

**Cairo University**

**Faculty of Computers and Information**

**CS251: SWE-1**

**Program:** Social Networks

**TA:** MohamedSamir

**SRS phase 2**

CS251: Phase 2

Project: <SR\_11>

**Software Requirements Specifications**

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**Software Requirements Specifications**

**Team**

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Name** | **Email** | **Mobile** |
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**Document Purpose and Audience**

* To define scope, requirements and analyze the system
* The audience: (Developer, tester, Sponsors).

**Introduction**

**Software Purpose**

* To help Users to interact through a social network in such an easy way by making a common community to share their information, Photos, posts, memories and create groups or pages.
* People who will use the system are Users and the admin of the website.
* **Software Scope**
* API is a social network
* It allows users to create their own social network
* Features: API Social Networking provides the functionality of a message board, user comment system, and a means of uploading appraisals, using hash tags, creating groups and pages, It also includes an appraisal hosting and uploading system of posts.

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**Definitions, acronyms, and abbreviations**

|  |  |
| --- | --- |
| Using  Hash tags | To facilitate the searching process for the users to be able to reach posts through keywords easily. |
| Chatting list | **When users want to communicate together** |
| Creating  Post | **Users may want to posts defined as texts whether on his own profile or** **on a public scale such as groups or pages.** |
| Joining Group | **Bringing the individuals together into specific groups, often like a small** **community or a neighborhood to share and comment on each other** **posts.** |

**Requirements**

**Functional Requirements**

1. Create Account: it allows users to create a new account using e-mail when this email isn’t already registered on the API and the email exists .
2. Create Group/Page: allowing users to create a fan page or a group for scope that decided by admin.
3. Join group/Like page: it permits the user to interact within the group or page.
4. Sharing posts: the availability of sharing posts defined as texts to be shared and can be liked or commented on by the viewers.
5. Using Hash Tags: it functions as a guide for users to find and list the keywords, it is used to express context around a given keyword, with fully intent to categorize the keyword for later searching, sharing, or other reasons.
6. Messaging: it allows users to send messages to people who are on their friend list or to anyone involved in the API.
7. Download or Upload Content: content of a given course should be uploaded by a person, categorized by a hash tag and could be downloaded by anyone.
8. Search: it permits any user to search a fan page or group using the name or posts using the hash tags.
9. Add Friend: It allow user to send friend request to anther user and allow them to see each other posts.

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**Software Requirements Specifications**

**Non Functional Requirements**

|  |  |
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|  | **Details** |
| **Security** | * **User has an email and password to login.** * **User Cannot Access Database.** * **Strong Firewall.** |
| **Software requirements** | * **Backup system** * **Online domain** * **Database server** |
| **Accessibility** | * **Could be accessed from any user who have an account on it** |
| **Reliable and extendable** | * **Site doesn’t fall a lot and it can be extendable if admin decides afterwards.** |
| **Maintainability** | * **The API system should be able to add or change or remove functions easily** * **Fixing bugs.** * **Update GUI.** |
| **Portability** | * **The API system itself should be transferred to another device.** |
| **Usability** | * **The API system is easy to use and a sample GUI.** |
| **Performance** | * **Hash tag or name searches take about 20 sec or less.** * **Fast system recovery.** |
| **Scalability** | * **The API Server should be able to support up to 100000 users at the time.** |

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**System Models**

**Use Case Model**

|  |  |
| --- | --- |
| **Actor**    **CS251 – CU – FCI – Software Engineering I – 2014 – Software Requirements Specifications** |  |
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**Software Requirements Specifications**

**Use Case Tables**

|  |  |  |
| --- | --- | --- |
| Use Case Information: | Use Case Name: Create an account. Use Case ID = 1. | |
| Actor: | User | |
| Pre-conditions: | The user should have an email | |
| Post-conditions: | The user can use the application | |
| Flow of events: | **User Action** | **System Action** |
| 1-User Enter his name, email and  password. | 1-The system checks if the email,  username pattern and password  pattern is valid.  2-The system creates a new object  in the data base for the new user.  3-The user information are saved in  that object. |
| Exceptions: | Email is not valid, username and password patterns are not correct. | |
| Includes: | Login , Logout | |
| Notes and Issues: | Email must exist, Username and password patters must be valid to avoid  any issues. | |

|  |  |  |
| --- | --- | --- |
| Use Case Information: | Use Case Name: Create group/page. Use Case ID = 2. | |
| Actor: | User | |
| Pre-conditions: | User has created an account and logged in. | |
| Post-conditions: | User can post or share to this group/page. | |
| Flow of events: | **User Action** | **System Action** |
| 1- User Enter his email and  Password to login.  2- User creates the group/page with  the specific name and define its  scope and audience.  3- User or admin should post contents  in the domain of the scope. | 1- System verifies user data.  2- System creates the group/page |
| Exceptions: | Group/page can be rejected due to missing information | |
| Includes: | Using Hash tag, Search and Sharing posts. | |
| Notes and Issues: | In groups, member posts must be accepted by an admin.  In pages, posts are posted by admins only. | |

