

Project :

# KMITL-simple-event-bulletins-board

Team : My-name-is-TOM

55011355 Suradit Keereekaew

55010895 Permpon Kurung

Class: Object-oriented Analysis and Design Fall 2014 @ KMITL

Post-second year, Computer Engineering, B.Eng. Semester 1/2557

King Mongkut's Institute of Technology Ladkrabang

# Table of Contents

<b>Introduction.....</b>	<b>1</b>
Abstract	1
Introduction & Motivation	1
Related works	1
<b>Requirement.....</b>	<b>2</b>
Functional requirements	2
Non-functional requirements	2
Use case	3
<b>Analysis &amp; Design.....</b>	<b>8</b>
Problem Analysis	8
Application Architecture	8
Subsystems	9
Domain classes	11
Deployment	12
Implementation Plan	13
<b>Progress.....</b>	<b>14</b>
Testing	16
Experiment	17
<b>Conclusion.....</b>	<b>19</b>
Problem	19
Limitations	19
Development in further	19
<b>Bibliography.....</b>	<b>20</b>

# Introduction

**Class:** Object-oriented Analysis and Design Fall 2014 @ KMITL

**Project :** KMITL-simple-event-bulletins-board

**Team :** My-name-is-TOM

55011355 Suradit Keereekaew

55010895 Permpon Kurung

## Abstract

Recently, the way to access the internet is so much that make us comfortable more than in the past. This fact makes people more likely prefer to get the news from online media. We see this trend and have idea to build KMITL-simple-event-bulletins-board to replace the board in real world that which is not get enough attention and make a lot of spending. In addition, we design the KMITL-simple-event-bulletins-board for everybody who wants to post some content and upload their poster on website in easy interface.

## Introduction & Motivation

The reason that we pick this topic to be a project is we see that the poster and leaflet take too much time and cost. And when the event is expiring these items will not be disposed in right way. So that we want to design some website that can announce and update the KMITL's news. Moreover, we need to get news from anyone who wants to post it because we think that there are some people that want to do it. But they don't have opportunity.

## Related works

<http://www.reg.kmitl.ac.th>: official public relations website for KMITL

<http://www.contestwar.com>: public relations website for every contest

However, these website need permission to publicize the news. But in our project, we design that everyone can post on our website without permission.

# Requirement

## Functional requirements

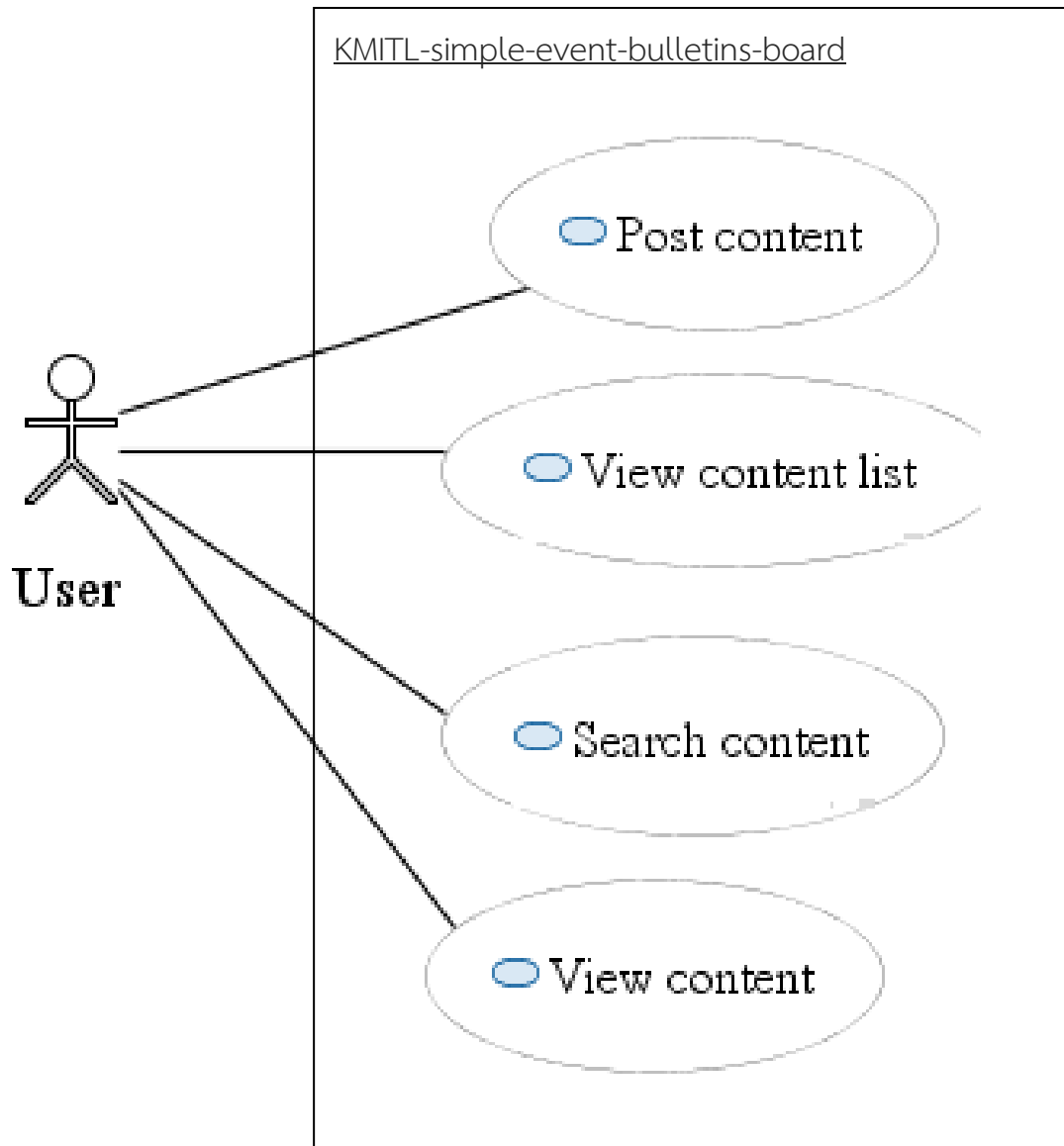
- Everybody can view content by accessing from event's list.
- Automatically hide out of date event in event's list.
- User can search event from keyword.
- User can post KMITL's event.
- User must post their event only by provided form.

