

1. Introduction

Communicating and sharing ideas with other people have become a major factor that affect our life. People sends millions of messages every day to share their ideas, thoughts and feelings. One of the ways to do so is to share text messages to the others so they can reply with a feedback. Twitter is the most famous website in providing this service. This document will represent the technical design of the term project that will simulate the functionality of Twitter, and describe each part of the process.

2. System design

2.1 Application Functions

There are two sides of the application. One for the for the normal users so they can:

- Sign up or sign in.
- Create tweets.
- Send replies.

The other side is for administration. There will be only one admin and can:

- View members and delete them.
- View tweets and delete them.
- View replies and delete them.

2.2 Web Pages

The user side consists of the following pages:

1 – sign in: allows previously registered users to start a session and use the services provided by the application.

2 – sign up: allows new users to create new accounts.

3 – main: the main page of the application. This page shows all the tweets ordered from newest to the oldest tweet.

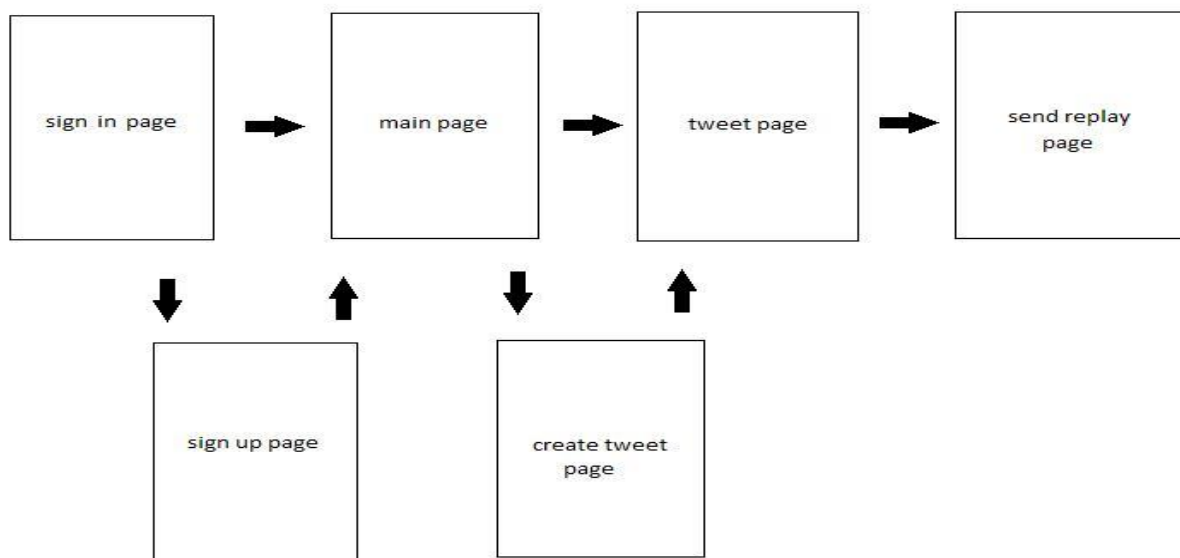
- 4 – create_tweet: allows the user to create new tweets.
- 5 – tweet: shows a specific tweet with the replies.
- 6 – create_reply: allows user to create and send a reply to a specific tweet.

The administration side will consist of the following pages:

