WIF2002 Software Requirements Engineering
Project Title: Evén Event Promotion System

Software requirements specification (SRS) document

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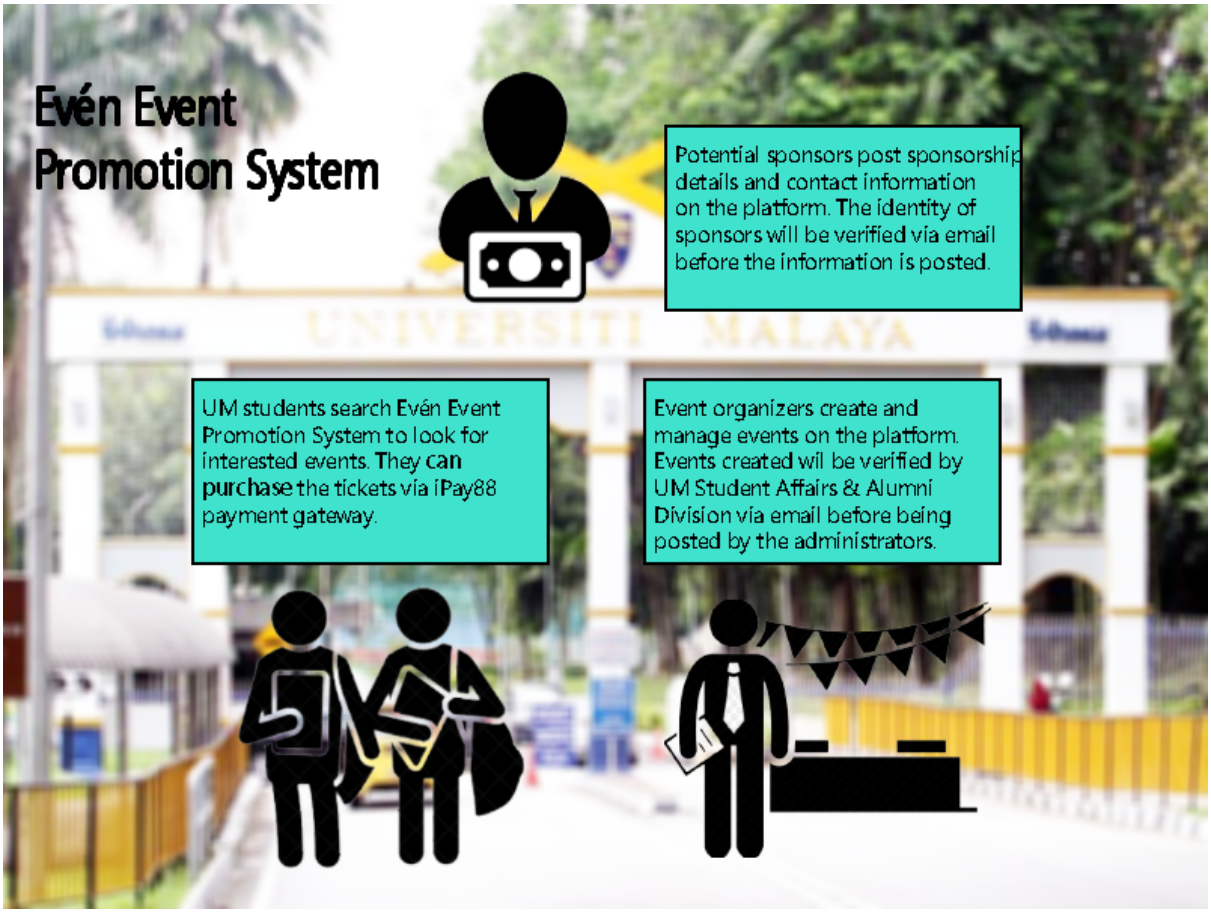
1. Introduction of Project



Evén Event Promotion System is a system designed for event advertisement in University of Malaya. This system is designated for all the events that are held in UM. Users can join events as participants or volunteers. This system also uses the third party payment gateway ---- iPay88 for ticket purchase and Google Map for venue routing. Users can create events and manage events. Events created will be verified by UM Student Affairs & Alumni Division (HEPA) before being posted by system administrators. Sponsors can post sponsorship details and contact information on the platform. Potential sponsors will be categorized according to event types, and their contact information will be displayed on the website. The main target users for this system are UM students, lecturers, staff, sponsors from any companies and organizations and event organizers for events held within UM areas.

1.1 Purpose

Evén event promotion system is an interactive web application which aims to provide a platform for event advertisement in University of Malaya as solution for the problems below:

Problem 1 : Event registration for events in UM differs for different events, mostly via Google Form.
Solution : Evén provides event registration functionality.

Problem 2 : Payment method for events in UM differs for different events.
Solution : Evén integrates with iPay88 online payment gateway for ticket purchase.

Problem 3 : Venue routing for event venue has to be done manually by users.
Solution : Evén event promotion system redirects user to event venues via Google Map.

Problem 4 : Event advertisement is done through different social media platforms.
Solution : Evén event promotion system allows users to create and manage events for advertisement.

Problem 5 : Sponsorship opportunity has to be done manually for events in UM.

Solution : Evén provides contact information for potential sponsors.

1.2 Objectives

1. To provide a web-based platform for users to register for events held in UM as volunteers or participants, make ticket purchase and route to event venue.

2. To provide a web-based platform for event organizers to create and manage events that are held in UM and have been verified by UM Student Affairs & Alumni Division.

3. To promote sponsorship opportunities for events held in UM by providing contact information of potential sponsors.

1.3 Scope

The major scopes covered are as follows:

1. Event registration:
   - Users can register for events held in UM as volunteers or participants.

2. Ticket purchasing:
   - User can purchase tickets via iPay88 payment gateway used in the system.

3. Venue routing:
   - Event participants can be routed to the event venue via Google Map.

4. Event creation:
   - Event organizers can create events that are held in UM based on categories.

5. Event management:
   - Event organizers can manage events that have been created, approve the registration from users as volunteers.

6. Sponsors contact information displays
   - Potential sponsors will be categorized and their contact information will be displayed.

1.4 Definitions, Acronyms and Abbreviation

Event management - Update and view current information about an event.

Event registration - Application to join an event as participants or volunteers.

Payment gateway - An e-commerce software that authorizes payments for online merchants, e-businesses or electronic business.

Routing - Directing to certain venue or location.

Sponsors - Companies that are supporting an event, activity, person, or organization financially or through the provision of products or services.

Volunteers - A person who works for an organization without being paid.

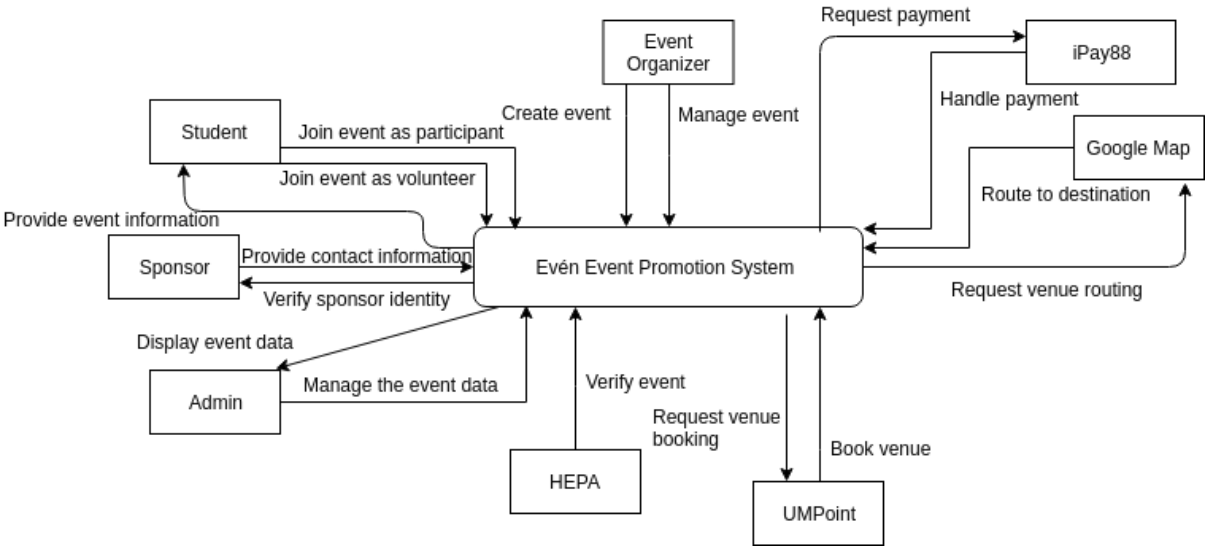
1.5 References

1. Project Template from Requirement Engineering Course
2. http://www.trishmarie.com/vision.pdf
3. http://cs.uccs.edu/~gsc/pub/master/hevecek/doc/EVoting_SRS%20Document.doc

1.6 Overview

This document addresses the context information, stakeholder and user descriptions, goals and important scenarios for the system and user, product features and constraints.

2. Product perspective



2.1 System interfaces

a) iPay88

iPay88 provides an easy and quick way for online payment. It helps handle ticket purchase in Evén Event Promotion System.
https://www.ipay88.com/

b) Google Maps

Integration with Google Maps Platform enables venue routing for Evén Event Promotion System.
https://cloud.google.com/maps-platform/

2.2 User interfaces

The major functionalities are as follows:

a) Event registration
b) Ticket purchase
c) Venue routing
d) Event creation
e) Event management
f) Sponsors advertisement
g) Sponsors contact information displays

2.3 Hardware interfaces

The application must run over Internet.

- Google Cloud Console is chosen for back end hosting.
- Heroku is chosen for front end hosting.
- In client side, all the hardware devices used by clients must be equipped with Internet connection capability, and complemented with devices needed to connect to Internet, such as routers.

