Citizen Journalism by Analyzing Twitter Data for a Particular Geolocation



Submitted by:

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ID: 2015-2-96-004

Spring 2016.

Supervised by:

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East West University, Bangladesh

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East West University

Dept. of Computer Science and Engineering Spring 2106

Abstract

This project present citizen journal with different categories of tweets that are extract form Twitter for a particular geolocation. Represent tweets to citizen in comfortable view by specifying some interesting categories. Moreover try to give the latest news , incident that tweeted by the Twitter user more early than the electronic media. It brings a new era of journalism. I want to introduce citizen journalism and represent interesting pattern or information for specific region by using social Medias data. At present I am working on New York city and the radios of my working area is km around this city. I collect tweets form there and represent it to our citizen. Before developing this application many scholar work with twitter data for their analysis or the other thesis work. And the Citizen Journalism is not a new word to us. It is now introduced whole over the world. But Citizen Journalism Analyzing Twitter Data for a Particular Geolocation is a new thought because the scholar are work either with twitter data or Citizen journal, But they are not worked on conjugate together. Here I conjugate it together and try to show something new I also analyze data to make an extra portion of my project.

Declaration

The project has been submitted to the Department of Computer Science and Engineering at East West University in the partial fulfillment of the requirement for the degree of Masters in Computer Science and Engineering performed by me under supervision of Dr. Mohammad Rezwanul Huq, Assistant Professor, Dept. of CSE at East West University. This is also needed to certify that, the project work under the course 'Master's Project (CSE 597)'.

I, hereby declare that this project has not been submitted elsewhere for the requirement of any degree or diploma or any other purpose.

Signature of the candidate

A.S.M.Mannaf Rahman

Letter of Acceptence

This project is entitled "Citizen Journalism Analyzing Twitter Data for a Particular GEO Location" submitted by A.S.M.Mannaf Rahman ID No: 2015-2-96-004 to the Department of CSE, East West University, Dhaka-1212, Bangladesh is accepted by the Department for the partial fulfillment of requirements for the degree of MS in CSE August, 2016

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I would like to pay our gratitude to the almighty Allah who created me with not only the ability to design and program this system but also power of patience.

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A.S.M.Mannaf Rahman

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Chapter 1

INTRODUCTION

1.1 Citizen Journalism by Analyzing Twitter Data for a Particular Geolocation

At present the people are highly habituated on Modern technology . They communicate, share their status, emotions, news, thoughts, incidents by using social medias such as Twitter, Facebook, Google-plus etc. They can also get the latest news around the world within a short time. Sometime it is more faster than the electronic media. If we see our countries people now they give more concentration on social media rather than electronic media. So we can say that social media is a great resource for news. Here the idea of citizen Journalism born.

Citizen Journalism based upon public citizens "playing an active role in the process of collecting, reporting, analyzing, and disseminating news and information. So now social media can be a great resource of collection news, analyzed it and present those news to citizen.

Twitter is one of the popular social media. In this project I extract tweets from twitter ,analyzed it and present it into a news portal. So the citizen easily get all categorical news from this news portal. I also analyze the citizen interest in present time into those categories for particular geo location .

In Bangladesh the word Citizen Journalism is new. It may helps our citizen to get the latest and real incident or news around us. In future we have also opportunity to go higher research by using those data and evaluate interesting news, information, patterns.

1.2 Objective

The objective of my project is to present citizen journal with different categories of tweets that are extract form Twitter for a particular geolocation. Represent tweets to citizen in comfortable view by specifying some interesting categories . Moreover try to give the latest news ,incident that tweeted by the Twitter user more early than the electronic media. It's brings a new era of journalism. I want to introduce citizen journalism and represent interesting pattern or information for specific region by using social medias data . At present I am working on New York city and the radios of my working area is km around the New York city. I collect tweets form there and represent it to our citizen.

1.3 Methodology

At the beginning go the introduction I said that the data are collected from Twitter. One question may arise that why not other popular social media? In Facebook, the authority didn't permit us to extract data from another unknown users and so the others. Twitter give this facilities to the developer to extract data and analysis on those data.

Into my analyzing part .First extract data into a particular Geolocation with the help of latitude and longitude. Then put a filter into my code to filter those data .The reason to my filtering data here is to protect the unwanted data and make the database light. Into my user end again put my second filter to categorized those data and present those data to user comfortable format. I also analyze weekly categorical popularity among those categories and present it to bar and pie chart .

