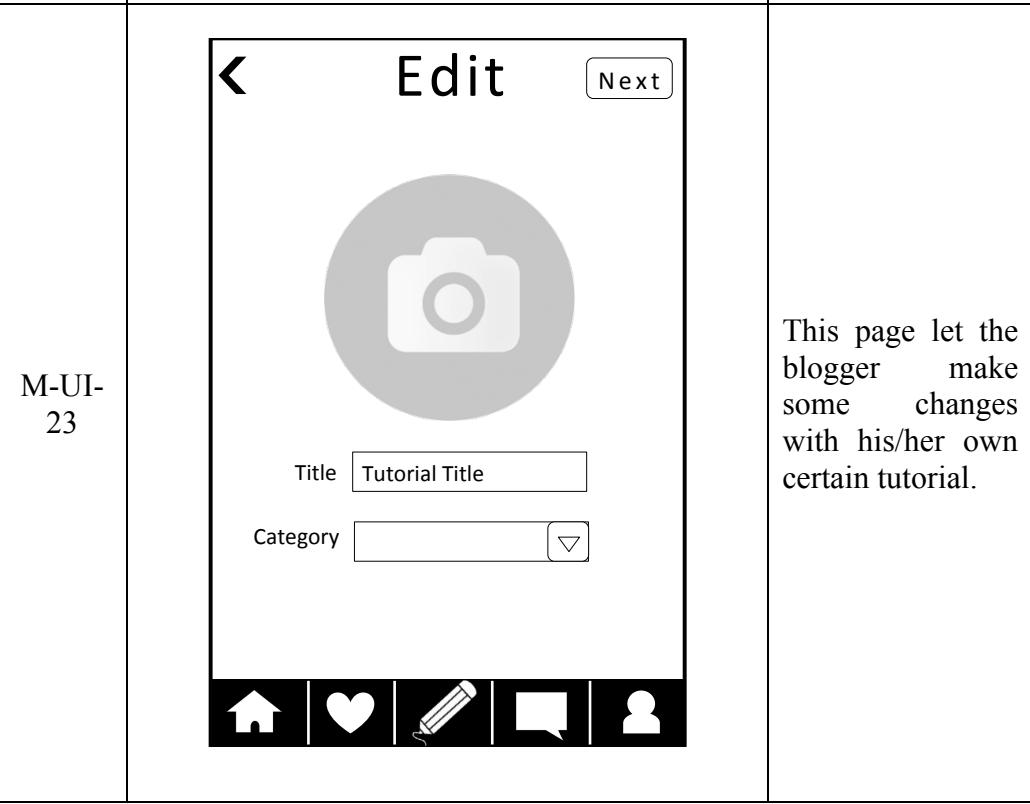
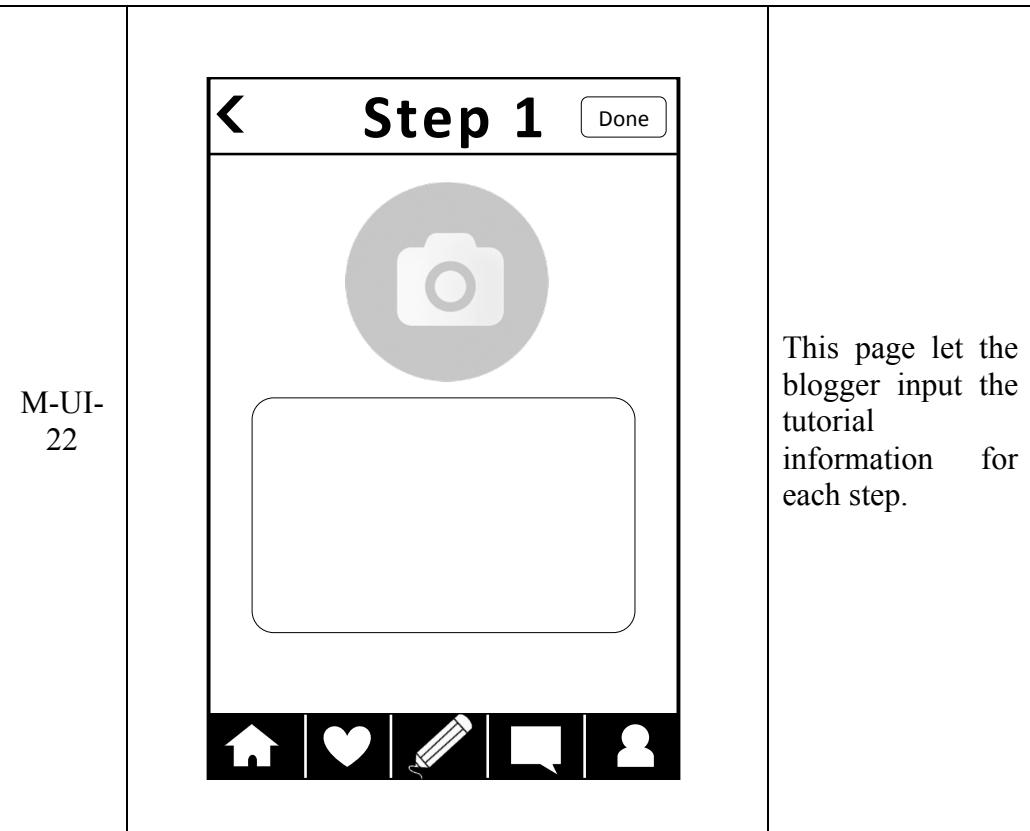
This page let the blogger creates a tutorial by inputting tutorial picture, title, and define the category.