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**Software Requirements Specifications**

|  |  |  |
| --- | --- | --- |
| Use Case Information: | Use Case Name: Join group/Like Page. Use Case ID = 3. | |
| Actor: | User | |
| Pre-conditions: | User has created an account and logged in | |
| Post-conditions: | User can see posts or post or share to this group/page. | |
| Flow of events: | **User Action** | **System Action** |
| 1- User searches for group/page name.  2- User selects the wanted group/page  from search result.  3- User sends join request for groups or  click the like button | 1- The system sends the search results  to the user.  2- System sends a notification if a user sent  a join request for a group or a user liked  a page. |
| Exceptions: | Page/Group could not be found.  Admission for joining the group could be rejected. | |
| Includes: | Create group/page. | |
| Notes and Issues: | Write right information to avoid not found issues. | |

|  |  |  |
| --- | --- | --- |
| Use Case Information: | Use Case Name: Share Post. Use Case ID = 4. | |
| Actor: | User | |
| Pre-conditions: | User has created an account and logged in | |
| Post-conditions: | User can see posts or post or share to this group/page. | |
| Flow of events: | **User Action** | **System Action** |
| 1- User searches for group/page name.  2- User selects the wanted group/page  from search result.  3- User sends join request for groups or  click the like button | 1- The system sends the search results  to the user.  2- System sends a notification if a user sent  a join request for a group or a user liked  a page. |
| Exceptions: | Page/Group could not be found.  Admission for joining the group could be rejected. | |
| Includes: | Join group/Like page. | |
| Notes and Issues: | Write right information to avoid not found issues. | |

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**Software Requirements Specifications**

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| --- | --- | --- |
| Use Case Information: | Use Case Name: Using Hash Tag. Use Case ID = 5. | |
| Actor: | User | |
| Pre-conditions: | User has created an account and logged in. | |
| Post-conditions: | User can find the specific thing he needs. | |
| Flow of events: | **User Action** | **System Action** |
| 1- User searches for group/page name.  2- User selects the wanted group/page  from search result.  3- User searches in that group or page for the  specific thing he needs using the hash tag. | 1- The system sends the search results  to the user. |
| Exceptions: | Page/Group could not be found.  Searched with the wrong hash tag. | |
| Includes: | Join group/Like page  Search | |
| Notes and Issues: | Write right information to avoid not found issues. | |

|  |  |  |
| --- | --- | --- |
| Use Case Information: | Use Case Name: Send Message. Use Case ID = 6. | |
| Actor: | User | |
| Pre-conditions: | User has created an account and logged in | |
| Post-conditions: | User can text another user(s) privately or in group. | |
| Flow of events: | **User Action** | **System Action** |
| 1- User searches for another user or chatting   group name.  2- User selects what he needs from search  result.  3- User is now able to send messages. | 1- The system sends the search results  to the user.  2- The system sends the messages between   users correctly. |
| Exceptions: | User/Group name could not be found.  The user could be offline. | |
| Includes: | Join group/page.  Search | |
| Notes and Issues: | Write right information to avoid not found issues. | |

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**Software Requirements Specifications**

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| --- | --- | --- |
| Use Case Information: | Use Case Name: Download or Upload Content. Use Case ID = 7. | |
| Actor: | User | |
| Pre-conditions: | User has created an account and logged in. | |
| Post-conditions: | User can download or upload content on a page or a group. | |
| Flow of events: | **User Action** | **System Action** |
| 1- User searches for group/page name he  wants to upload to.  2- Incase of download, user searches for the  post by hash tag and download contents.  3- User uploads or download | 1- The system sends the search results  to the user.  2- System should provide fully working  download and upload server and links for  the user. |
| Exceptions: | Page/Group/post could not be found.  Download link is not working.  Upload function is not working. | |
| Includes: | Join group/page.  Search  Using Hash Tag | |
| Notes and Issues: | Write right information in search to avoid not found issues. | |

|  |  |  |
| --- | --- | --- |
| Use Case Information: | Use Case Name: Search a Content. Use Case ID = 8. | |
| Actor: | User | |
| Pre-conditions: | User has created an account and logged in | |
| Post-conditions: | User can search for a group or fan page or for another user. | |
| Flow of events: | **User Action** | **System Action** |
| 1- User enter search words in the search bar  for a specific user, group or fan page.  2- User selects the wanted from search result. | 1. The system takes the words that the user   entered from the search bar and search it in the database.  2- The system sends the search results  to the user. |
| Exceptions: | Page/Group/User could not be found. | |
| Includes: | Using Hash Tags. | |
| Notes and Issues: | Write right information to avoid not found issues. | |