1.4 Issue that Consider to design this project

A good system is organized and functional. It must load quickly and should be easy to use. To design the system we spent time in planning. While designing the system we kept some issues in mind. Those are given bellow-

- > Is the information reliable and error free?
- > Does the information stored correctly?

- > Is the application user frindly?
- > Is the system user friendly?
- ➤ Is the system fast?
- > Dose the user get information easiest way?

1.5 The System Development Life Cycle

To understand system development, we need to recognized that a candidate system has a life cycle, just living or a new product. System analysis mans design are keyed to the system life cycle. The stages are shown in figurer-1. The analyst must progress one stage to another methodically, answering key questions and achieving results in each stage.

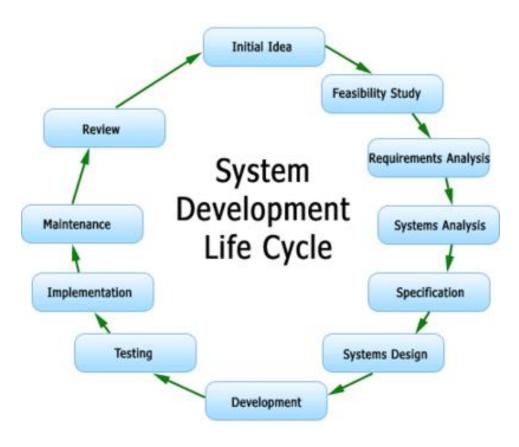


Figure 1.: System Development Life Cycle

1.6 Database Oriented System Approach

In Computer Science, a database is a structured collection of records or data that is stored in a computer system so that a computer program or person using a query language can consult it to answer queries.

The records retrieved in answer to queries are information that can be used to make decisions. The computer program used to manage and query a database is known as a database management system(DBMS). The properties and design of database systems are incident in the study of information science.

Database are used in many applications in different ways. Some application utilize database for storing massive amount of growing data for better manage ability and searching capabilities. Again, some applications utilize database for storing processing and making decisions based on data.

This project deals with twitter data so using a database will definitely make it efficient to reach into the goals of this project with properly design database schema and using powerful database queries

1.7 Flexiable User Interface

Here in this project one of the major area focus is on flexible user interface. So here we categories the tweets and display it different pages that the user can get their expected type of news in shorter time.

Here a search filter is also added to make user more comfort to get their expected type of data. Here the tweet URL is also added that one user can go into the tweet or news through this interface and can also identify tweet user easily .Our extracting engine is so strong to extract qualified data. I also add some extra feature of analysis that may give the user a good impression about this interface. Here for user communication platform also build so they are able to share their experience with us.

1.8 Summary

In this chapter I discuses about the existing system. My objective comes very clear from this chapter. Here I discuses about the system development life cycle and I follow that. I discuses about the main focus area of this project any the represent descriptive ways that the system follow.

Chapter 2

SYSTEM ANALYSIS

2.1 Introduction

The System analysis is a details study of the various operations performed by the existing system and their relationship within and outside of the system. One aspect of analysis is defining the boundaries of the system and determining whether or not a candidate system should consider other related systems.

2.2 Steps of System Analysis

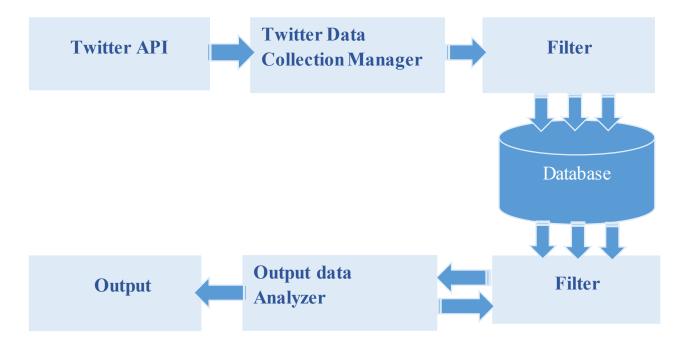


Figure 2. Block DIagram of System Analysis

Here I complete system analysis by the extract twitter data, put those data into database, output analysis, and data analysis of existing system.

2.3 Twitter API Analysis

Twitter allows you to interact with its data that is tweets & several attributes about tweets using Twitter APIs. To know a server side scripting language like Php, python or ruby to make requests to twitter API and results would be in JSON format that can be easily read by your program.