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M-UI-20	 <p>The Material page interface features a header with a left arrow, the word "Material", and a "Next" button. Below the header is a large camera icon inside a grey circle. Underneath the camera is a rectangular placeholder box for a picture. At the bottom is a black navigation bar with icons for Home, Heart, Pencil, Chat, and User.</p>	This page let the blogger add material picture and material detail.
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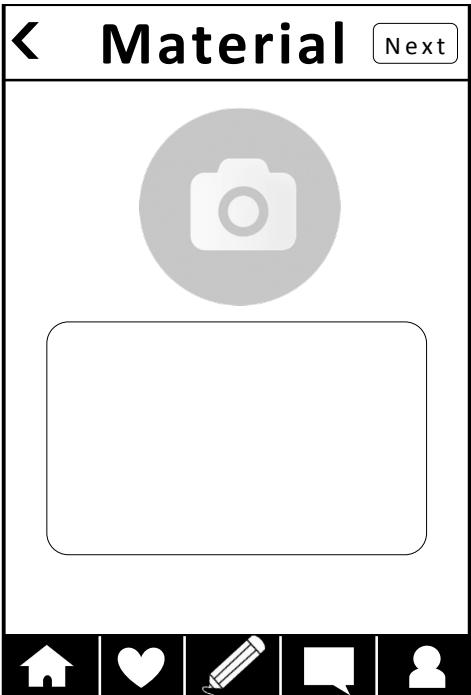
M-UI-21	 <p>The Title page interface features a header with a left arrow, the word "Title", and a "Done" button. It includes a camera icon with a "Step 1" indicator and a right arrow. A large play button icon is centered below. A "Add Step" button is located at the bottom. The bottom navigation bar is identical to the one on the Material page.</p>	This page let the blogger add video and create steps of the tutorial. The step can be only up to six.
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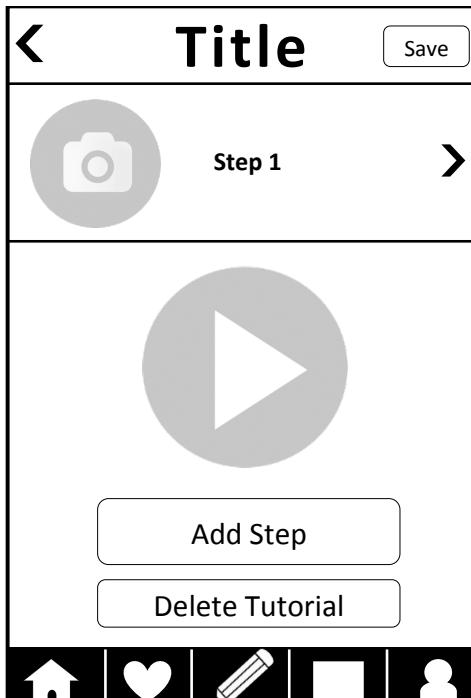
M-UI-24



The Material page interface includes a header with a back arrow, the word 'Material', and a 'Next' button. It features a large camera icon in a grey circle at the top, followed by a large empty rectangular box below it. At the bottom is a black navigation bar containing icons for home, heart, edit, comment, and user.

This page let the blogger change material picture and material detail.

M-UI-25



The Title page interface includes a header with a back arrow, the word 'Title', and a 'Save' button. It features a camera icon in a grey circle on the left, with 'Step 1' to its right and a right-pointing arrow to the far right. Below this is a large play button icon. At the bottom is a black navigation bar containing icons for home, heart, edit, comment, and user, along with 'Add Step' and 'Delete Tutorial' buttons.