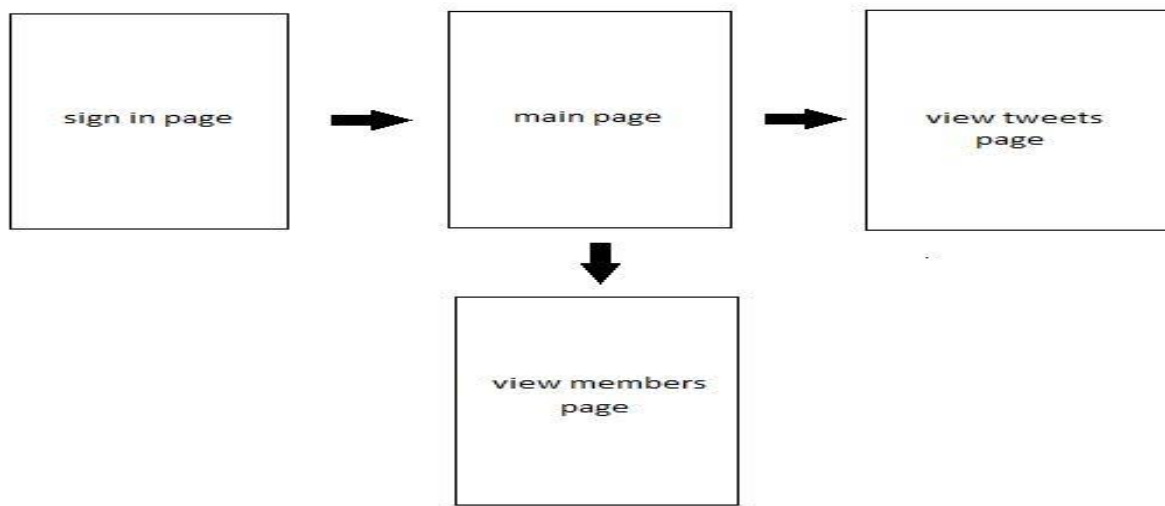
- 1- sign in: allows the admin to start a session.
- 2- main: has to links that leads to the two following pages
- 3- view_members: allows the admin to search through users by name and delete them.
- 4- view_tweets: allows the admin to search through tweets and delete them and their related replies.

2.3 Application Flow

Sign in page is the first page that appears to the user unless he/she is already signed in. Also, it has a link that directs the user to the sign-up page where he/she can make a new account. After making a new account or starting a session with a previously registered one, the page called main will appear. This page show all the tweets created by users and has a link to create_tweet page where the user can create new one. Every tweet will have a link that directs the user to a page that shows this specific tweet and its related replies and has a link to create_reply page where the user can send a reply. The following graph represent the flow of this side of the application.



Moreover, the administration side will start with a sign in page. After starting the session, the main page will appear and provide two links. One that directs the user to view_members page where the admin can search through users by their name. Every single user name has a button beside it that allows the admin to delete the user. The other link directs to view_tweets page where the admin can search through tweets by username or the tweet text. Every single tweet has a button beside it that allows the admin to delete it. Also, it has its related replies below it so the admin can delete replies. The following graph describe the flow of this side.



2.4 Data Design

To implement the described functionality, the data received from the users should be stored in a place. Also, a data storage is a critical part of responsive web applications. Therefore, a database will be linked to the application. The tables of the database will be made as follows:

1 – users table

Column Name	Data Type	Description
user_id	int	Unique user identifier.
username	varchar(25)	Unique user name.
password	varchar(25)	User password.
email	varchar(25)	User email.
name	varchar(25)	User real name.
r_date	DateTime	Registration date.

2 – tweets table

Column Name	Data Type	Description
tweet_id	int	Unique tweet identifier.
tweet_text	varchar(250)	The tweet text.
tweet_date	DateTime	The date when the tweet was published.

3 – reply table

Column Name	Data Type	Description
user_id	int	Unique user identifier.
username	varchar(25)	Unique user name.
tweet_id	Int	Unique tweet identifier.
reply_text	varchar(250)	The reply text.
reply_date	DateTime	The date when the reply was published.

3. Technologies

There will be several technologies that going to be used to create the application. HTML and CSS will be used to create the web pages and their layout. XML will be used define the structure of the data shown on the pages or transferred between the application and the data storage. For the functionality part, JSP will provide the responsiveness between the application parts. Lastly, a MySql database will be the storage of the data received from or sent to the user side.