Here in twitter API data can be extract easily by using their resources. I work on Java library for the Twitter API. That helps me to integrate my Java application with the Twitter service.

2.4 Twitter Data Collection Manager

Using Twitter API with the help search filter we can collect lots of data and those data are needs to manage into a proper way that anyone can able to analyze on those data and produce interseting information or pattern. After that their needs to be a database manager that can manage those data into structured way.

The goal of design Twitter data collection manager(DCM) is to make data entry as easy,logical and free from errors as possible. In entering data, operators need to know the following:

- > The allocated space for each field
- > Field sequence, which must match in the source document
- ➤ The format in which data fields are entered.

Source data that means extracted twitter data stored into a database in a structure way that it brings comfortibility to users. Here we can see Table-2-1 that the structure of data into the database:

Table 1 Structured Data Format into Database

| Twitter id | Username | Profile Picture | Tweet | Tweet related images | date tweet | of |
|-------------|------------|---------------------------------------|---|---|------------------------|----|
| 112544246 | Cassienora | http://pro_im g1/14358.jp g | Once More About iPhone Battery #iPhone #iGotOffer https://t.co/eDPUN N8F9b @iGotOffer https://t.co/InS4dz Ycat | http://pbs.twimg.com/media/CpB0eH1UMAEPHzO.jpg | 2016-08-04 09:36:39 | |
| 1113456 | Rojario | http://pro_im g1/143f8.jpg | #Sports Stefan Matteau 2013-14 National Treasures Auto #Reebok Patch Logo RC 5/5 https://t.co/IMCky HQ24E #Share https://t.co/oZXbT WjdMG | http://pbs.twimg.com/media/CpB0eH1UM AakjdnHzO.jpg | 2016-08-04 09:36:42 | |
| 9495930349 | Bony | http://pro_im g1/143ffdwf 8.jpg | RT @katiea_SQ: #Twitter Trending can ROCK your #Business: https://t.co/BmRB 5ZyosY | http://pbs.twimg.com/ media/CpB0eH1sn0n HzO.jpg | 2016-08-04 09:36:43 | |
| 54639383099 | The_M app | http://pro_im g1/389ffdwf 8.jpg | Designing Facebook Image Posts in Photoshop #Facebook | http://pbs.twimg.com/media/CpB0eH1UM AahhdokjdnHzO.jpg | 2016-08-04 09:36:45 | |
| 38504630 | YasuyukiA | http://pro_im g1/384ffdwf 8.jpg | RT @PINNLAND_E MPIRE: Stranger Than Paradise/The Golden Boat | http://pbs.twimg.com/ media/CpB0eH1sn0n HzO.jpg | 2016-08-04 09:36:49 | |

Table-1:Structured Data Formet Into Database

2.5 Output Data Analyzer

Computer output is the most important and direct source of information to the user. Efficient and intelligible output design should improve the system relationships with the user to help in decision making. I have to tested my system by taking some right formatted data. The output, which comes according to the input . Here we see some input value that are extract value from API.

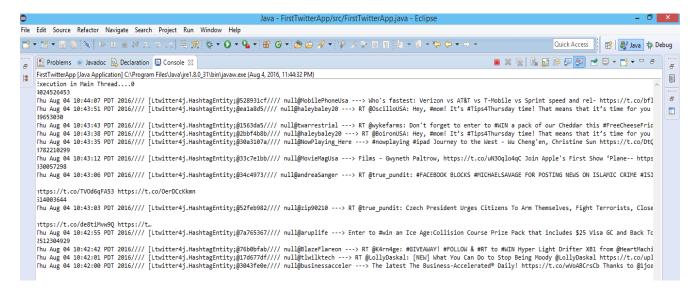


Figure 3 - Structured Input Value

After that those inputted data are presented user comfortable format that is get more importance into interior project. Now see the comfortable format for user of those data is