This page let the blogger change video and steps of the tutorial. Also blogger is able to delete the tutorial.

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M-UI-26

Step 1

This page let the blogger change the tutorial information for each step.

M-UI-27

Shops

Categories **Q** ...Search...

This page allows the blogger to explore shops by random, categories, and searching.

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M-UI-28

Categories

Fabric Accessory

Wood Stationary

Container Other

Home | Heart | Pencil | Message | Profile

This is the shop categories page to let blogger/shopkeeper explore shops according to each category.

M-UI-29

Shop Name

Message

Branch: xxx

Tel.: 000-000-0000

Information: xxxxxxxxxxxxxxxxx
xxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

Home | Heart | Pencil | Message | Profile

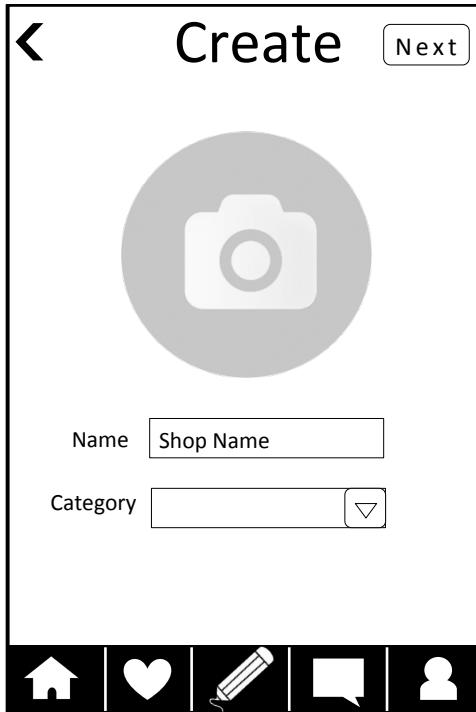
This page let the blogger/shopkeeper see detail of the shop that the blogger has selected.

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M-UI-30		<p>This page let the blogger/shopkeeper see the location of the shop via Google Maps.</p>
M-UI-31		<p>This page let the blogger see shops that are located near by him/her.</p>

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M-UI-32



The interface shows a camera icon in a circular placeholder. Below it are input fields for 'Name' (Shop Name) and 'Category'. At the bottom is a navigation bar with icons for Home, Heart, Pencil, Chat, and User.

Create Next

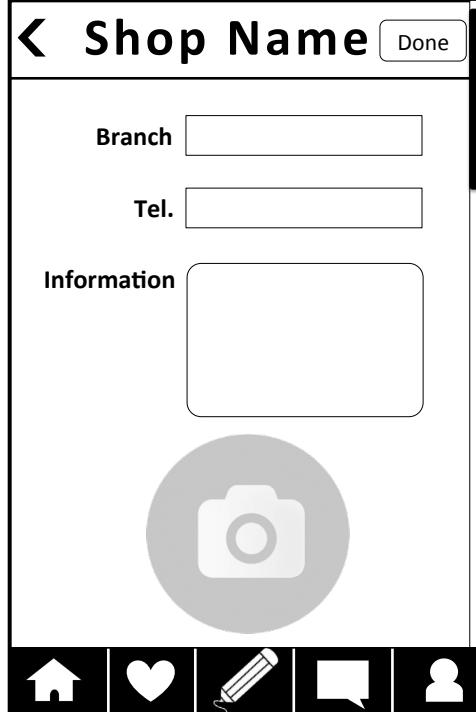
Name

Category ▼

Home | Heart | Pencil | Chat | User

This page let the shopkeeper creates a tutorial by inputting shop picture, shop name, and define the category.

M-UI-33



The interface shows input fields for 'Branch' and 'Tel.'. Below these is a large text area labeled 'Information'. A camera icon is at the bottom. The bottom navigation bar is identical to the one in the previous screen.

Shop Name Done

Branch

Tel.

Information

Home | Heart | Pencil | Chat | User

This page let the shopkeeper input the shop detail, which are branch, telephone number, information, and pictures.

