

**SWE312: Software Requirements Engineering**

**3rd Term 2023**

*You have to read the whole document before starting the work*

## 1. Project Objectives

The main objective of this project is to give students the opportunity to apply the knowledge acquired during classes in a project of a reasonable size in order to improve their skills. The system to be developed is described in section 6.

## 2. Organization

The work is subdivided into two phases called Phase 1 and Phase 2. The table below summarizes the deliverables of each of these phases.

Phase		Deliverable	Deadlines
1	A	System Boundary Diagram	Individual: April 30 Team: May 7
	B	Use Case Diagram for <b>ALL</b> use cases (Technical tool)	
	C	<b>Three</b> use case descriptions for the provided list (use template)	
	D	The list of <b>ALL</b> functional requirements for the system	
	E	The list of <b>ALL</b> nonfunctional requirements and <b>ALL</b> design constraints for the system.	
2	A	<b>Three</b> Sequence Diagrams for the <b>three</b> use cases (Technical tool)	Individual: May 22 Team: May 30
	B	Mockup screens for the <b>three</b> use cases [basic flow only] (Technical tool)	
	C	Class Diagram for the <b>three</b> use cases (Technical tool)	
	D	Activity Diagrams for <b>two</b> use cases (Technical tool)	
	E	Updated Phase 1 Deliverables (A-E)	

### 3. Details of Phase 1

1. Use the SRS (Software Requirements Specification) template (available on LMS), the cover page must include group number, section number, student's names with their IDs.
2. Before filling up the SRS document read its instruction page carefully (available after the cover page within the same document).
3. In the Introduction section include Purpose, Scope, Definitions, Acronyms, Abbreviations and References and Overview, all the fields have been explained in the template.
4. Write a complete list of functional requirements for the proposed system. The requirements must be error free and complete.
5. Develop a use case diagram (all use cases) using any tool (Example: [www.umlet.com](http://www.umlet.com)). Hand drawn diagrams are not accepted.
6. For the below use case list, provide the use case description in a table describing (Name, Description, Actors, Precondition, Relationships, Basic flow, One alternative flow, and One Post condition for both (Pass/Fail)).
  - *Create account as service provider*
  - *Purchase ticket*
  - *Issue license request*
7. Write a complete list of nonfunctional requirements for the proposed system. The requirements must be error free and complete.
8. Write the design constraints and ethical and professional issues as explained in the template.

**Note:** Document organization is a must, each topic must have a title, English must be correct, diagrams must be readable and document format must be consistent.

#### Phase 1 Mark Distribution

Task	Marks
Introduction	1.5
Functional, non-functional requirements and Design Constraints	4
Use Cases Diagram, Use case description	4
Report organization	0.5
<b>Total Phase 1</b>	<b>10</b>

## 4. Details of Phase 2

Use the SRS template and submit the following deliverables based on phase1 correction:

1. Three sequence diagrams for use cases that have been selected in phase 1. The sequence diagram should depict the basic flow only.
2. Mockup screens for the use cases that have been selected in phase 1 that depicts the basic flow only. (use a tool like [www.mockflow.com](http://www.mockflow.com) and [moqups.com](http://moqups.com), hand drawn mockup screens are not accepted)
3. Class diagram for the use cases that have been selected in phase 1. you need to specify (relationships, association name, multiplicity, needed attributes and operations).
4. Two activity diagrams for two use cases that have been selected in phase 1, showing the swim-lanes (partitions).
5. It is mandatory to use a UML modeling tool to draw all the diagrams (like [www.umlet.com](http://www.umlet.com)). Hand drawn diagrams are not accepted.

**Note:** Document organization is a must, each topic must have a title and English must be correct, all diagrams must be readable.

### Phase 2 Mark Distribution

Task	Marks
Sequence diagrams	3
Mockup screens	2
Class diagrams	3
Activity diagrams	2
<b>Total Phase 1</b>	<b>10</b>

## 5. Work Submission

### 1. Phase 1

- EACH student has to work INDIVIDUALLY on the phase as stated in section 3 and produce a SRS as stated there.
- No communication with the other team members is allowed here.
- The team organizes meetings to produce a UNIQUE COMMON version of the SRS.
- No later than **Sunday, April 30**,
  - EACH student has to share her individual SRS (in both DOCX and PDF formats) on Google drive ([here](#))
  - The submitted files must be named swe312-project-phase1-t<team number>-<student name>.docx and swe312-project-phase1-t<team number>-<student name>.pdf Example:  
swe312-project-phase1-t1-MonaAlAli.docx and  
swe312-project-phase1-t1-MonaAlAli.pdf
- No later than **Sunday, May 7, 2023**,
  - The team leader has to submit the common version of the SRS (in both DOCX and PDF formats) on LMS.
  - The submitted files must be named swe312-project-phase1-t<team number>.docx and swe312-project-phase1-t<team number>.pdf Example: swe312-project-phase1-t1.docx and  
swe312-project-phase1-t1.pdf

### 2. Phase 2

- EACH student has to work INDIVIDUALLY on the phase as stated in section 4 and produce a SRS as stated there.
- No communication with the other team members is allowed here.
- The team organizes meetings to produce a UNIQUE COMMON version of the SRS.
- No later than **Tuesday, May 22, 2023**,
  - EACH student has to share his individual SRS (in both DOCX and PDF formats) on Google drive ([here](#))
  - The submitted files must be named swe312-project-phase2-t<team number>-<student name>.docx and swe312-project-phase2-t<team number>-<student name>.pdf Example:  
swe312-project-phase2-t1-MonaAlAli.docx and  
swe312-project-phase2-t1-MonaAlAli.pdf
- No later than **Tuesday, May 30, 2023**,

- The team leader has to submit the common version of the SRS (in both DOCX and PDF formats) on LMS.
- The submitted files must be named swe312-project-phase2-t<team number>.docx and swe312-project-phase2-t<team number>.pdf  
Example: swe312-project-phase2-t1.docx and swe312-project-phase2-t1.pdf

## Important

For each phase, and before starting the work, the team has to agree on the following:

- ^ The schedule of the meetings that will be dedicated to the production of the common deliverable.