Google Cloud Console configuration:
730 total hours per month
VM class: regular
Instance type: g1-small (vCPUs: shared, RAM: 1.70GB)
Region: lowa
Operating System: Windows

2.4 Software interfaces

Oracle SQL
Version - 18.4.0.376.1900
https://www.oracle.com/technetwork/developer-tools/sql-developer/downloads/index.html
Purpose - Database System

Java SE Development Kit
Version - 8u201
https://www.oracle.com/technetwork/java/javase/downloads/index.html
Purpose - Database System

NodeJS
Version - v10.15.2
https://nodejs.org/en/download/
Purpose - JS runtime

NPM
Version - 6.4.1
https://nodejs.org/en/download/
Purpose - Package Management

Heroku
Version - v7.22.2
https://devcenter.heroku.com/articles/heroku-cli#download-and-install
Purpose - Front-end hosting

React
Version - 16.8.3
https://react-cn.github.io/react/downloads.html
Purpose - Front-end development

3. Requirements

3.1 Identification of stakeholders

No.	Stakeholder Name	Role	Relevance to the software project	Area of expertise	Assigned task
1	Event organizers	Organizer	Create and manage event, approve volunteer applications	Event planning	Create event, manage event
2	UM Lecturers	User	Register for events as participants or volunteers	Education	Register for events
3	UM Staff	User	Register for events as participants or volunteers	Management	Register for events
4	UM Students	User	Register for events as participants or volunteers	Student	Register for events
5	UM Student Affairs & Alumni Division (HEPA)	Management	Approve events that are created	Management	Approve events that are created in the platform
6	Administrators	Administrator	Manage the event data	Administration	Manage event data

7	Potential sponsors from organizations / companies	User	Provide sponsorship details and contact information	Marketing	Provide sponsorship details and contact information
8	Project Manager	Project Manager	Schedule and monitor the development of the system.	Management	Ensure the system adhere to the requirements and completed within timeline
9	Software Developer	Programmer	Develop maintainable, scalable, secured and efficient system	Programming	Develop system that is reliable and suits the users' requirements
10	Database engineer	Database engineer	Design and Manage the system database	Database Designing	Design and maintains the system database
11	UI / UX Designer	Designer	Design user interface.	UI / UX design	Design the website user interface
12	Software Tester	Software Tester	Test the website with test cases.	Software testing	Tests the software to ensure proper functioning.

3.2 Requirement Elicitation Techniques

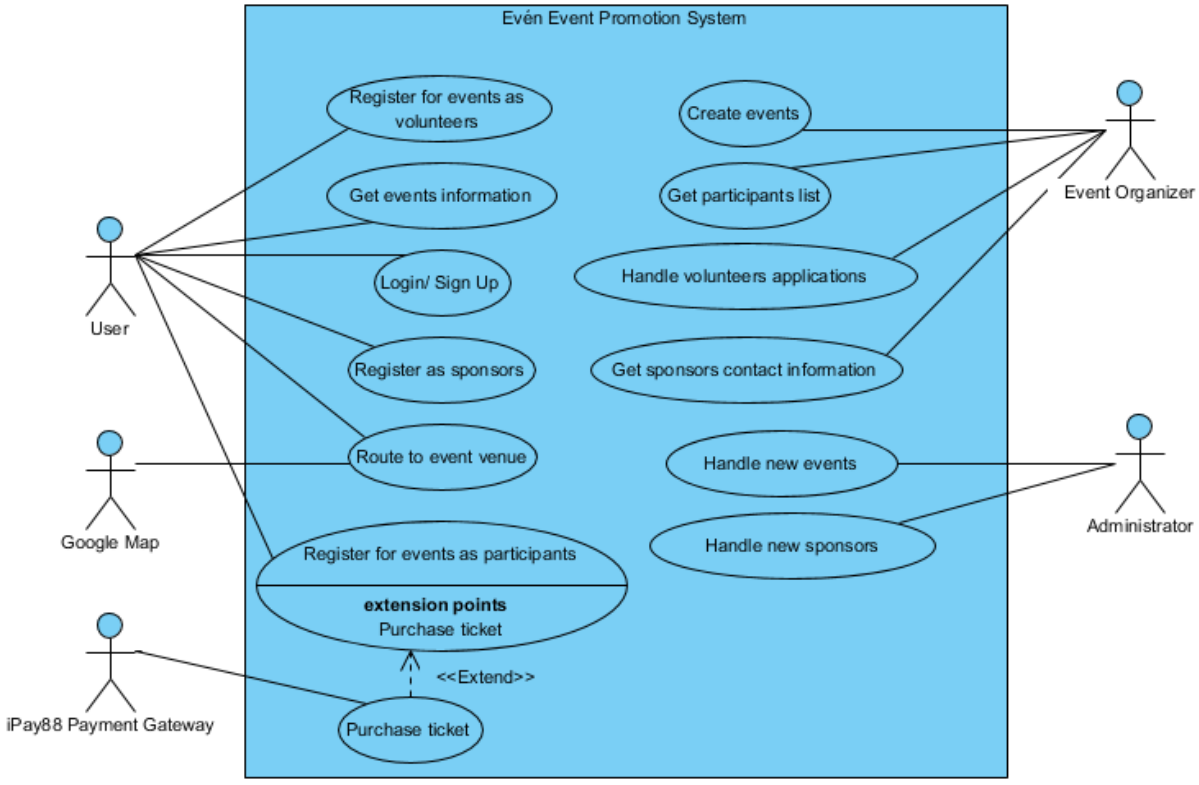
a) Survey techniques - Interview
   - Interview has been carried out among 10 event organizers in University of Malaya to identify their workflow especially in publicizing their events, and the effectiveness of current methods.

b) Survey techniques - Questionnaire
   - Questionnaire has been distributed among 120 students of University of Malaya, 50 UM lecturers, and 50 UM staff to study their common channels to participate in events.

c) Supporting techniques - Prototyping
   - Prototyping of system design has been drafted to identify suitable system design for targeted users.

d) Supporting techniques - Use case modelling
   - Use case diagram with detailed use case descriptions has been drawn to study the detailed workflow and scenario when using the system.

3.3 Product Functions



Use case reference	Use Case Name	Use case description
UC-01	Register for events as volunteers	Users can register for events as volunteers. Volunteer application will then be handled by the event organizers.
UC-02	Get events information	Users can get events information, and search for interested events based on categories and keywords.
UC-03	Login / Sign Up	New users can sign up in the platform. Users can log in via username and password.
UC-04	Register as sponsors	Users can register as sponsors to provide contact information. The registration will be handled by system administrator to do verification.
UC-05	Route to event venue	Users can get the route to the event's location via Google Map Platform.
UC-06	Register for events as participants	Users can register for events as participants. UC-07 will be triggered if events require ticket purchase.
UC-07	Purchase ticket	Users can pay fees for ticket purchase through iPay88 payment gateway.
UC-08	Create events	Users can create events that have been approved by UM Student Affairs & Alumni Division. The event will be handled by system administrator to do verification.

UC-09	Get participants list	Event organizers can get participants list for the event created.
UC-10	Handle volunteers applications	Event organizers can choose to approve / disapprove volunteers applications based on their decisions.
UC-11	Get sponsors contact information	Users can get contact information about registered potential sponsors.
UC-12	Handle new events	System administrators can approve / disapprove new events after verification from UM Student Affairs & Alumni Division via email. Only approved event will be visible to the users.
UC-13	Handle new sponsors	System administrators can approve / disapprove sponsors registrations after verification about the organizations / companies. Only contact information of approved sponsors will be visible to the users.

3.4 Assumptions & dependencies

Assumptions:

- Proper testing towards the website to ensure that no major bugs occur
- User may access from any device that has Internet browsing capability and an Internet connection
- The information of all user, event details, transactions and system logs must be stored in database securely.
- Any users can create event. Evén event promotion system provides platform for event advertisement. The events created will be verified by UM Student Affairs & Alumni Division, then approved by system administrators before posted on the platform.
- Any users can apply to be event volunteers. The application will be displayed to event organizers. Event organizers can choose to approve or disapprove the application based on their needs.
- Any users can register as sponsors. They must attach relevant company or organization information during registration. System administrators will verify the information. After that, the details of sponsorship and contact information of the sponsor will be displayed.
- System administrator must verify the events being created by the users, then only they will be visible to the users.
- System administrators also must verify the sponsors' identities, then only the sponsorship information will be visible to the users.

Dependencies:

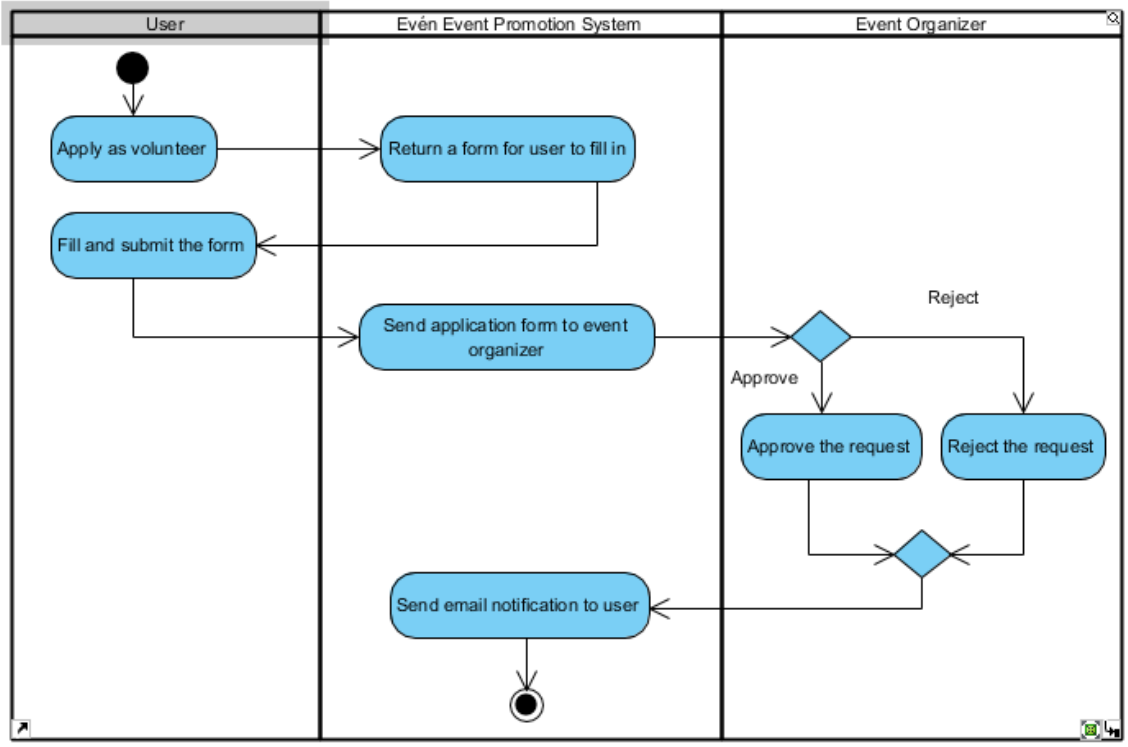
- The specific hardware and software due to which the product will be run.
- Database engineer must ensure that the data stores is secured with regular data backup.
- Event location has to be plotted properly in Google Map for users' convenience.
- iPay88 payment gateway has to be configured properly to ensure the transaction is safe and verified properly.