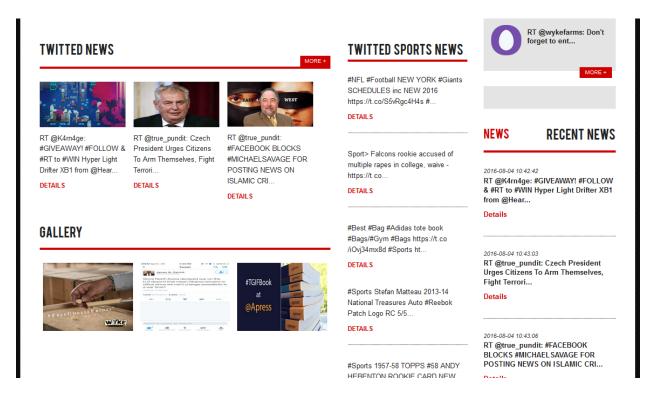


Figure 4. User Friendly Output of Structured Intuted Data

2.6 Data Analysis

In the data analysis the data has been selected from input analysis according to the requirement of the system. The following data are included by the data analysis. In future if required, the data can be used for to analyze particular geoloacation users concentration area, their interest etc. After that it may represent it graphically for user to understand easily. Now we can see Figurer-4 to see an live example on output data analysis which is collected form New york city.

WEEKLY TWEETS CATEGORICAL REPORT (INBARCHART)

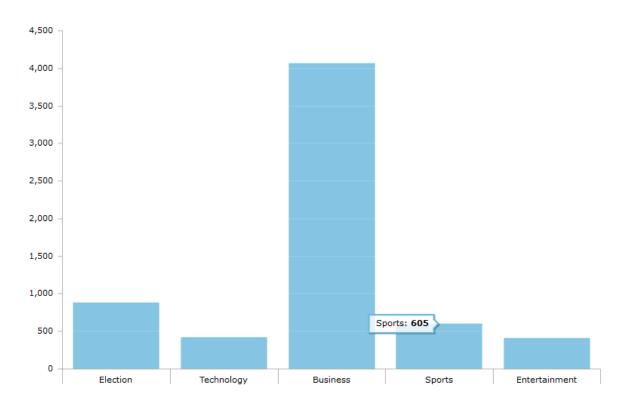


Figure 5-Data Analysis

2.7 Summary

In this Chapter here discuses about the system analysis by extract twitter data, Twitter API analysis, Twitter data collection manager, filter, Data analyzer, output data analysis. In chapter three we discussed about the implementation part of my project.

Chapter 3

SYSTEM DESIGN

3.1 Introduction

At present in our world the people are highly involved on social media. Now they want all information into one platform and want to get the latest news that happen some moments earlier. People also share news or incident so fast now a day. But they are not in proper structured way to represent news. Many viewers of social media not able to reach those news. So there is no easy way into social media to get those categorical data with good pattern.

Form this requirement or from this point of view I developed a web portal which give us the most latest news or incident news that is posted or tweet some moments earlier .Here the user can get a categorical pattern of present the news.so they easily get those news what they want to show each other.

3.2 Schematic Diagram for Operation

Now we can see a schematic diagram for operation .It contains four parts. Those are

- Twitter Database
- Internet Cloud
- > Utility Server
- Citizen Journal Core Database

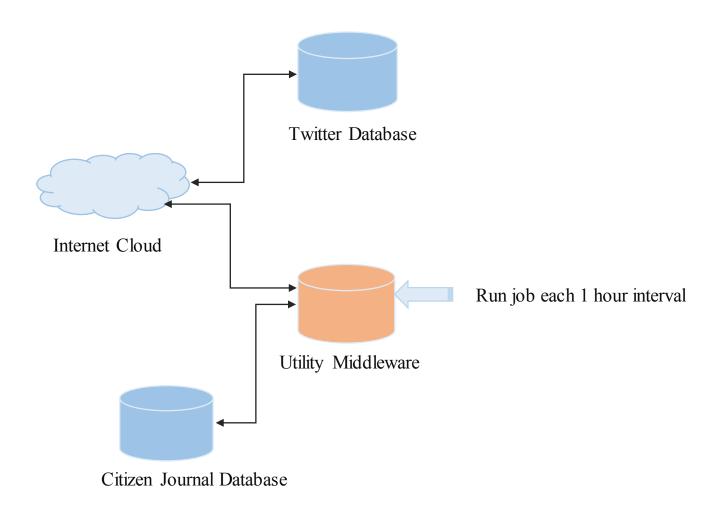


Figure 6-Schematic Diagram for Operation

The main operation are:

- > Run Twitter API
- > Extract data every one hour interval
- > Insert data into Database
- > Filter it
- > Repesent it to the users
- > Analyze the data

3.3 Data Flow Diagram

The DFD was first developed by Larry Constantine as way of expressing system requirement in graphical form. This led to a modular design. A DFD also known as bubble chart has the purpose of clarifying system requirements and identifying major transformation that will become programs in systems.[1]

So, it is the starting point of the design phase that functionally decomposes the requirements specification down to the lowest level of details. A DFD consists of a series of bubbles join by the lines. The bubbles represent data transformations and the line represent data flow in the system.