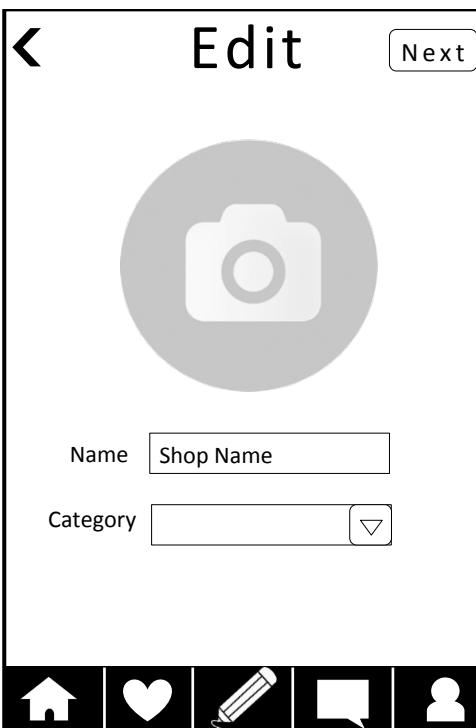
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M-UI-34



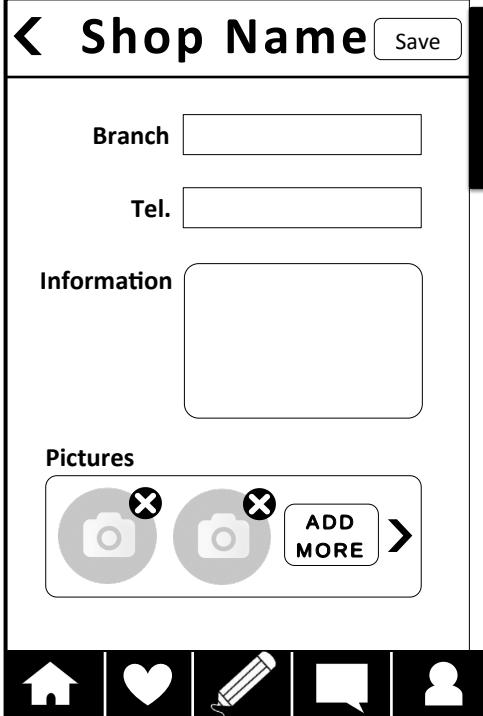
This page let the shopkeeper pin the shop's location on Google Map.

M-UI-35



This page let the shopkeeper make some changes with his/her own certain shop.