4. Specific Requirements

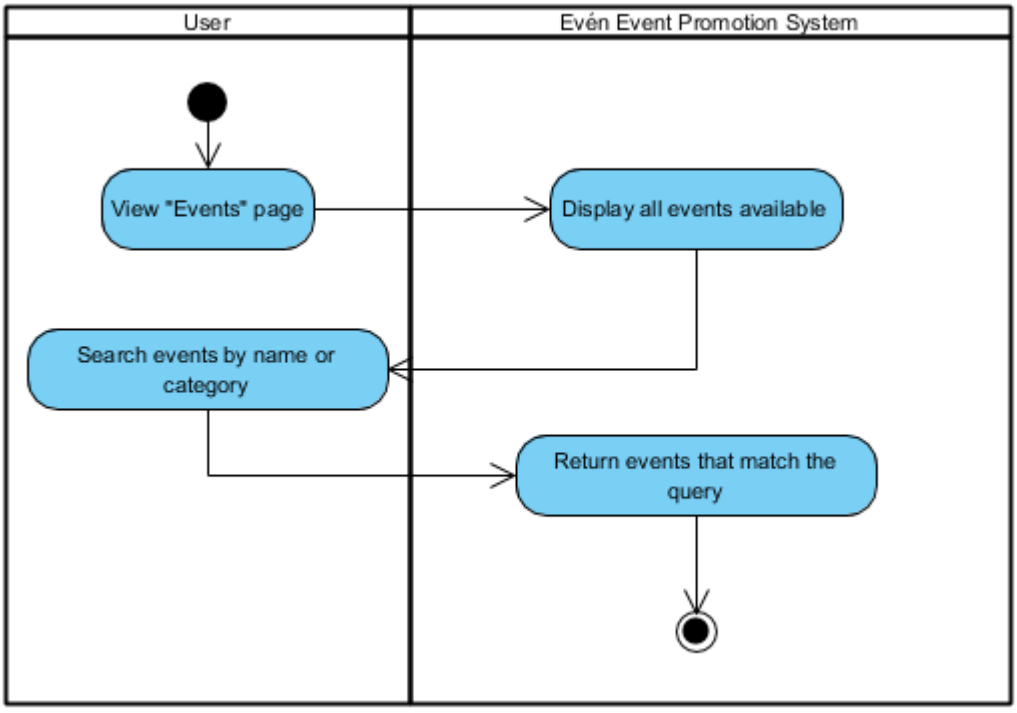
4.1 Detailed use case descriptions

Element	**Description**	
Use Case Name	Register for events as volunteers	
Use Case ID	UC-01	
Priority	High	
Actor(s)	Users, event organizers	
Description	Users can register for events as volunteers. Volunteer application will then be handled by the event organizers.	
Pre-condition(s)	Users have logged into the system.	
Post-condition(s)	Users will be notified whether the volunteer applications success or not.	
Flow of events	**Actor Action**	**System Response**
	1. User clicks “Apply as Volunteer” on the event 3. User submit the filled form 5. Event organizer approve the request	2. Return a form to fill in details to user 4. Send application form to event organizer. 6. Send email notification to user.
Alternative flows and exceptions	If event organizer disapproves the request, email notification will be sent to user to notify the unsuccess status of their application.	
Extensions	-	

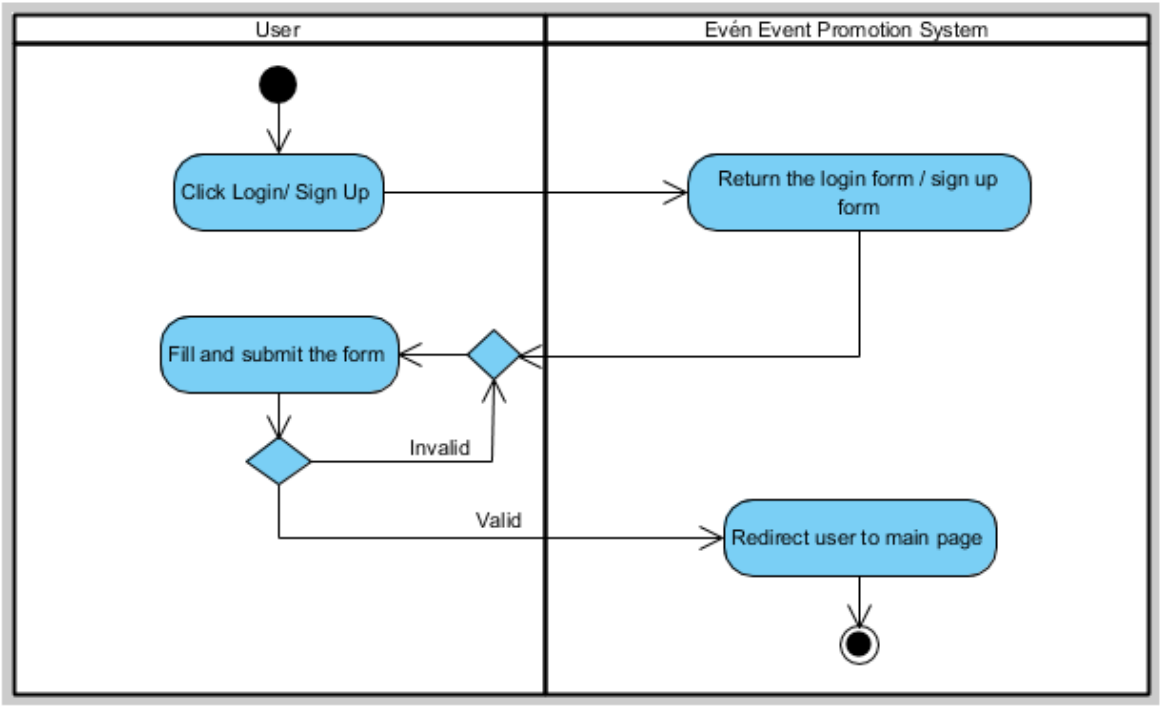
Business Rule	1. Event must be valid and verified. 2. User must have logged in to the system. 3. Volunteer application form must be complete.
Quality Requirement	-



Element	Description	
Use Case Name	Get events information	
Use Case ID	UC-02	
Priority	Very high	
Actor(s)	Users	
Description	Users can get events information, and search for interested events based on categories and keywords.	
Pre-condition(s)	User must have logged into the system.	
Post-condition(s)	User will be provided events information based on categories or keywords searched.	
Flow of events	**Actor Action**	**System Responses**
	1. User enters “Events” page. 3. User searches events by name or category	2. Return all events available. 4. Return events that match the query.
Alternative flows and exceptions	If there is no event available or there is no event matching the keyword / category selected, “No matching event” will be displayed to notify user.	
Extensions	-	
Business Rule	1. User must have logged into the system. 2. Keywords are case-insensitive.	
Quality Requirement	- The system shall able display more than 20 events in the home page	

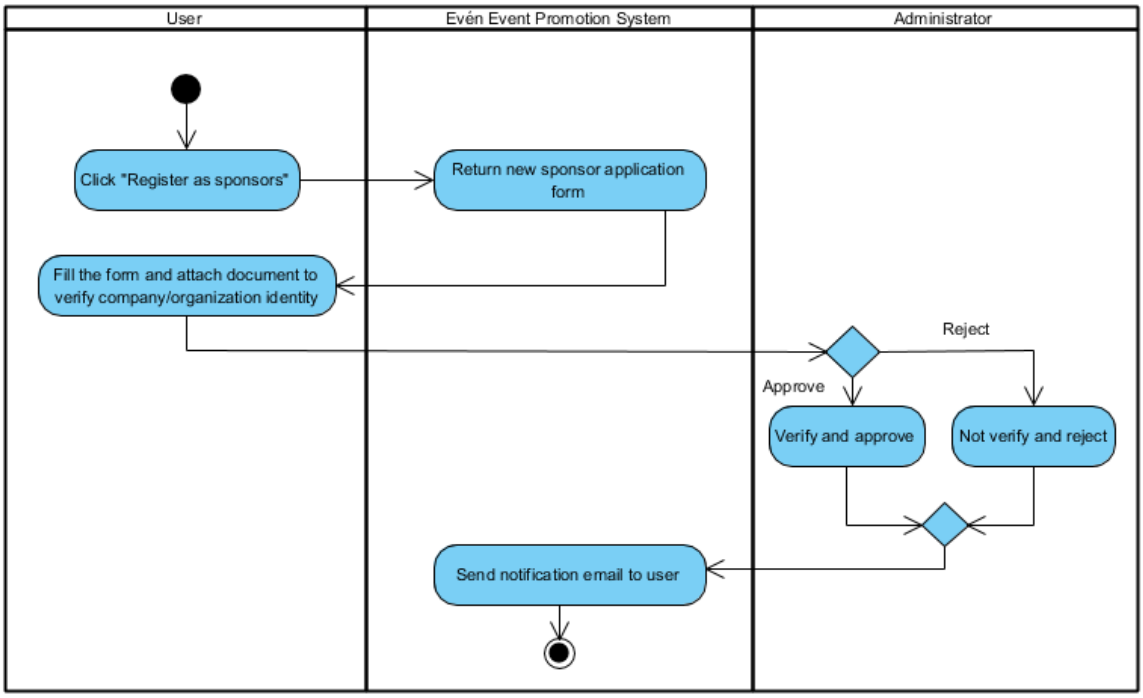

User
Evén Event Promotion System
View "Events" page
Display all events available
Search events by name or category
Return events that match the query