## Non-functional requirements

- Responsive web page
- Function support on web browser on computer and mobile phone
- Simple pattern interface for post event
- Few content on page to make few confusion
- Few decorated item ,few data be transmitted

## Use case

### Use case diagram



### Use case specifications

**Use case name :** View content

**Use case purpose:** Providing the page that actor request with information from database.

**Assumptions:** Actor call this from content list.

**Primary Scenario :**

- A. Actor select content from list.
- B. System get information from database following selected event.
- C. System arrange content in pattern.
- D. Actor get information page from system.

**Use case name :** Post content

**Use case propose :** This use case will provide actor to publicize their information.

**Preconditions:** Actor sign in successfully (have cookie save in user's browser).

**Postconditions :** New event announce on homepage.

**Primary Scenario :**

- A. Actor fill title , description due date in form.
- B. Actor upload poster picture.
- C. Actor submit form and picture to server.
- D. Server get data and save in database.
- E. Send actor back to homepage.

**Alternate Scenario :**

Condition triggering an alternate scenario:

Condition 1 : Actor don't have picture to upload.

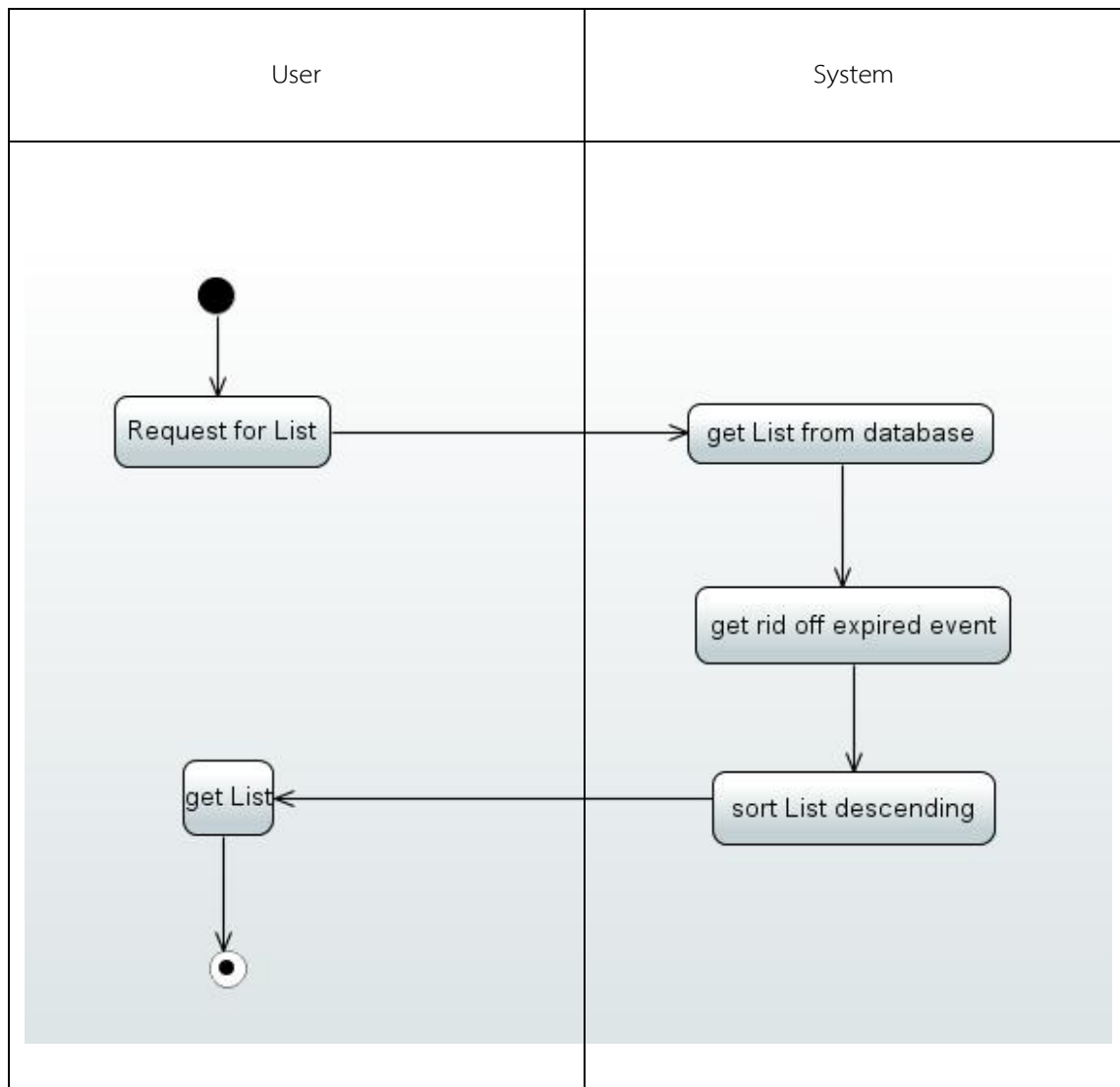
C1 Actor can submit form with out poster