## Timeline

<b>Week 3</b>	March 29	Start individual work on Phase 1
<b>Week 8</b>	April 30	Submit individual SRS for Phase 1 Start team work on Phase 1
<b>Week 9</b>	May 7	Submit SRS for Phase 1 Start individual work on Phase 2
<b>Week 11</b>	May 22	Submit individual SRS for Phase 2 Start team work on Phase 2
<b>Week 12</b>	May 30	Submit SRS for both Phase 1 and Phase 2

## 6. System description: Entertainment in a Click<sup>1</sup>

The entertainment industry in Saudi Arabia has witnessed a magnificent growth in recent years. The number and variety of cultural and entertainment activities are increasing in order to achieve Saudi Arabia's Vision for 2030. To support this vision, the government established the General Entertainment Authority (GEA) to organize and lead the entertainment sector to provide cultural and entertainment activities to the people of Saudi Arabia. The problem is that, with this magnificent growth of the entertainment industry, the management and organization of entertainment activities became more difficult. Several parties are involved in the process; customers, service providers, and the entertainment authority staff. The aim of the project is to develop a single interactive iOS application called "**Entertainment in a Click**".

There is one admin account who manages all accounts. The admin shall be able to login into the system using the given username and password. He/she must be able to view event reviews written by customers with enabling the ability to block any inappropriate review. The admin shall be able to block the customer account after 5 blocked reviews. Also, the admin will be able to manage accounts, for example: add GEA's staff accounts, remove users accounts (customers', service providers' and GEA's staff). Moreover, he/she can manage (add, edit or delete) the venues and event categories.

To add GEA's staff account, the admin shall complete and submit the staff registration form which includes (GEA's staff first name, GEA's staff last name, GEA's staff email, username and password). After that, the system will send an email containing the GEA's staff username and password of the newly registered account using the Mail Server.

Service providers (SP) have several capabilities in the system. They shall be able to register in the system by providing the following information (first name, last name, email, phone number, company name, company address, commercial record, username and password) after that, the system will notify the admin about this request. Only after getting the approval from the admin the registration process will be completed, and the service provider will be able to view GEA regulations, search for venues by names, view venues detailed information (capacity, cost and contact information) and all other services.

One of the main services of SPs is to issue a license in order to get the approval for holding an event. To do that, the SP has to raise a request by filling a form including the event information: (event name, event logo, event description, event date, time, location (using maps) , audience, tickets price and information, rules and regulations of the event,

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<sup>1</sup> The general idea is based on the graduation project titled 'Entertainment in a Click' which was supervised by L. Manal AlOnaizan during the 2017-2018 academic year.

City, the capacity of the event's location, number of expected attendees, attendees age limit, cost and earnings). After submitting the request, the system will set the status of the license to 'pending' and will send a notification to the GEA's staff to accept or decline the request. The SPs should be able to view their license requests status (accepted/pending/declined).

The GEA staff shall be able to view license requests details issued by service providers, and may then accept or decline their requests. The system shall publish the event once the GEA staff accepts the license request. Moreover, GEA staff can view customers' complaints and update the complaint status (resolved/in progress). Furthermore, they can post new regulations.

Customers should be able to create an account. They are able to search for events and view events' information. Customers can write reviews on any event. Also, they shall be able to rate the event that has been attended from a scale of 1 to 5 with 5 being the highest rating. Furthermore, they should be able to purchase tickets through the application and pay for them via Visa/Mastercard payment systems. Upon successful completion, the customer will receive a confirmation email. In addition, customers can view their purchased tickets and optionally they can set a reminder to receive a notification a day before the start of an event they have paid for. Moreover, the customer can file a complaint against any event to the GEA.

The system visitors are able to search for events. After that the visitors may view event information including its location (on maps). The visitor shall be able to create an account as a customer or as a service provider, to be able to use the full system features.

All users of the system (except visitors) will be able to login into the system using username and password. They also are able to update their accounts information.

Additionally, the system should support both Arabic and English languages. It shall keep backups of registered events and store them for a long period. All private data like passwords and credit card information must be encrypted. Also, It is imperative for the system to be running most of the time to support simultaneously a large number of users. Moreover, the system must respond quickly. Finally, The system's maps shall be able to work with a location based system.

### **Project Glossary:**

<b>GEA</b>	General Entertainment Authority.
<b>Visitors</b>	Non-registered users that can benefit from the system.
<b>Customer</b>	Registered “Entertainment in a click” user who will benefit from the application.
<b>Service Provider</b>	Registered companies that work on organizing events in KSA.
<b>GEA’s staff</b>	Registered GEA staff members who have special features in the application.
<b>Mail Server</b>	A server that handles and delivers e-mail over a network, usually over the Internet.
<b>Event categories</b>	It can be any of the following categories: Art & Culture, Exhibition, Education, Music, and Sports