Element	Description	
Use Case Name	Login / Sign Up	
Use Case ID	UC-03	
Priority	Very high	
Actor(s)	User	
Description	New users can sign up in the platform. Users can log in via username and password.	
Pre-condition(s)	User hasn't logged into the system.	
Post-condition(s)	User is logged into the system.	
Flow of events	**Actor Action**	**System Responses**
	1. User clicks "Log In" or "Sign Up" 3. User fills in the form and click "Submit"	2. Return the login form / signup form 4. Redirect user to main page.
Alternative flows and exceptions	If user forgets the password, can click "Forget password", email confirmation will be sent to reset user password.	
Extensions	-	
Business Rule	1. One user has one username and password 2. User has to bind with email account	
Quality Requirement	- the system shall include user authorisation procedure where users must identify themselves using a login name and password - the user forgotten password may request a temporary password and shall receive a link sent to their primary email address	

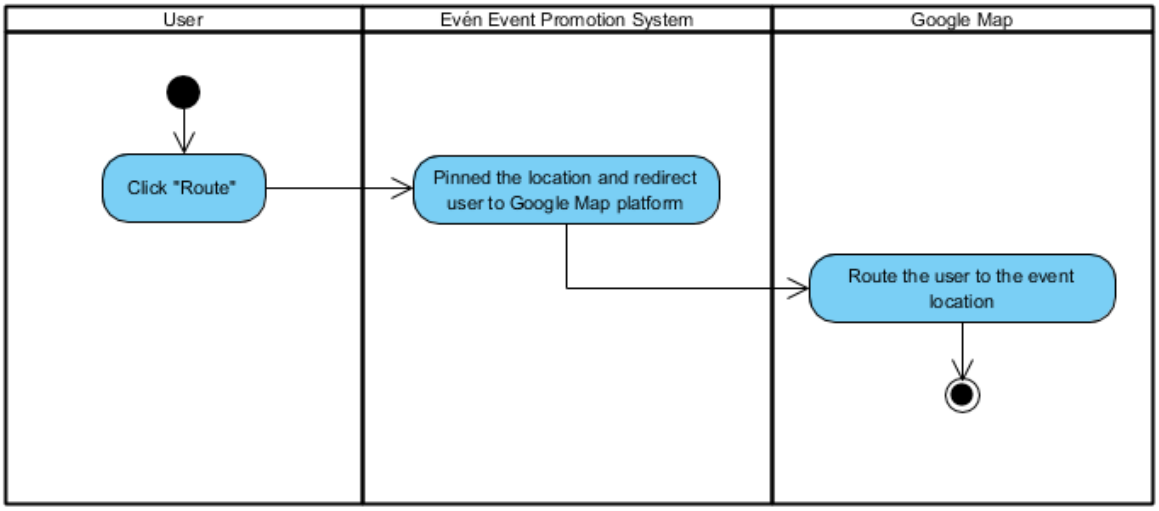

User
Evén Event Promotion System
Click Login/ Sign Up
Return the login form / sign up form
Fill and submit the form
Invalid
Valid
Redirect user to main page

Element	Description	
Use Case Name	Register as sponsors	
Use Case ID	UC-04	
Priority	High	
Actor(s)	User, system administrator	
Description	Users can register as sponsors to provide contact information. The registration will be handled by system administrator to do verification.	
Pre-condition(s)	User must have logged into the system.	
Post-condition(s)	Contact information of user will be displayed as potential sponsors.	
Flow of events	**Actor Action**	**System Response**
	1. User clicks “Register as sponsors” 3. User fills in the form, attach document to verify company / organization identity and click “Submit”	2. Return the new sponsor application form 4. System administrator verifies the identity of user. Send email notification to user 5. Contact information of user is displayed as potential sponsors
Alternative flows and exceptions	If the identity of user as member of organization / company, system administrator will reject the application. Email notification will be sent to user. Purpose of verification is to avoid fraud cases.	
Extensions	-	

Business Rule	1. One user can provide only one contact information 2. Updates towards contact information has to be done by administrator. Administrator can be contacted via email.
Quality Requirement	-

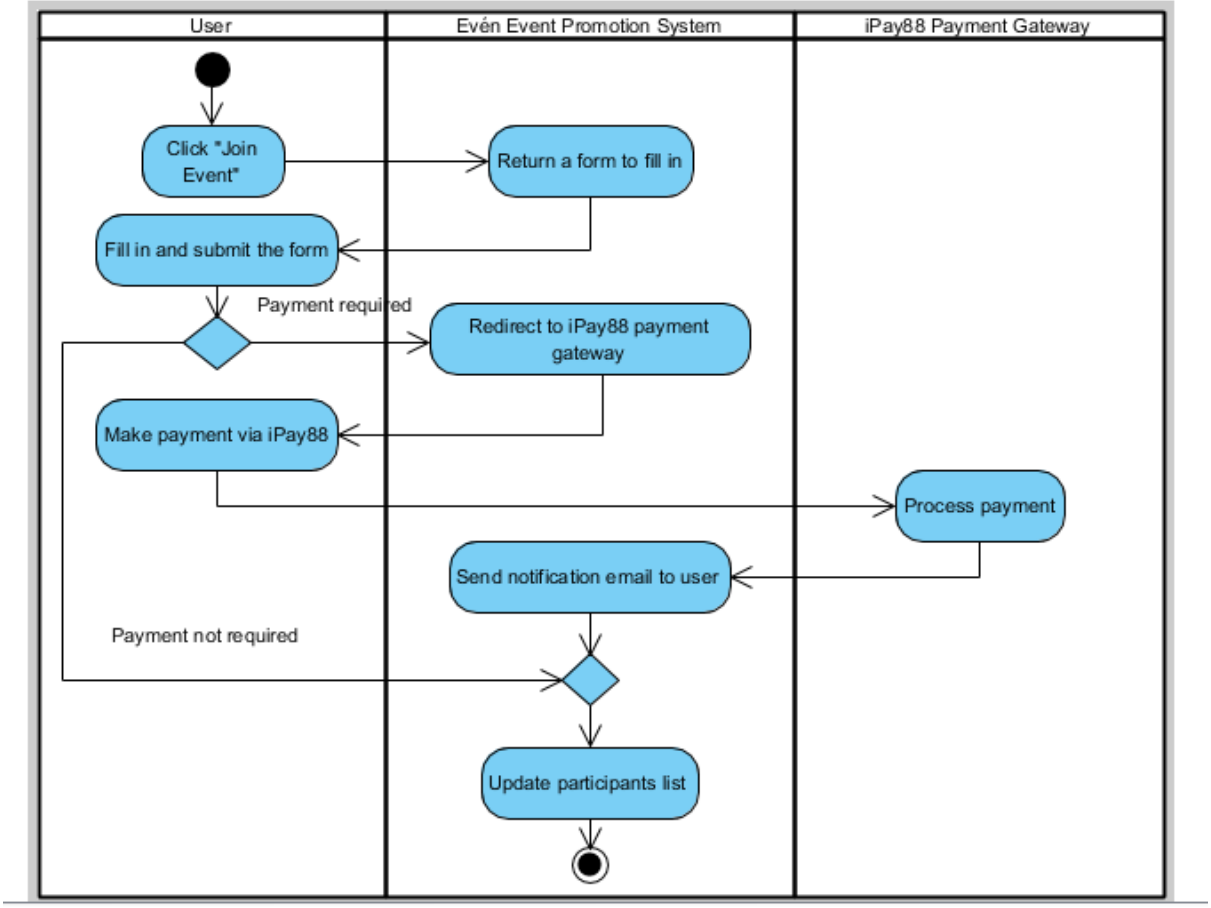


Element	Description	
Use Case Name	Route to event venue	
Use Case ID	UC-05	
Priority	Medium	
Actor(s)	User, Google Map Platform	
Description	Users can get the route to the event's location via Google Map Platform.	
Pre-condition(s)	User has logged into the system.	
Post-condition(s)	User is redirected to Google Map Platform for venue routing.	
Flow of events	**Actor Action**	**System Responses**
	1. User click "Route" on the event.	2. Redirect user to Google Map Platform. The event venue is pinned on Google Map.
Alternative flows and exceptions	Event cannot be routed if the event organizer did not pin the location.	
Extensions	-	
Business Rule	1. One event can only be associated with a venue 2. One event may not have location pinned (Exception case) 3. User must have logged into the system 4. User may route to event venue even if he/she has not joined the event.	
Quality Requirement	- The system shall redirect the route to venue to google map within 5 seconds	



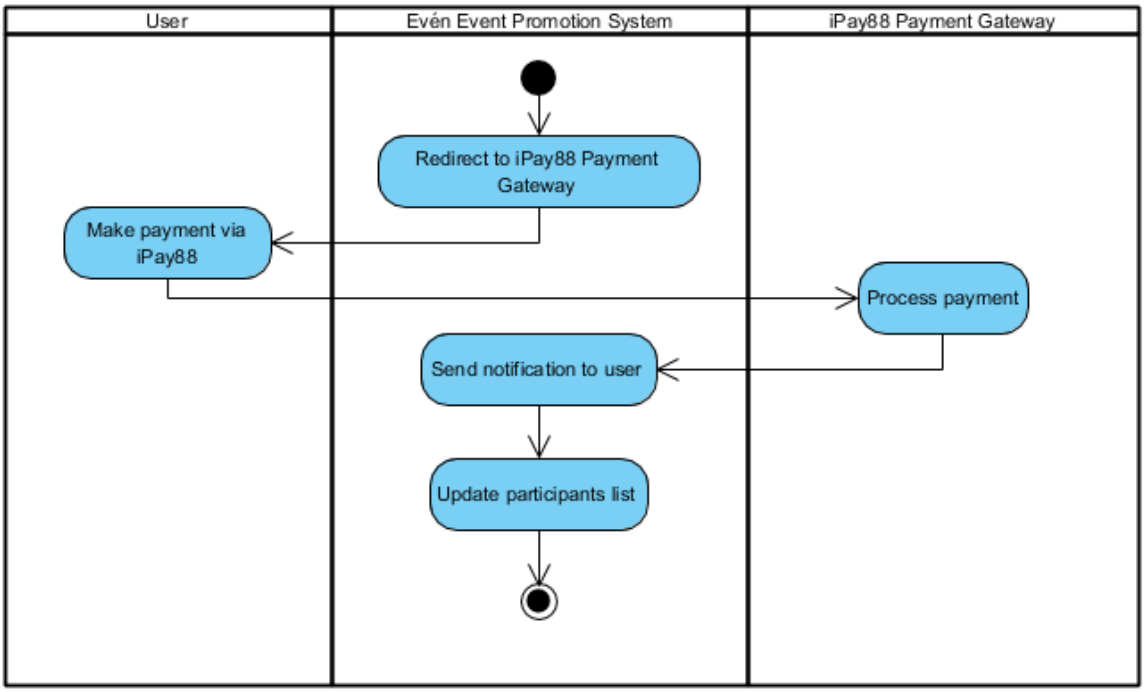
Element	**Description**	
Use Case Name	Register for events as participants	
Use Case ID	UC-06	
Priority	High	
Actor(s)	User	
Description	Users can register for events as participants. UC-07 will be triggered if events require ticket purchase.	
Pre-condition(s)	User must have logged into the system	
Post-condition(s)	User is added into participant list of the event.	
Flow of events	**Actor Action**	**System Responses**
	1. Click “Join Event” on the event 3. Submit the filled form 5. Make payment via iPay88 (if payment is required)	2. Return a form to fill in details 4. Redirect user to iPay88 payment gateway (if payment is required)