Condition 2 : Don't have title and due date.

D1 Actor get error message and back to step A again.

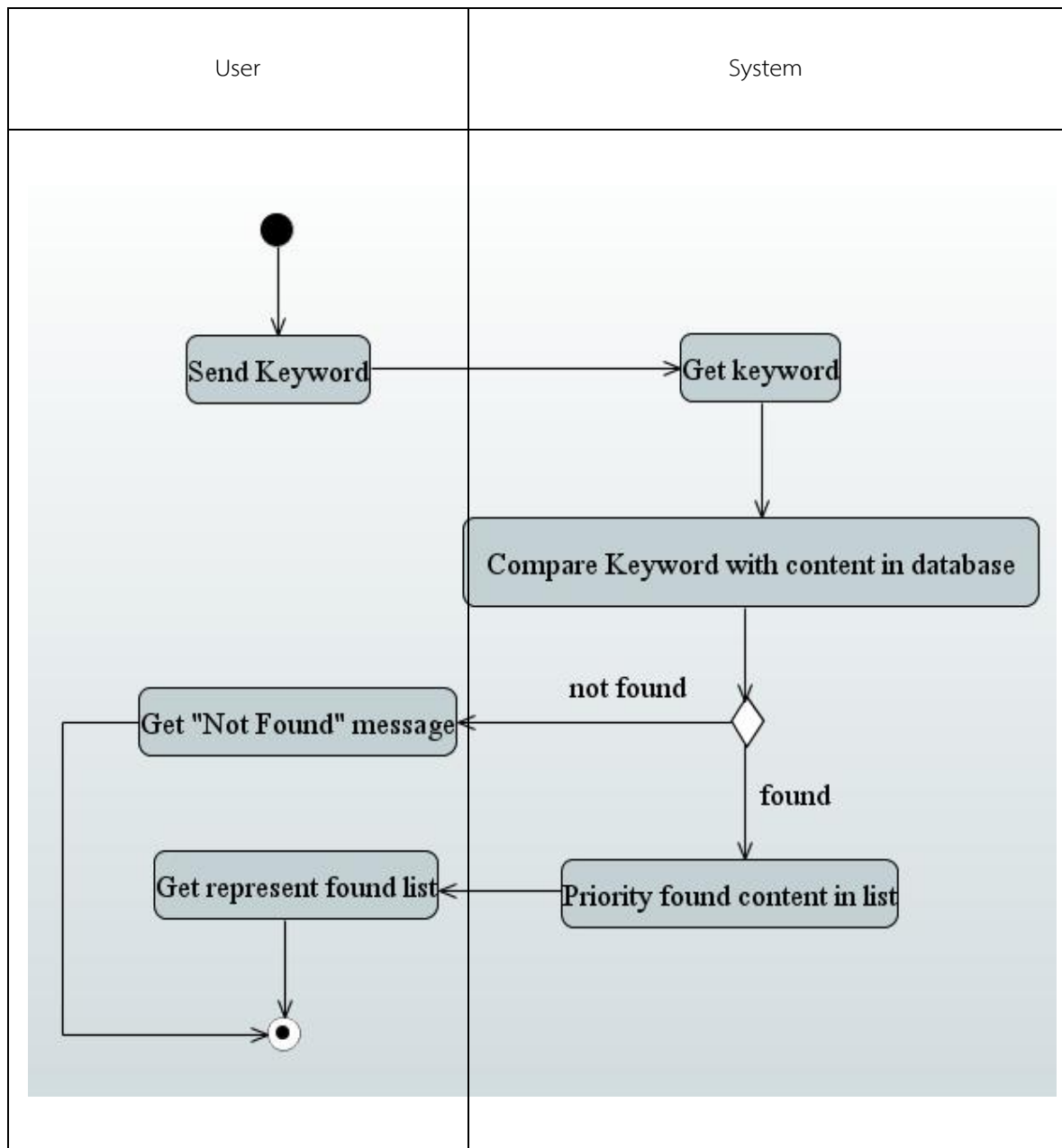
## Activity diagrams

View content list 's activity diagrams





### Search content 's activity diagrams



# Analysis & Design

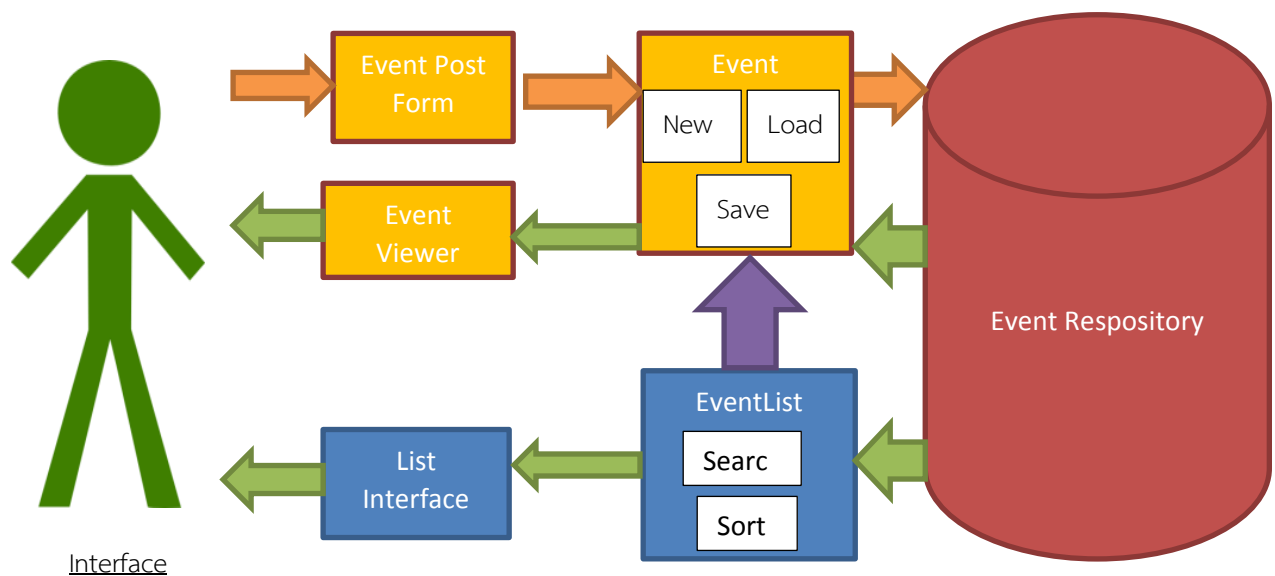
## Problem Analysis

We have analysed problem and separate in two part , list and event , because both of them are important logic that our software have.

### Component & Abstraction

- Event : contain with title, description, poster image destination, post date, due date and author.  