A DFD descried what data flow rather than how they are processed, So it does not depend on hardware, software, data structure or file organization. The key question that we are trying to answer is: What major transform must occur for input to be correctly transform into output? [2]

Here I am try to represent my DFD that we can easily get the initial and the destination point of data flow of Citizen Journal. Here the major transform of input data are collected form Live tweets form twitter via Internet cloud. Those data are initially stored into twitter Database. When we request for tweet they just justify our request and then send the data into a Structured JSON format. That would be very structured way to collect data to developer. After that this data flow goes into a filter to extract the expected and qualified data. Then those data insert into our database. The collected data again goes into different kinds of filter that developed by the developer and finally it represents to the endures .In this way the flow of data continue.

Now we can see the data flow diagram of my project into figure 7

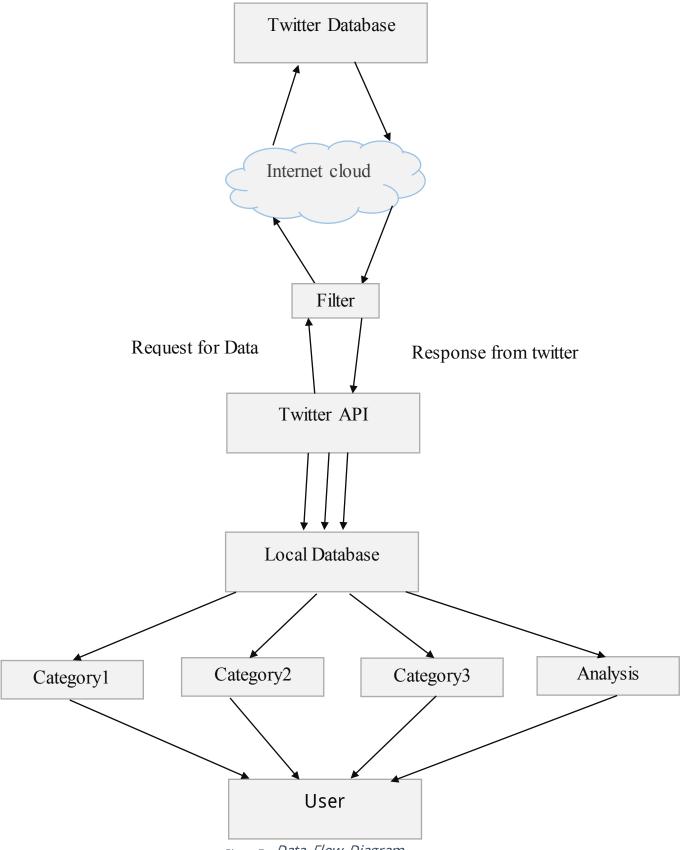


Figure 7- Data Flow Diagram

3.4 UML Diagram

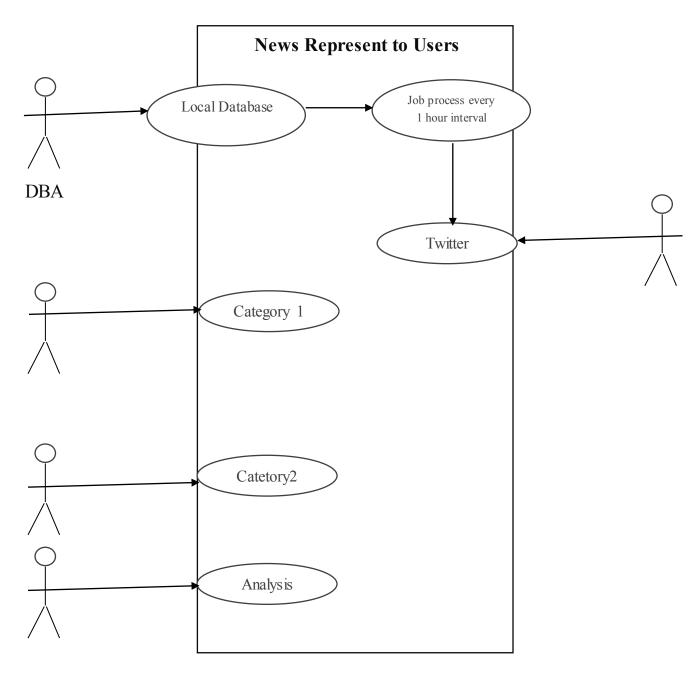


Figure 8-UML Diagram of News Representation to Users

3.5 Schema Diagram

The Entity-Relationship model is a data model for high-level description of conceptual data models, and it provides graphical notation for representing such data models in the form of entity relationships diagrams. Such data models are tropically used in the first stage of information-system design; they are used, for example, to describe information needs and/or the type of information that is to be stored in the database during the requirement analysis. The modeling technique, however, can be describe any ontology for a certain universe of discourse. In the case of the design of an information system that is based on a database, the conceptual data model is ,at a later stage mapped to the logical data model, such as the relational model; this in turn is mapped to a physical model during physical design. Sometimes ,both of those phases are referred to as physical design.[3]