		6. Process payment, send email notification to user once success. 7. Update participant list for the event.
Alternative flows and exceptions	If participant has already joined the event, the form will not be process and alert message “Event already joined” will pop up.	
Extensions	Purchase ticket	
Business Rule	1. One participant has one unique ticket for an event	
Quality Requirement	-	



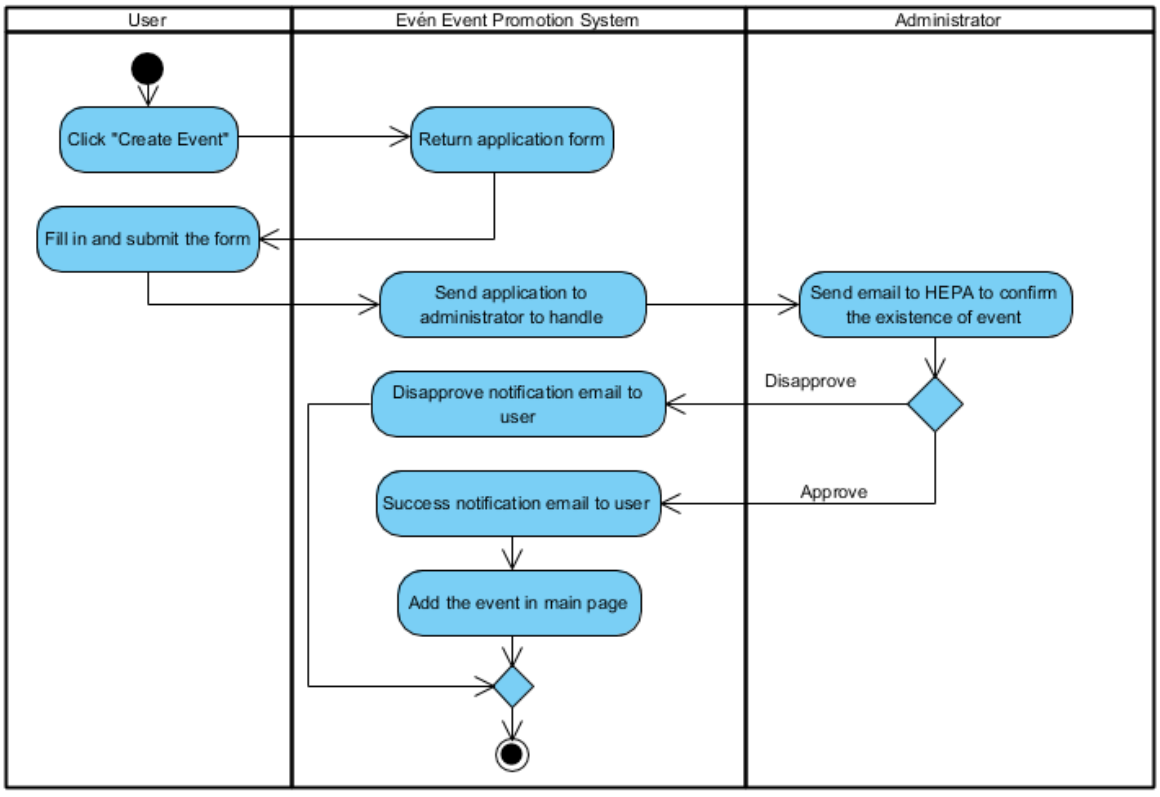
Element	Description	
Use Case Name	Purchase ticket	
Use Case ID	UC-07	
Priority	High	
Actor(s)	User, iPay88 Payment Gateway	
Description	Users can pay fees for ticket purchase through iPay88 payment gateway.	
Pre-condition(s)	User has logged into the system, user has submit join event form, event requires ticket purchase	
Post-condition(s)	User is added into participants list.	
Flow of events	**Actor Action**	**System Responses**
	2. User makes payment	1. User is redirected to iPay88 Payment Gateway 3. Redirect to previous page. 4. Send email notification once success. 5. Add user into participants list of the event.
Alternative flows and exceptions	If payment is denied or failed, redirect user to previous page. Show failure message as pop up. The application is unprocessed.	
Extensions	-	
Business Rule	1. Amount paid during ticket purchase must be same as the amount set by the event organizer, else payment is denied. 2. Generated e-ticket will be sent with success email notification.	

Quality Requirement	- the system will not retain user iPay88 online payment information entered during the checkout payment processing - the system shall redirect the ticket purchase to ipay88 within 2 seconds - the system shall allow the using to purchase maximum 10 tickets in one transaction - The rate of the occurrence of failure for the system shall be 0.001 (1 out of 1000) when user requests to purchase a ticket to join event. - the system shall allow the user to make more than one transaction a day - the system should leave the payment page if the payment is not completed within 5 mins

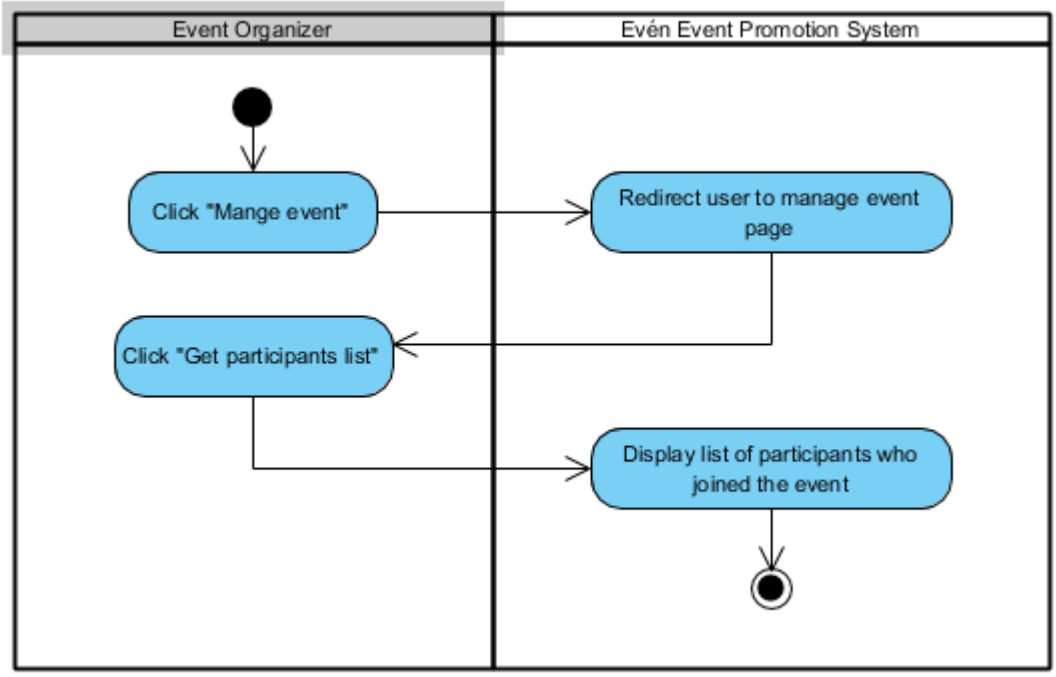


Element	Description	
Use Case Name	Create events	
Use Case ID	UC-08	
Priority	High	
Actor(s)	User, UM Student Affairs & Alumni Division, system administrator	
Description	Users can create events that have been approved by UM Student Affairs & Alumni Division. The event will be handled by system administrator to do verification.	
Pre-condition(s)	User has logged into the system.	
Post-condition(s)	The event advertisement will be shown in main page.	
Flow of events	**Actor Action**	**System Responses**
	1. User click “Create event” 3. User fills in and submits the form 5. System administrator sends email to UM Student Affairs & Alumni Division to confirm the existence of event. 6. Administrator approves / disapproves the event.	2. Return an application form 4. Send application to system administrators to be handled. 7. Success notification email is sent to user. 8. The event advertisement is shown in main page.

Alternative flows and exceptions	If the event is disapproved by system administrator, failure notification email will be sent to user. The event will be removed from the event list.
Extensions	-
Business Rule	1. One event can have only one advertisement. 2. One event can be categorized in one category.
Quality Requirement	- The system shall only allow the organiser of the specific event to has access to the details of participants and volunteer who are interested to join their events