This component can be made new one , save or load
- EventList : contain with array of event object that can be search or sort.

## Application Architecture



- Event Post Form : Interface that give users a form to add new their event to database.
- Event Viewer : Interface that provide event's detail requested by users.
- List Interface : Interface that provide event's list to users.

### System

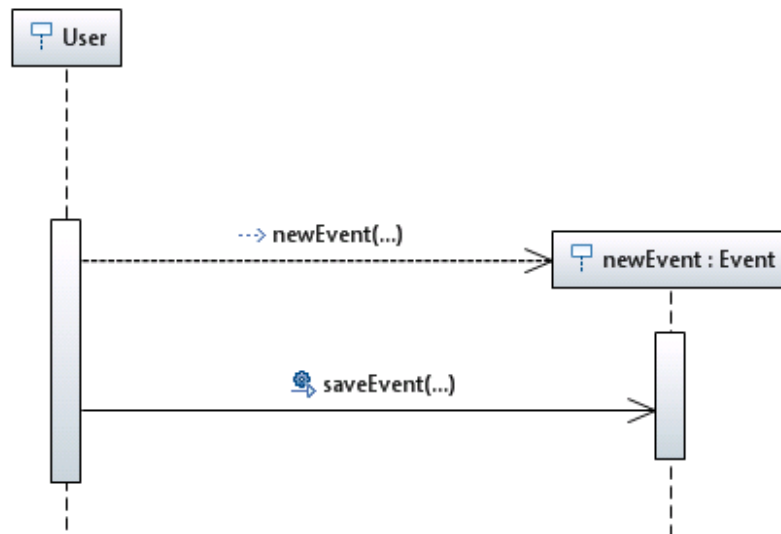
- Event: Component that load and store event's detail .
- List: Component that get data list from Event Respository and search or sort following request.