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**Software Requirements Specification**

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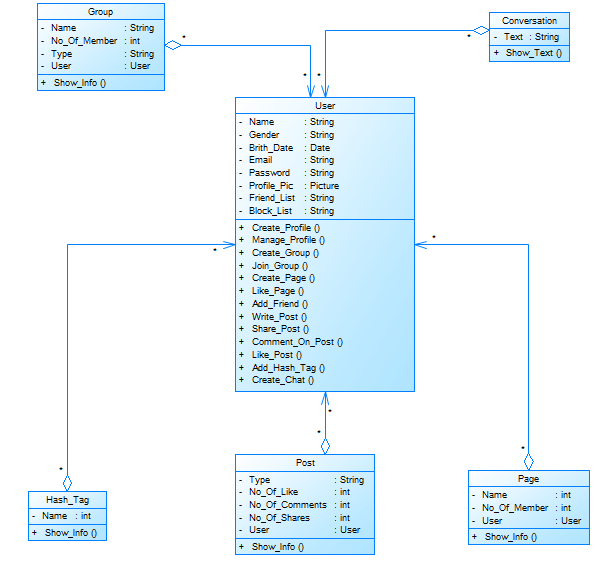
|  |  |  |
| --- | --- | --- |
| Use Case Information: | Use Case Name: Add Friend. Use Case ID = 9. | |
| Actor: | User | |
| Pre-conditions: | User has created an account, logged in, Searched and found the wanted user. | |
| Post-conditions: | The two users can see each other’s posts and communicate. | |
| Flow of events: | **User Action** | **System Action** |
| 1. The user searches for another user. 2. The user selects the other user he wants to add to his friend list. 3. The user sends friend request to another user. 4. The other user weather he accepts or declines that request. | 1. The system returns the search result to the user. 2. The system sends a notification for the user that an another user sent him a friend request. 3. If that user accepted the request, the system should send a notification to the user who sent the request that the other user accepted his request. 4. System should increase number of friends for both of users. |
| Exceptions: | User search name was not found.  The system did not send the notification request. | |
| Includes: | Create account.  Search. | |
| Notes and Issues: | Insert correct information to avoid not found error. | |

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**Software Requirements Specifications**

**Class diagram**

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**Software Requirements Specifications**

**Traceability matrix**

|  |  |  |
| --- | --- | --- |
| **BR#**  **( business/functional requirement number )** | **Use Case ID** | **Class(es) Name(s)** |
| **Add** | **8 - 9** | **User** |
| **Like** | **3-4-5-6** | **User** |
| **Comment** | **3-4-5-6** | **User** |
| **Search Content** | **5-7-8** | **User** |
| **Download or Upload** | **3-4-5-6** | **User** |
| **Browsing** | **2-3-4-5-6-7-8-9** | **User** |
| **Create** | **1-2** | **User** |

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**Ownership Report**

|  |  |
| --- | --- |
| **Item** | **Owner** |
| * [**Document Purpose and Audience**](#page3) | **1- Abo-Taleb Khaled**  **2- Ahmed Ayman**  **3- Ahmed Alsaket**  **4- Osama tarek** |
| * [**Introduction**](#page3) | **1- Abo-Taleb Khaled**  **2- Ahmed Ayman**  **3- Ahmed Alsaket**  **4- Osama tarek** |
| * [**Requirements**](#page4) | **1- Abo-Taleb Khaled**  **2- Ahmed Ayman**  **3- Ahmed Alsaket**  **4- Osama tarek** |
| * [**System Models**](#page5) | **1- Abo-Taleb Khaled**  **2- Ahmed Ayman**  **3- Ahmed Alsaket**  **4- Osama tarek** |
| * **Traceability** | **1- Abo-Taleb Khaled**  **2- Ahmed Ayman**  **3- Ahmed Alsaket**  **4- Osama tarek** |
| * [**Ownership Report**](#page6) | **1- Abo-Taleb Khaled**  **2- Ahmed Ayman**  **3- Ahmed Alsaket**  **4- Osama tarek** |

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