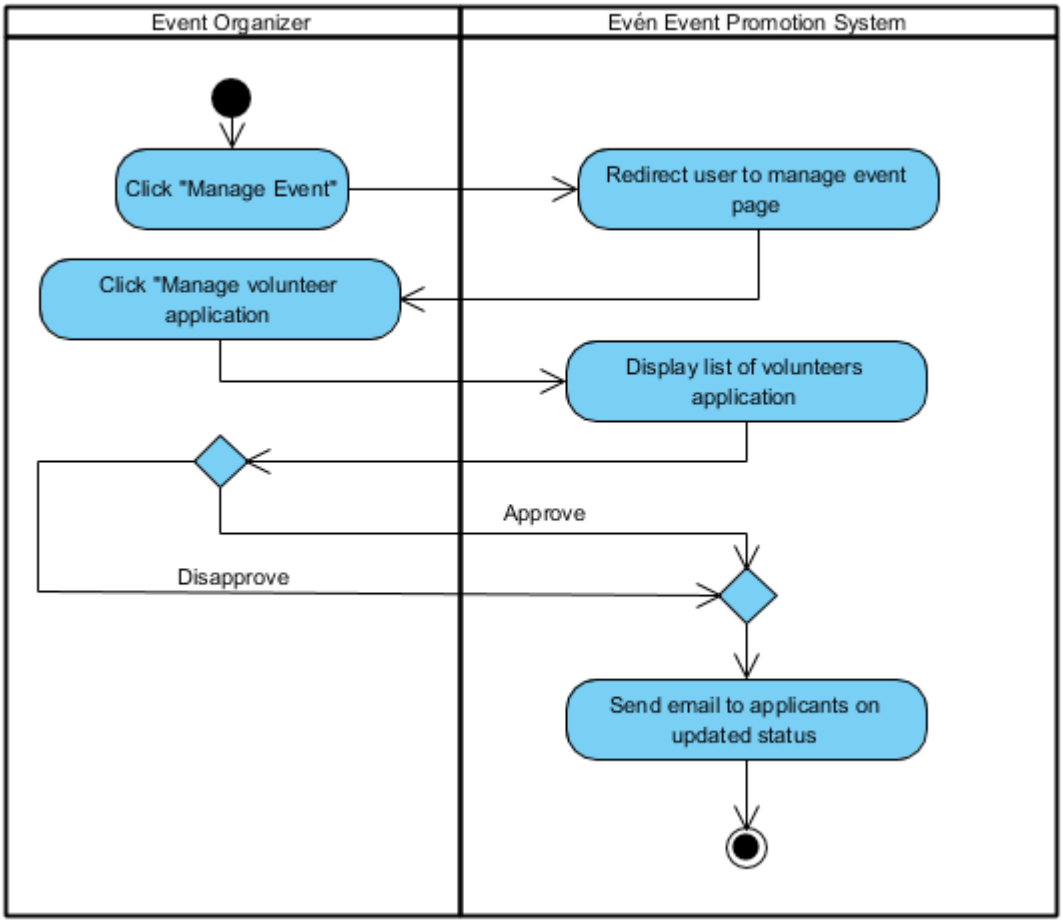


Element	Description	
Use Case Name	Get participants list	
Use Case ID	UC-09	
Priority	High	
Actor(s)	User	
Description	Users can get participants list for the event created.	
Pre-condition(s)	User has logged into the system. User has created the event, and has been approved by system administrator.	
Post-condition(s)	User can view the participants list for the event created.	
Flow of events	**Actor Action**	**System Response**
	1. User clicks “Manage event” on an event. 3. User clicks “Get participants list”	2. Redirect user to manage event page. 4. Display list of participants who has joined the event.
Alternative flows and exceptions	If there is no participant yet for the event, “No participant” message will be displayed to notify user.	
Extensions	-	
Business Rule	1. Participants that have made necessary payment only will be shown in the participant list	
Quality Requirement	-	



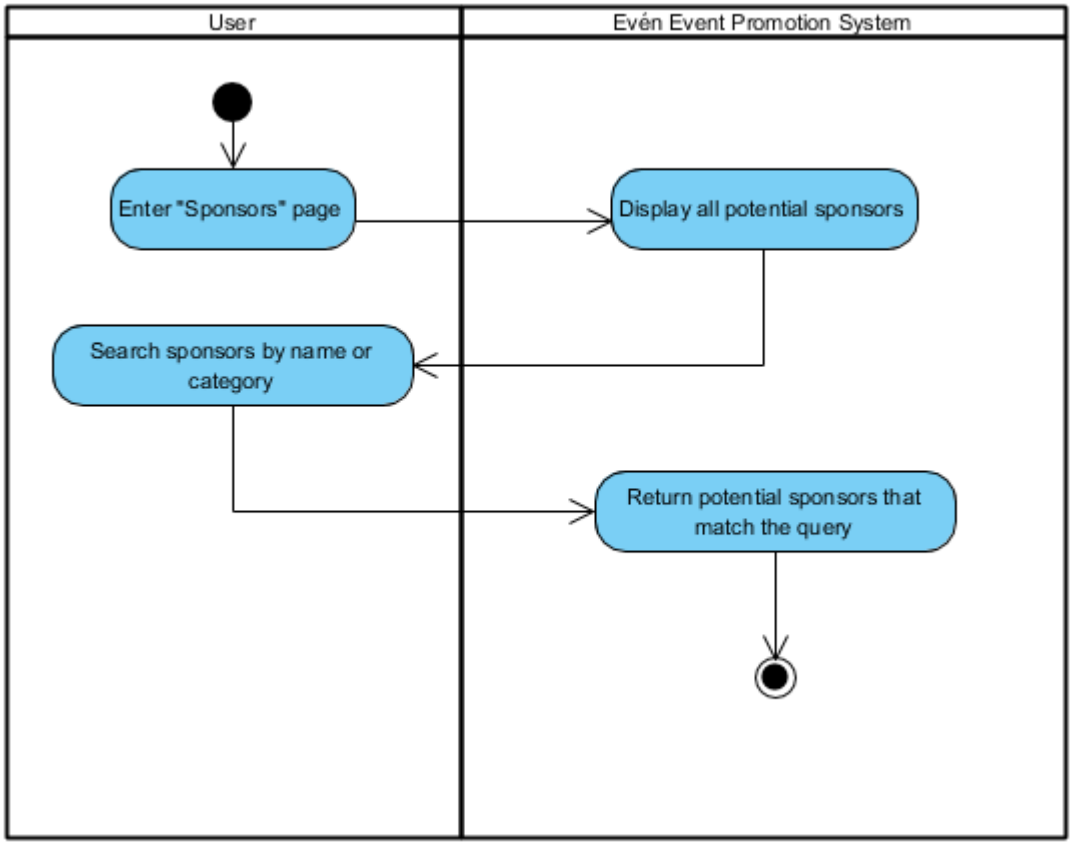
Element	**Description**	
Use Case Name	Handle volunteers applications	
Use Case ID	UC-10	
Priority	High	
Actor(s)	Users	
Description	Event organizers can choose to approve / disapprove volunteers applications based on their decisions.	
Pre-condition(s)	User has logged into the system, user has created the event and has been approved by system administrator.	
Post-condition(s)	Volunteer application is approved or disapproved.	
Flow of events	**Actor Action**	**System Response**

	1. User clicks “Manage event” on an event. 3. User clicks “Manage volunteer application” 5. User clicks “approve” or “disapprove” on pending volunteer	2. Redirect user to manage event page. 4. Display list of volunteers application 6. Send email notification to applicants on updated status.
Alternative flows and exceptions	If volunteer application is disapproved, email notification will be sent to applicant to notify them.	
Extensions	-	
Business Rule	1. One user can send one volunteer application to an event. 2. Volunteers will not be shown in participants list	
Quality Requirement	-	



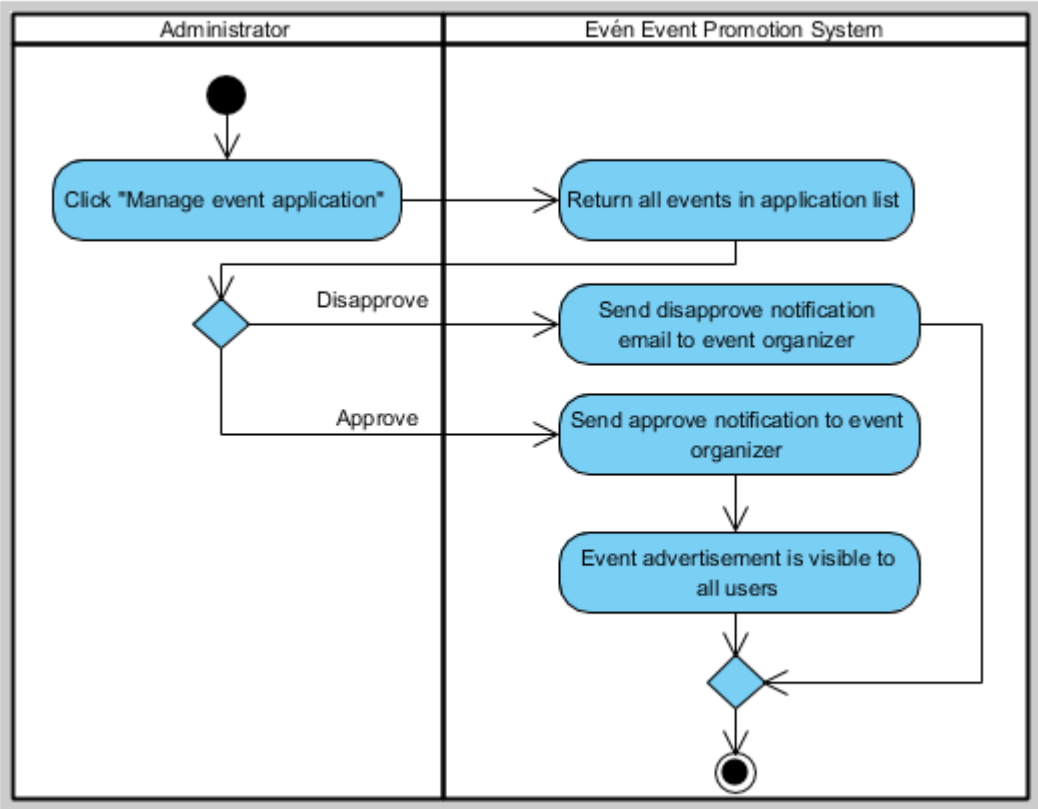
Element	**Description**	
Use Case Name	Get sponsors contact information	
Use Case ID	UC-11	
Priority	High	
Actor(s)	User	
Description	Users can get contact information about registered potential sponsors.	
Pre-condition(s)	Users has logged into the system	
Post-condition(s)	List of potential sponsors will be list based on categories or keywords	
Flow of events	**Actor Action**	**System Response**

	1. User enters “Sponsors” page. 3. User searches sponsors by name or category	2. Return all potential sponsors. 4. Return potential sponsors that match the query.
Alternative flows and exceptions	If there is no sponsor available or there is no sponsor matching the keyword / category selected, “No matching sponsor” will be displayed to notify user.	
Extensions	-	
Business Rule	1. Only registered and approved sponsors are visible to the user. 2. Contact information is provided for event organizers and potential sponsor to discuss further about sponsorship availability.	
Quality Requirement	-	