## Subsystems / Components

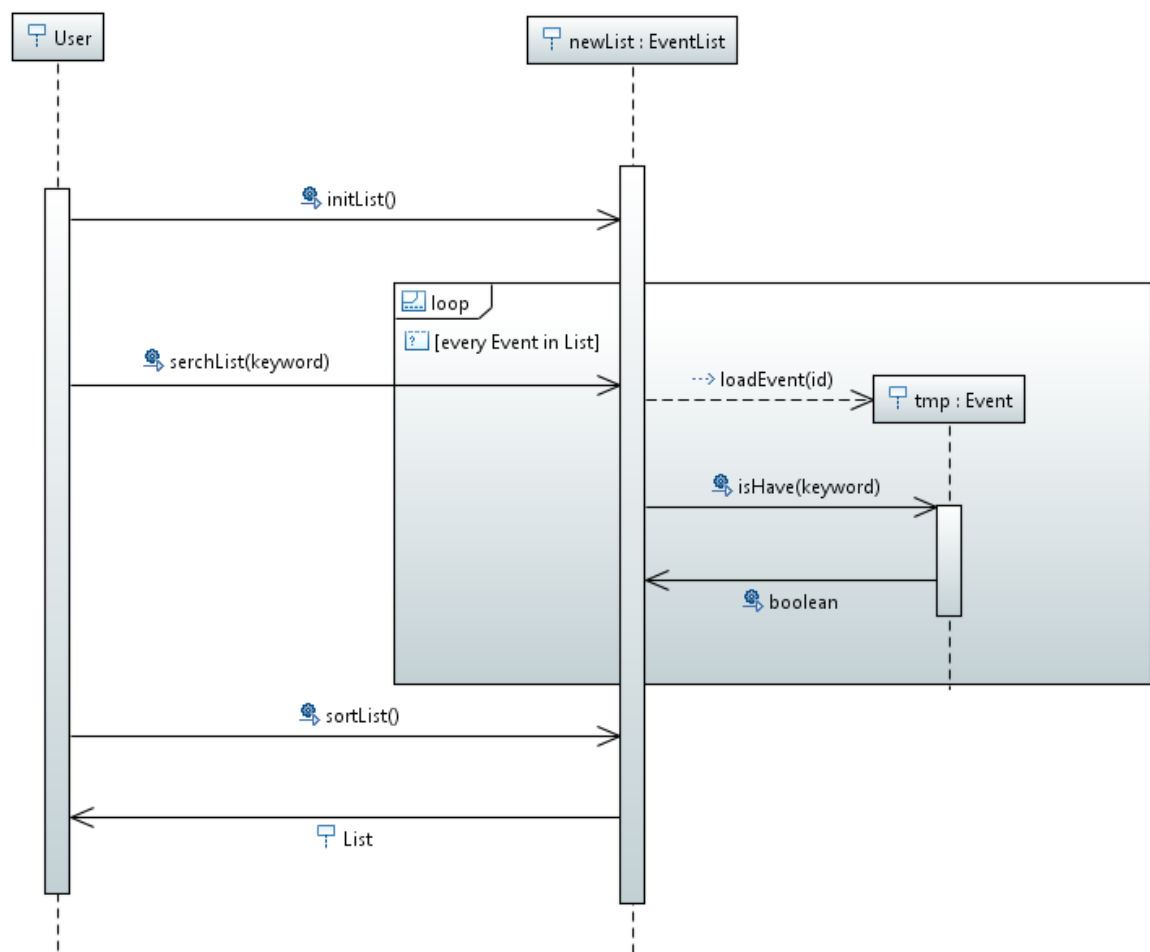
- Event
  - Responsibility :
    - Save Event data from user's form to database.
    - Get Event data from database following request
    - Edit Event data
  - Interaction :
    - Keep data from Event Post Form to Event Repository
    - Get data from Event Repository to show on Event Viewer
    - Update data that edited by author
  - Subsystems
    - NewEvent
    - LoadEvent
    - SaveEvent
- EventList
  - Responsibility :
    - Give data list to users following users's request
  - Interaction :
    - Get list from Event Repository
  - Subsystems
    - SearchList
    - SortList

## Sequence diagrams

Case 1 : User submit post form to server.