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M-UI- 36	 <p>The screen shows a form for managing shop details. At the top is a header with a back arrow and the text 'Shop Name' followed by a 'Save' button. Below the header are fields for 'Branch' and 'Tel.'. A large rectangular area labeled 'Information' is present. Underneath is a section titled 'Pictures' containing two camera icons with delete symbols and an 'ADD MORE' button. At the bottom are five navigation icons: a house, a heart, a pencil, a speech bubble, and a person.</p>	<p>This page let the shopkeeper make some changes with his/her own certain shop.</p>
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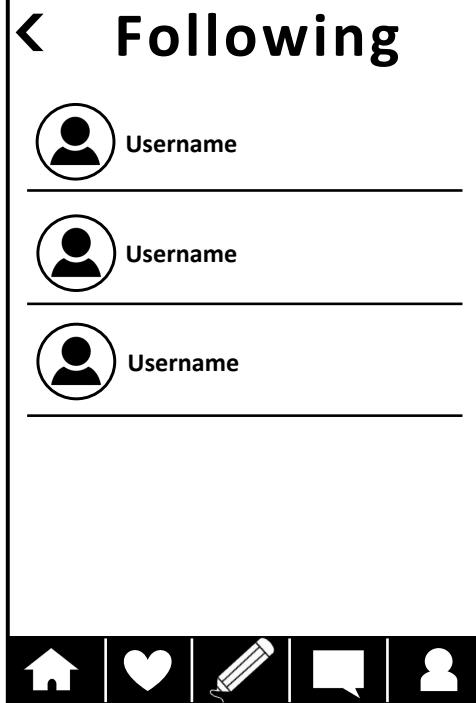
M-UI- 37	 <p>The screen shows a map of northern Thailand with a location pin placed near Chiang Mai. The map includes labels for 'Hau Nam Dang National Park', 'Phayao', 'Thep', 'Chiang Mai', 'Lamphun', 'Lampang', and 'Lang National Park'. At the top is a header with a back arrow and the text 'Location' followed by a 'Done' button. Below the map is a section with five navigation icons: a house, a heart, a pencil, a speech bubble, and a person.</p>	<p>This page let the shopkeeper make some changes with his/her own certain shop.</p>
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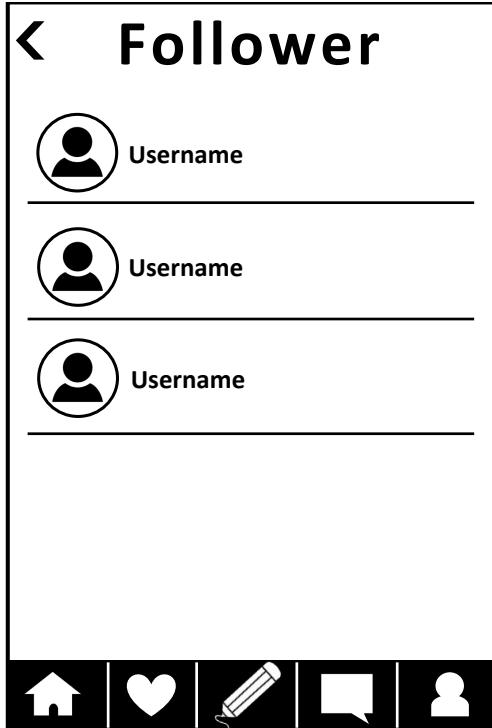
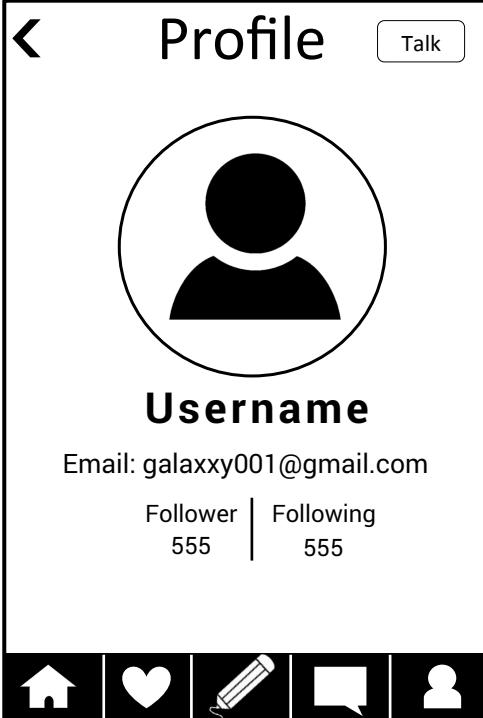
M-UI-38	<p>The wireframe shows a list of messages from shop names. Each message item includes a user icon, the shop name, and a timestamp. Below the list is a navigation bar with icons for home, heart, pencil, speech bubble, and profile.</p> <pre> < Messages Shop name xxxxxxxxxx Shop name xxxxxxxxxx Shop name xxxxxxxxxx Home Heart Pencil Message Profile </pre>	This page shows the list of the messages that the blogger has sent/received.
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M-UI-39	<p>The wireframe shows a detailed view of a message conversation between a blogger and a shopkeeper. It includes message history, timestamps, and a text input field for sending a reply. Below the message area is a navigation bar with icons for home, heart, pencil, speech bubble, and profile.</p> <pre> < Username Profile Blogger Username Hi :-) 11.11 am Shopkeeper Username Hello, may I help you? 11.11 am Blogger Username I want to ask you about the knitting wools. Is it available in your shop? 11.11 am Type Message Here ... Send Home Heart Pencil Message Profile </pre>	This page shows the detail of the message that has been sent/received with a certain shop.
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M-UI-40	 <p>The screenshot shows a mobile application interface titled "Blogger". At the top left is a back arrow icon, and at the top center is the title "Blogger". Below the title is a search bar with a magnifying glass icon and the placeholder text "...Search...". The main content area displays three entries, each consisting of a user icon (a person in a circle), the word "Username", and the text "Follower: number". A horizontal line separates each entry. At the bottom of the screen is a black navigation bar containing five icons: a house, a heart, a pencil, a speech bubble, and a person.</p>	This page shows list of bloggers that shopkeeper search by inputting a keyword.
M-UI-41	 <p>The screenshot shows a mobile application interface titled "Following". At the top left is a back arrow icon, and at the top center is the title "Following". The main content area displays three entries, each consisting of a user icon (a person in a circle) and the word "Username". A horizontal line separates each entry. At the bottom of the screen is a black navigation bar containing five icons: a house, a heart, a pencil, a speech bubble, and a person.</p>	This page shows list of bloggers that the user is following.

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M-UI-42	 <p>Follower</p> <p>Username</p> <p>Username</p> <p>Username</p> <p>Home Heart Edit Comment Profile</p>	This page shows list of bloggers that are following the user.
M-UI-43	 <p>Profile</p> <p>Talk</p> <p>Username</p> <p>Email: galaxxy001@gmail.com</p> <p>Follower Following 555 555</p> <p>Home Heart Edit Comment Profile</p>	This page shows the selected blogger profile and information to a shopkeeper.

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