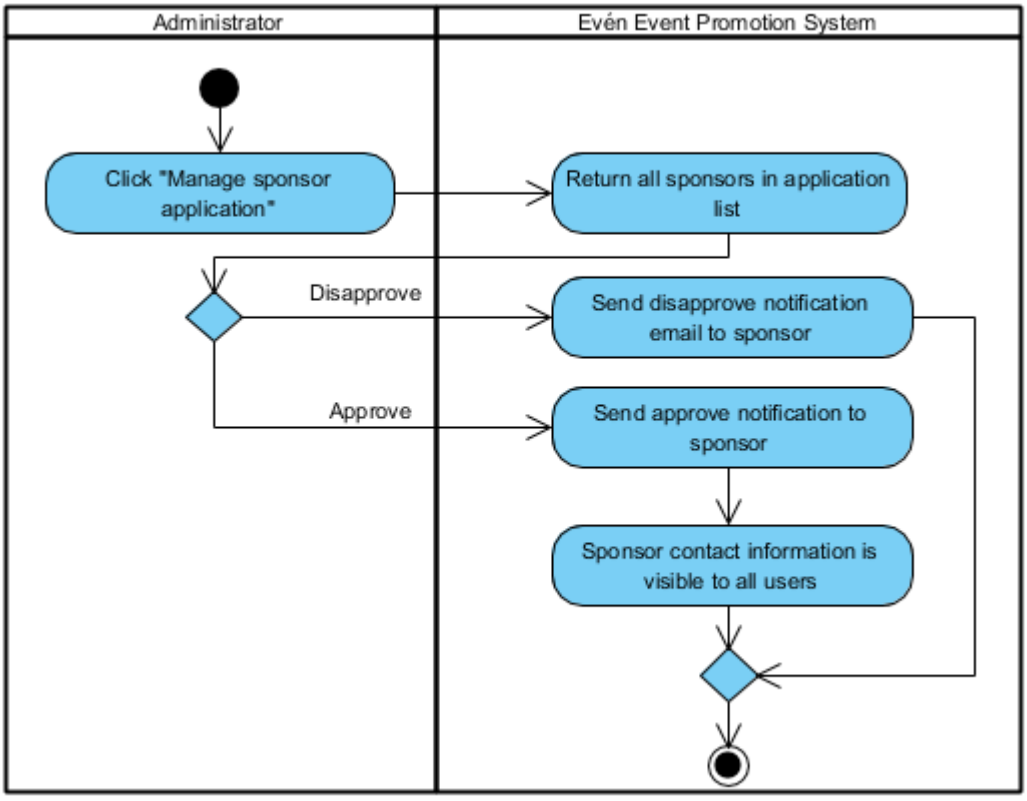
Element	**Description**	
Use Case Name	Handle new events	
Use Case ID	UC-12	
Priority	High	
Actor(s)	System administrators	
Description	System administrators can approve / disapprove new events after verification from UM Student Affairs & Alumni Division via email. Only approved event will be visible to the users.	
Pre-condition(s)	User has logged into system as administrator	
Post-condition(s)	Event status is updated as approved or disapproved.	
Flow of events	**Actor Action**	**System Response**

	1. Administrator clicks “Manage event application” 3. Administrator clicks “Approve” or “Disapprove” after email confirmation with UM Student Affairs & Alumni Division	2. Return all events in application list 4. Send email notification to event organizers. 5. If the event is approved, the event advertisement is visible to all users.
Alternative flows and exceptions	If the event is disapproved, the event will be removed from the event list. Email notification will be sent to event organizer to notify them.	
Extensions	-	
Business Rule	1. Event confirmation with UM Student Affairs & Alumni Division is to ensure the existence of events	
Quality Requirement	-	



Element	**Description**	
Use Case Name	Handle new sponsors	
Use Case ID	UC-13	
Priority	High	
Actor(s)	System administrators	
Description	System administrators can approve / disapprove sponsors registrations after verification about the organizations / companies. Only contact information of approved sponsors will be visible to the users.	
Pre-condition(s)	User has logged into system as administrator	
Post-condition(s)	Sponsor's status is updated as approved or disapproved.	
Flow of events	**Actor Action**	**System Response**

	1. Administrator clicks “Manage sponsor application” 3. Administrator clicks “Approve” or “Disapprove” after verifying the identity of companies or organizations	2. Return all sponsors application list 4. System send email notification to sponsor 5. Sponsor contact information is visible to all users
Alternative flows and exceptions	If the sponsor application is disapproved, sponsor will be removed from sponsor list. Email notification will be sent to the user to notify them	
Extensions	-	
Business Rule	1. Disapproved sponsor may submit application again with more sufficient documents.	
Quality Requirement	-	


Administrator
Evén Event Promotion System
Click "Manage sponsor application"
Return all sponsors in application list
Disapprove
Send disapprove notification email to sponsor
Approve
Send approve notification to sponsor
Sponsor contact information is visible to all users

4.2 Objective Functionalities

Objective	High level functionalities	Use Cases	System Requirements
1. To provide a web-based platform for users to register for events held in UM as volunteers or participants, make ticket purchase and route to event venue.	1.1 Provide the information of events that held in UM.	1.1.1 Get events information.	1.1.1.1 System shall be able to display information about few upcoming events held in UM. 1.1.1.2 System shall provide the user with the ability to browse the events information. 1.1.1.3 System shall provide the user with the ability to search based on the category and keyword of the events.
	1.2 Provide user authentication functionalities for event registrations.	1.2.1 Login / Signup	1.2.1.1 System shall be able to allow new users to sign up. 1.2.1.2 System shall allow users to log in via usernames and passwords.
	1.3 Allow users to register for events as volunteers or participants.	1.3.1 Register for events as volunteers	1.3.1.1 System shall provide the requirements to register as a volunteer. 1.3.1.2 System shall be able to allow users to register as volunteer when register for events. 1.3.1.3 System shall provide the information of users that registered as volunteers to the event organizers for

			approval.
		1.3.2 Register for events as participants	1.3.2.1 System shall be able to allow users to register as participant when register for events. 1.3.2.2 System shall notified the users via email after the registration is completed. 1.3.2.3 System shall provide the information of the users that registered as participants to the event organizers.
	1.4 Allow the users to make ticket purchasing.	1.4.1 Purchase ticket	1.4.1.1 System shall be able to send payment request to iPay88 and users make payment via iPay88. 1.4.1.2 System shall send the e-ticket to users via email after received the payment confirmation from iPay88.
	1.5 Provide the routing services for the users via Google Map.	1.5.1 Route to event venue	1.5.1.1 System shall use Google Map platform for events routing.
2. To provide a web-based platform for event organizers to create and manage events that are held in UM and have been verified by Student Affairs & Alumni Division(HEPA).	2.1 Allow the users create events that are held in UM.	2.1.1 Create events	2.1.1.1 System shall allow the event organizers to create and post event on the website. 2.1.1.2 System shall require the event organizers to provide information of the event

			including the venue, date and category.
		2.1.2 Handle new events	2.1.2.1 System shall send email to the HEPA to validate the events that created by event organizer before post it on the website.
	2.2 Allow the event organizers manage events that have been created by them.	2.2.1 Get participants list	2.2.1.1 System shall provide the information of every participant that had registered the event to the event organizer.
		2.2.2 Handle volunteers applications	2.2.2.1 System shall allow event organizers to approve or reject the volunteers application and provide the list of approved volunteers.
3. To promote sponsorship opportunities for events held in UM by providing contact information of potential sponsors.	3.1 Provide the contact information of potential sponsors.	3.1.1 Register as sponsors.	3.1.1.1 System shall request the users to upload their company document for validation.
		3.1.2 Handle new sponsors	3.1.2.1 System shall be able to display the contact information of the potential sponsors according to category after validation.
		3.1.3 Get sponsors contact information	3.1.3.1 System shall be able to display sponsors contact information according to

			category of interest. 3.1.3.2 System shall provide the user with the ability to search sponsors based on the category of interest.

4.3 Functional Requirements

FReq ID	Functional Requirements	Related Use Case
F-001	System shall be able to display information about few upcoming events held in UM.	Get Event Information
F-002	System shall provide the user with the ability to browse the events information.	Get Event Information
F-003	System shall provide the user with the ability to search based on the category and keyword of the events.	Get Event Information
F-004	System shall be able to allow new users to sign up.	Login / Signup
F-005	System shall allow users to log in via usernames and passwords.	Login / Signup
F-006	System shall provide the requirements to register as a volunteer.	Register for events as volunteers
F-007	System shall be able to allow users to register as volunteer when register for events.	Register for events as volunteers
F-008	System shall provide the information of users that registered as volunteers to the event organizers for approval.	Register for events as volunteers
F-009	System shall be able to allow users to register as participant when register for events.	Register for events as participants
F-010	System shall notified the users via email after the registration is completed.	Register for events as participants

F-011	System shall provide the information of the users that registered as participants to the event organizers.	Register for events as participants
F-012	System shall be able to send payment request to iPay88 and users make payment via iPay88.	Purchase ticket
F-013	System shall send the e-ticket to users via email after received the payment confirmation from iPay88.	Purchase ticket
F-014	System shall use Google Map platform for events routing.	Route to event venue
F-015	System shall allow the event organizers to create and post event on the website.	Create events
F-016	System shall require the event organizers to provide information of the event including the venue, date and category.	Create events
F-017	System shall send email to the HEPA to validate the events that created by event organizer before post it on the website.	Handle new events
F-018	System shall provide the information of every participant that had registered the event to the event organizer.	Get participants list
F-019	System shall allow event organizers to approve or reject the volunteers application and provide the list of approved volunteers.	Handle volunteers applications
F-020	System shall request the users to upload their company document for validation.	Register as sponsors.
F-021	System shall be able to display the contact information of the potential sponsors according to category after validation.	Handle new sponsors
F-022	System shall be able to display sponsors contact information according to category of interest.	Get sponsors contact information
F-023	System shall provide the user with the ability to search sponsors based on the category of interest.	Get sponsors contact information