Case 2 : User search title of Event's list that match to keyword and sort by descended author

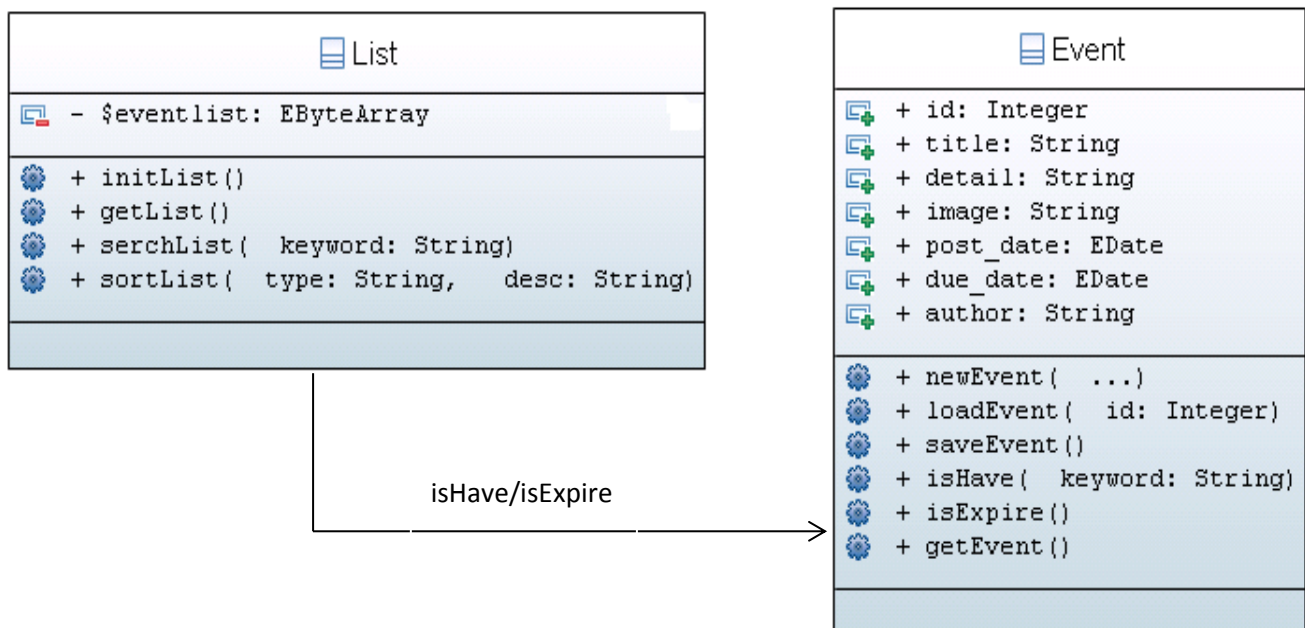


## Domain classes

EventList : Class object which represent event data in array

Event : Class object that collect all details of one event.

- isHave(keyword) : return boolean if this event contain the keyword
- isExpire() : return boolean to show if this event is out of date



## Deployment

Server : Ubuntu server run on Azure VM

- Web server : Apache + PHP5
- Database : MySQL + phpMyAdmin

Web Application

- Back-end : PHP with CodeIgniter framework
- Front-end : HTML with javascript,CSS,ajax

## Implementation Plan

TASK	September	October											November
	27	1	7	12	14	15	16	18	20	23	25	1	6
Implement Event Class													
Implement EventList Class													
Implement User Class													
Implement Admin Class													
Build Unit Test													
CONTROLLER													
Connect Event List Interface with EventList Class													
Connect Event Viewer with Event Class													
Connect Post Form with Event Collector													
Build Search and Sort System													
Build Sign Up System													
Build Sign In&Out System													
Connect User Panel with User Class													
Connect Moderator Interface with Admin Class													
VIEW													
Build Event List Interface													
Build Event Viewer													
Build Post Form													
Build User Panel													
Build Moderator Interface													
Other													
Build & Set up VM on Azure													
Install All Program on VM													
Build Integration Test													
Test both unit and Integration													