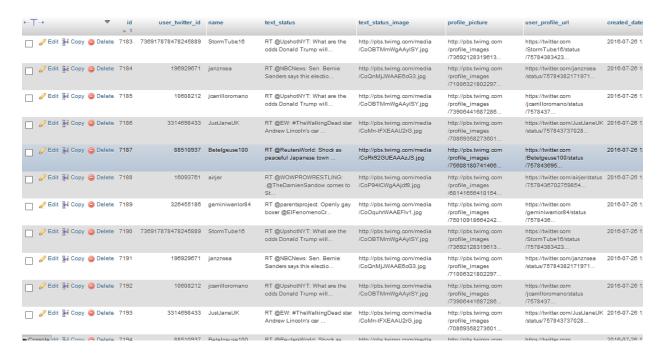


Figure 9-Twitter Data Table

Here we can see that twitter data table that store the data that extract form twitter.



Figure 10- User Table

Here we see the user table that the user wants to communicate with us and give us effective advice or request.

3.6 Database Design

According to the requirement of the system, following tables have been constructed.

3.6.1 Twitter Data Table

| Name | Туре | Null | Action |
|-------------------|--------------|------|-------------|
| id | int(11) | NO | |
| user_twitted_id | bigint(20) | NO | Primary Key |
| name | varchar(100) | NO | |
| text_status | varchar(250) | NO | |
| text_status_iamge | varchar(500) | NO | |
| profile_picture | varchar(500) | NO | |

| user_profile_url | varchar(1000) | NO | |
|------------------|---------------|----|--|
| created_date | datetime | NO | |

Table 2. Tweet Data Table

3.6.2 User Table

| Name | Type | Null | Action |
|--------------|---------------|------|-------------|
| id | int(11) | No | Primary Key |
| username | varchar(250) | No | |
| email | varchar(100) | No | |
| message | varchar(1000) | No | |
| created date | datetime | No | |

Table 3. User Table

3.7 Application Input Section

We can see the input section of Twitter data bellow:

```
inthOnsumerSecret("impyNekNoral gainAccessToken("287236748-9wZUGyuMT@XINYxwVqwMt&37QooYNgGUSrdbDGHyi")
ithAccessToken("287236748-9wZUGyuMT@XINYxwVqwMt&37QooYNgGUSrdbDGHyi")
ithAccessToken("287236748-9wZUGyuBrdGUSrdhJHyi")
ithAccessTokenScore("287236748-9wZUGyuBrdGUSrdhJHyi")
ithAccessTokenScore
```

Figure 11-Data Input Selection

3.8 Application Home page

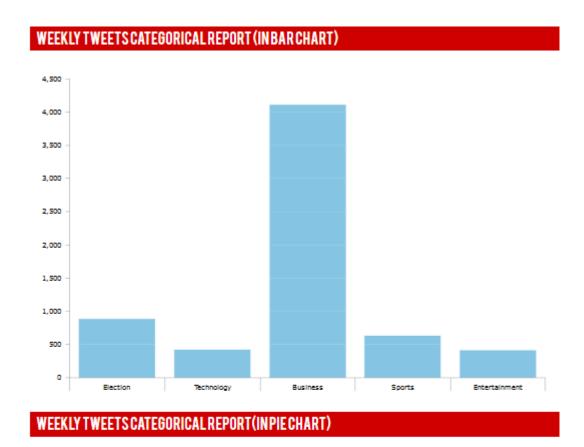
This is our home page. Here the user can get the various categorical news form tweets.