4.4 Non-functional Requirements

QReq ID	Non-functional Requirements	Types
Q-001	the system shall include user authorisation procedure where users must identify themselves using a login name and password	Security
Q-002	the user forgotten password may request a temporary password and shall receive a link sent to their primary email address	Security
Q-003	the system will not retain user iPay88 online payment information entered during the checkout payment processing	Security
Q-004	the system shall only allow the organiser of the specific event to has access to the details of participants and volunteer who are interested to join their events	Security
Q-005	the system shall redirect the ticket purchase to ipay88 within 2 seconds	performance
Q-006	the system shall redirect the route to venue to google map within 5 seconds	performance
Q-007	the system shall process a minimum of 5 transaction per second	performance
Q-008	The system shall accommodate unrestricted growth in the number of user to access the system	Usability
Q-009	the system shall allow the using to purchase maximum 10 tickets in one transaction	Usability
Q-010	The system shall allow everyone to see the details information of every events	Usability
Q-011	the system shall able display more than 20 events in the home page	Usability
Q-012	the system shall be viewed by user from multiple operating systems including Microsoft Windows, mac OS, and Android	Portability
Q-013	The rate of the occurrence of failure for the system shall be 0.001 (1 out of 1000) when user requests to purchase a ticket to join event.	Reliability

Q-014	the system shall be rolled back to restock the data to pre-session condition when an update was failed	Reliability
Q-015	the system shall backup all the data at least once per month to prevent data loss	Reliability
Q-016	Routine system upgrades shall be applied no more frequently than once every 2 weeks	Availability
Q-017	the system shall allow the user to make more than one transaction a day	Availability
Q-018	the mean preventative maintenance time on applying routine updates to the system shall be less than 30 minutes every 2 weeks	Maintainability
Q-019	the system should leave the payment page if the payment is not completed within 5 mins	Security

4.5 Constraint

C ID	Constraint	Type
C-001	the system need to have internet connection	communication
C-002	only registered user can purchase ticket	scope
C-003	The cost for this software should not be more than RM500,000	cost
C-004	The system should only provide the contact number of potential sponsorship	scope
C-005	the system should not provide the conversation platform for organiser and volunteer/participant to communicate	scope
C-006	the system should only display events that are held in university of Malaya	scope
C-007	the system only record the information of volunteer/participant for the organiser according to the event they join	scope
C-008	the system should use platform that are able support the system	resource
C-009	The system shall be deployed to production before 1st June 2019	schedule

4.6 Scenario

No.		Section	Content
ID	1.1	Name	Register for events as volunteers
Management	1.2.1	Actors	Users, event organizers
Scenario definition	1.3.1	Associated goal	G1.4.1: Users will get volunteer applications status..
	1.3.2	Precondition	Users have logged into the system.
	1.3.3	Postcondition	Users will be notified whether the volunteer applications success or not.
	1.3.4	Result	Users will be notified with volunteer application status.
	1.3.5	Scenario steps	1. User clicks “Apply as Volunteer” on the event 2. System returns a form to fill in details to user 3. User submits the filled form 4. System sends application form to event organizer. 5. Event organizer approves the request 6. System sends email notification to user

No.		Section	Content
ID	2.1	Name	Get events information
Management	2.2.1	Actors	Users
Scenario definition	2.3.1	Associated goal	G2.4.1: User will be provided events information that they are interested in.
	2.3.2	Precondition	Users have logged into the system.
	2.3.3	Postcondition	User will be provided events information based on categories or keywords searched.
	2.3.4	Result	User will be provided events information that they query.
	2.3.5	Scenario steps	1. User enters “Events” page. 2. System returns all events available. 3. User searches events by name or category. 4. System returns events that match the query.

No.		Section	Content
ID	3.1	Name	Login/ Sign Up
Management	3.2.1	Actors	Users
Scenario definition	3.3.1	Associated goal	G3.4.1: User is authenticated and logged into the system.
	3.3.2	Precondition	User hasn't logged into the system.
	3.3.3	Postcondition	User is logged into the system.
	3.3.4	Result	User is authenticated.
	3.3.5	Scenario steps	1. User clicks "Log In" or "Sign Up" 2. System returns the login form / signup form 3. User fills in the form and click "Submit". 4. System redirects user to main page.

No.		Section	Content
ID	4.1	Name	Register as sponsors
Management	4.2.1	Actors	User, system administrator
Scenario definition	4.3.1	Associated goal	G4.4.1: Contact information of potential sponsors is displayed..
	4.3.2	Precondition	User must have logged into the system.
	4.3.3	Postcondition	Contact information of user will be displayed as potential sponsors.
	4.3.4	Result	Contact information of potential sponsors is displayed for all users.
	4.3.5	Scenario steps	1. User clicks “Register as sponsors” 2. System returns the new sponsor application form 3. User fills in the form, attach document to verify company / organization identity and click “Submit”. 4. System administrator verifies the identity of user. Send email notification to user 5. Contact information of user is displayed as potential sponsors

No.		Section	Content
ID	5.1	Name	Route to event venue
Management	5.2.1	Actors	User, Google Map Platform
Scenario definition	5.3.1	Associated goal	G5.4.1: User is routed to event venue.
	5.3.2	Precondition	User has logged into the system.
	5.3.3	Postcondition	User is redirected to Google Map Platform for venue routing.
	5.3.4	Result	User is routed to event venue.
	5.3.5	Scenario steps	1. User click “Route” on the event. 2. System redirects user to Google Map Platform. The event venue is pinned on Google Map.

No.		Section	Content
ID	6.1	Name	Register for events as participants
Management	6.2.1	Actors	Users
Scenario definition	6.3.1	Associated goal	G6.4.1: User joins the event
	6.3.2	Precondition	User must have logged into the system
	6.3.3	Postcondition	User is added into participant list of the event.
	6.3.4	Result	User is added into participant list of the event so that event organizer can view afterwards.
	6.3.5	Scenario steps	1. User clicks “Join Event” on the event. 2. System returns a form to fill in details 3. User Submits the filled form 4. System redirects user to iPay88 payment gateway (if payment is required) 5. User Makes payment via iPay88 (if payment is required) 6. System processes payment, sends email notification to user once success. 7. System updates participant list for the event.

No.		Section	Content
ID	7.1	Name	Purchase ticket
Management	7.2.1	Actors	User, iPay88 Payment Gateway
Scenario definition	7.3.1	Associated goal	G7.4.1: User is added into participants list once payment approved.
	7.3.2	Precondition	User has logged into the system, user has submit join event form, event requires ticket purchase
	7.3.3	Postcondition	User is added into participants list.
	7.3.4	Result	User is added into participants list after payment is approved
	7.3.5	Scenario steps	1. User is redirected to iPay88 Payment Gateway 2. User makes payment 3. System redirects to previous page. 4. System sends email notification once success. 5. System adds user into participants list of the event.

No.		Section	Content
ID	8.1	Name	Create events
Management	8.2.1	Actors	User, UM Student Affairs & Alumni Division, system administrator
Scenario definition	8.3.1	Associated goal	G8.4.1: The event advertisement will be visible in main page.
	8.3.2	Precondition	User has logged into the system.
	8.3.3	Postcondition	The event advertisement will be shown in main page.
	8.3.4	Result	The event advertisement will be shown in main page for all users to view.
	8.3.5	Scenario steps	1. User click “Create event”. 2. System returns an application form 3. User fills in and submits the form 4. System sends application to system administrators to be handled. 5. System administrator sends email to UM Student Affairs & Alumni Division to confirm the existence of event. 6. Administrator approves / disapproves the event. 7. Success notification email is sent to user. 8. The event advertisement is shown in main page.

No.		Section	Content
ID	9.1	Name	Get participants list
Management	9.2.1	Actors	User
Scenario definition	9.3.1	Associated goal	G9.4.1: User can view the participants list for their event.
	9.3.2	Precondition	User has logged into the system. User has created the event, and has been approved by system administrator.
	9.3.3	Postcondition	User can view the participants list for the event created.
	9.3.4	Result	User can view the participants list for the event created.
	9.3.5	Scenario steps	1. User clicks “Manage event” on an event. 2. System redirects user to manage event page. 3. User clicks “Get participants list” 4. System displays list of participants who has joined the event.

No.		Section	Content
ID	10.1	Name	Handle volunteers applications
Management	10.2.1	Actors	Users
Scenario definition	10.3.1	Associated goal	G10.4.1: Handle volunteer application by system administrator.
	10.3.2	Precondition	User has logged into the system, user has created the event and has been approved by system administrator.
	10.3.3	Postcondition	Volunteer application is approved or disapproved.
	10.3.4	Result	Volunteer application is handled.
	10.3.5	Scenario steps	1. User clicks “Manage event” on an event. 2. System redirects user to manage event page. 3. User clicks “Manage volunteer application” 4. System displays list of volunteers application 5. User clicks “approve” or “disapprove” on pending volunteer 6. System sends email notification to applicants on updated status.

No.		Section	Content
ID	11.1	Name	Get sponsors contact information
Management	11.2.1	Actors	User
Scenario definition	11.3.1	Associated goal	G11.4.1: User will get a list of contact of potential sponsor
	11.3.2	Precondition	Users has logged into the system.
	11.3.3	Postcondition	List of potential sponsors will be list based on categories or keywords.
	11.3.4	Result	User got a contact list of potential sponsor.
	11.3.5	Scenario steps	1. User enters “Sponsors” page. 2. System display all potential sponsors. 3. User searches sponsors by name or category. 4. System display potential sponsors that match the query.

No.		Section	Content
ID	12.1	Name	Handle new events
Management	12.2.1	Actors	System administrators
Scenario definition	12.3.1	Associated goal	G12.4.1: Approved event will be shown in main page
	12.3.2	Precondition	User has logged into system as administrator
	12.3.3	Postcondition	Event status is updated as approved or disapproved.
	12.3.4	Result	Email notification will be sent to event organizer to notify them.
	12.3.5	Scenario steps	1. Administrator clicks “Manage event application”. 2. System display all events in application list. 3. Administrator clicks “Approve” or “Disapprove” after email confirmation with UM Student Affairs & Alumni Division. 4. System sends email notification to event organizers. 5. If the event is approved, the event advertisement is visible to all users.

No.		Section	Content
ID	13.1	Name	Handle new sponsors
Management	13.2.1	Actors	System administrators
Scenario definition	13.3.1	Associated goal	G13.4.1: Approved sponsor will be able to sponsor event.
	13.3.2	Precondition	User has logged into system as administrator.
	13.3.3	Postcondition	Sponsor’s status is updated as approved or disapproved.
	13.3.4	Result	Sponsor application is handled.
	13.3.5	Scenario steps	1. Administrator clicks “Manage sponsor application”. 2. System display all sponsors application list. 3. Administrator clicks “Approve” or “Disapprove” after verifying the identity of companies or organizations. 4. System send email notification to sponsor. 5. Sponsor contact information is visible to all users.