55011355 Suradit Keereekaew



55010895 Permpon Kurung



Both member

## Progress

TASK	Progress	Note
<b>MODEL</b>		
Implement Event Class	Complete	Store in : MVC\models\ event.php
Implement EventList Class	Complete	Store in : MVC\models\ eventlist.php
Implement User Class	Complete	Store in : <ul style="list-style-type: none"> <li>• MVC\models\ authen.php</li> <li>• MVC\models\ encryption.php</li> </ul>
Implement Admin Class	Complete	Store in : MVC\models\ admin.php
Build Unit Test	Complete	
<b>CONTROLLER</b>		
Connect Event List Interface with List Service	Complete	Store in : MVC\ controllers\ homepage.php
Connect Event Viewer with Event Class	Complete	Store in : MVC\ controllers\ show.php
Connect Post Form with Event Collector	Complete	Store in : MVC\ controllers\ post.php
Build Search and Sort System	Complete	Store in : MVC\ controllers\ fulllist.php
Build Sign Up System	Complete	Store in : MVC\ controllers\ register.php
Build Sign In&Out System	Complete	Store in : MVC\ controllers\ login.php
Connect User Panel with User Class	Complete	Store in : MVC\ controllers\ homepage.php
Connect Moderator Interface with Admin Class	Complete	Store in : MVC\ controllers\ admin.php
<b>VIEW</b>		
Build Event List Interface	Complete	Store in : <ul style="list-style-type: none"> <li>• MVC\views\ eventlist.php</li> <li>• MVC\views\ fulleventlist.php</li> </ul>
Build Event Viewer	Complete	Store in : MVC\views\ eventviewer.php



Build Post Form	Complete	Store in : <ul style="list-style-type: none"> <li>● MVC\views\posting.php</li> <li>● MVC\views\uploading.php</li> </ul>
Build User Panel	Complete	Store in : <ul style="list-style-type: none"> <li>● MVC\views\loginpanel.php</li> <li>● MVC\views\register.php</li> <li>● MVC\views\userpanel.php</li> </ul>
Build Moderator Interface	Complete	Store in : <ul style="list-style-type: none"> <li>● MVC\views\adminviewer1.php</li> <li>● MVC\views\adminviewer2.php</li> </ul>
Other		
Build & Set up VM on Azure	Complete	Acess via domain : kmitl-bbs.cloudapp.net
Install All Program on VM	Complete	Acess via domain : kmitl-bbs.cloudapp.net
Build Integration Test	Complete	
Test both unit and Integration	Complete	

## Testing

### Directory :

- Test Event class : MVC\ controllers\ testEventService.php
- RESULT : MVC\views\ report.php

### Test 1 :Test EventList class

Checking EventList class and represent in view

### Test 2 :Test Event class

Checking that user can post new event.

Test function : newEvent(),saveEvent()

- Call function newEvent(),saveEvent() with test parameter
- Write the new code to pull data from database and compare with test parameter

## Evaluation

Experiment1: Search for event

**Goal of the experiment:** User can use keyword to find a list

**Measurement metrics:** Show out the list that match with keyword

**Setup and methods of your experiment:** Via webbrowser by user

**Experimental results:** Don't have any fault in Experiment with keyword 2014

Search			
Title	Author	Post Date	Due Date
Title of event	ood	2014-11-16	2015-10-31
าาาาา	blackboyjakk	2014-11-04	2014-11-14
ทดสอบการเ็นช้อความ	ood	2014-10-28	2014-12-31
การประเมินอาจารย์	REG-KMITL	2014-10-19	2014-11-30
Agile Development Training Class & Workshop 31 ตุลาคม	CE-KMITL	2014-10-18	2014-10-31
สมองกลฝังตัว (Embedded System)	Embedded Systems Laboratory	2014-10-17	2014-10-22
อบรมและฝึกปฏิบัติการ Microsoft Cloud	CE-KMITL	2014-10-16	2014-10-23
The 5th GAST Travelling Conference 2014 IT Security	ดร. อรทัย สังข์เพชร	2014-10-16	2014-10-29
การพัฒนาเว็บ Web Application	Embedded Systems Laboratory	2014-10-15	2014-11-22
ขอเชิญผู้ประกอบการ SMEs เข้าร่วมงาน "CeBIT 2015"	SIPA	2014-10-15	2014-10-30
กำหนดการพิธีพระราชทานปริญญาบัตร ถ่ายภาพหมู่ และรายชื่อลำดับบัตร	ส่วนสารนิเทศและประชาสัมพันธ์	2014-10-15	2014-11-22
Mobil ExonMobil เปิดโครงการ Eso Challenge Innovative Internship	Fluke	2014-10-14	2014-10-21
แข่งขันสืบสวนแกะรอยป้องกันระบบเครือข่าย CAT CYFENCE CYBERCOP CONTEST 2014	Contestwar	2014-10-13	2014-11-10
ประกวดผลงานการพัฒนา Mobile Application ภาครัฐ "Mobile e-Government Award 2014"	Contestwar	2014-10-13	2014-11-14
การแข่งขัน True Incube Asia Pacific Mobile App Challenge 2014	Contestwar	2014-10-07	2014-10-26
บริษัท เจ เอส อาร์ เอ็ดดูเคชั่น จะเข้ามาประชาสัมพันธ์ 13 ต.ค.57	CE-KMITL	2014-10-06	2014-10-13
บริษัท อินแกรม โมโตร์ (ประเทศไทย) จำกัด เข้ามาประชาสัมพันธ์และรับสมัครงาน วันจันทร์ ที่ 29 กันยายน เวลา 10.30 น.ห้อง 810	CE-KMITL	2014-09-26	2014-09-29
^ v Highlight All Match Case 38 of 38 matches			

Search			
Title	Author	Post Date	Due Date
The 5th GAST Travelling Conference 2014 IT Security	ดร. อรทัย สังข์เพชร	2014-10-16	2014-10-29
แข่งขันสืบสวนแกะรอยป้องกันระบบเครือข่าย CAT CYFENCE CYBERCOP CONTEST 2014	Contestwar	2014-10-13	2014-11-10
ประกวดผลงานการพัฒนา Mobile Application ภาครัฐ "Mobile e-Government Award 2014"	Contestwar	2014-10-13	2014-11-14
การแข่งขัน True Incube Asia Pacific Mobile App Challenge 2014	Contestwar	2014-10-07	2014-10-26

**Conclusion:** The search system work correctly

## Experiment2 : Posting

**Goal of the experiment:** Users can post their own event

**Measurement metrics:** Website can show user's post

**Setup and methods of your experiment:** have 2 ways

- Via webbrowser by user
- Via CodeIgniter Unit test library

**Experimental results:**

- Event's title match with input data
- Event's Description match with input data
- Event's image match with input data
- Event's due date match with input data

### Test Report

Test Name	Is title valid?
Test Datatype	String
Expected Datatype	String
Result	Passed
File Name	C:\wamp\www\html\application\controllers\testEventService.php
Line Number	39
Notes	
Test Name	Is desc valid?
Test Datatype	String
Expected Datatype	String
Result	Passed
File Name	C:\wamp\www\html\application\controllers\testEventService.php
Line Number	40
Notes	
Test Name	Is image valid?
Test Datatype	String
Expected Datatype	String
Result	Passed
File Name	C:\wamp\www\html\application\controllers\testEventService.php
Line Number	41
Notes	
Test Name	Is due date valid?
Test Datatype	String
Expected Datatype	String
Result	Passed
File Name	C:\wamp\www\html\application\controllers\testEventService.php
Line Number	42
Notes	

```
1 <?php
2 /*
3  *
4  */
5 class testEventService extends CI_Controller
6 {
7     //private $map_event;
8
9     function __construct()
10     {
11     }
12
13     public function index(){
14         //init value from session
15         $this->load->library('session');
16         $post = $this->session->all_userdata();
17         //set pseudo value to test
18         $title = 'Title of event';
19         $desc = 'description of event to read';
20         $image = '0001.jpg';
21         $duedate = '15-10-31';
22
23         $this->load->model('event');
24         $this->event->newEvent($title,$desc,$image,$duedate);
25         $this->event->saveEvent();
26
27         $result = mysql_query('SELECT * FROM event ORDER BY id DESC LIMIT 1;');
28         if (mysql_num_rows($result) > 0) {
29             $last_row = mysql_fetch_row($result);
30             $this->unit->run($last_row[1],$title,"Is title valid?");
31             $this->unit->run($last_row[2],$desc,"Is desc valid?");
32             $this->unit->run($last_row[3],$image,"Is image valid?");
33             $this->unit->run($last_row[4],$duedate,"Is due date valid?");
34         }
35         $this->load->view('testReport');
36     }
37 }
38
39 ?>
```

## ข่าวใหม่

Title of event

ทดสอบการโพสข้อความ

Test post

การประเมินอาจารย์

การพัฒนาเว็บ Web Application

กำหนดการพิธีพระราชทานปริญญาบัตร ถ่ายภาพหมู่ และรายชื่อลำดับบัณฑิต

**Conclusion:** We can see new event same with posting data

## Conclusion

According to our progress, we can build KMITL-simple-event-bulletins-board website with requirement such as user can see list without expired event, can search list and can post event with provided form.

In our design, we use concept of object-oriented for abstraction and component. We have two important class in business logic, EventList and Event. Moreover, we have used the MVC pattern for our architecture.

We coded in PHP with SQL database and tested them to make sure that our system is working right. Then we have final progress with end-user trying. In the conclusion we can say that our website can work following our requirement and able to reuse them to improve or add some extra requirement because of object-oriented design.

### Problem

- Search algorithm is only find match title.
- Sort algorithm is slow for large data.

### Limitations

- Webmaster can only remove data out from database.
- User must have poster that fit to providing pattern.

### Development in further

- Use cache webpage for improve accessing speed.
- Extend the way that user can decorate their event.
- Add user data about themselves ,avatar and contact.

## Bibliography

HTML/SQL knowledge	: <a href="http://www.w3schools.com/">http://www.w3schools.com/</a>
PHP string encoding decoding functions	: <a href="http://www.ireallyhost.com/kb/other/194">http://www.ireallyhost.com/kb/other/194</a>
codeigniter	: <a href="http://www.codeigniter.com/">http://www.codeigniter.com/</a>