Figure 12 - Application Home Page

3.9 Data Analysis Page

Here we can see the data analysis page



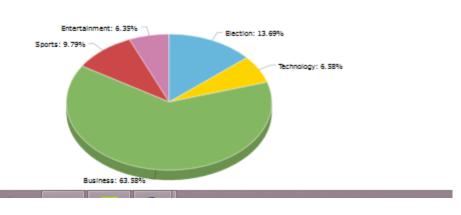


Figure 13 - Data Analysis Page

3.10 User Contact Form

This is user contact form .Here the user can contact with me by providing username, email address and the message that he/she sents to me. After that we give feedback on basis of his/her requirements.

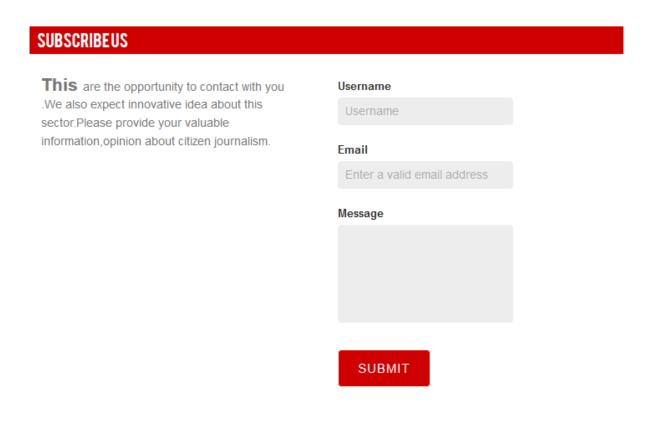


Figure 14. User Contact Page

3.11 Summary

In this chapter I have discussed about DFD and Schema diagram. I have also described about the entire database tables with details. I have depicted my whole system by showing screen shot of our system. In the next chapter I shall discuses about the technology that I used for this project.

Chapter 4

TECHNOLOGIES

4.1 Introduction

In the development of a new application I am just divide my work into two sectors. One is described as Backend which is developed by Java language and using a API is called Twitter 4j. After that I connect twitter 4j to mysql database to store the extracted data. Other is describe as frontend which is developer by Cakephp a specific frame work of php.

Here I use OOP Php. Here I also using HTML, CSS, Javascript, Jquery. I also using amChart Javascript graph .For make my project responsive I use Bootstrap and my individual CSS.

4.2 Twitter 4j API

Twitter4J is an unofficial Java library for the Twitter API.With Twitter4J, you can easily integrate your Java application with the Twitter service. Twitter4J is an unofficial library.

Twitter4J is featuring:

- > 100% Pure Java works on any Java Platform version 5 or later
- Android platform and Google App Engine ready
- > Zero dependency: No additional jars required
- ➤ Built-in OAuth support
- Out-of-the-box gzip support
- ➤ 100% Twitter API 1.1 compatible

4.2.1 System Requirements

OS: Windows or any flavor of Unix that supports Java.JVM: Java 5 or later.

4.2.2 How To Use

Just add twitter4j-core-4.0.4.jar application to your classpath. If you are familiar with Java language, looking into the JavaDoc should be the shortest for way you started. to get twitter4j. Twitter interface is the one you may want to look at first. [4]

4.3Java

Java is a general-purpose computer programming language that is concurrent, object-oriented, and specifically designed class-based, to have few implementation dependencies as possible. It is intended to let application developers "write once, run anywhere" (WORA), meaning that compiled Java code can run on all platforms that support Java without the need for recompilation. Java applications are typically compiled to bytecode that can run on any Java virtual machine (JVM) regardless of computer architecture. As of 2016, Java is one of the most popular programming languages in use, particularly for client-server web applications, with a reported 9 million developers. Java was originally developed by James Gosling at Sun Microsystems (which has since been acquired by Oracle Corporation) and released in 1995 as a core component of Sun Microsystems' Java platform. The language derives much of its syntax from C and C++, but it has fewer low-level facilities than either of them.

The original and reference implementation Java compilers, virtual machines, and class libraries were originally released by Sun under proprietary licences. As of May 2007, in compliance with the specifications of the Java Community Process, Sun relicensed most of its Java technologies under the GNU General Public License. Others have also developed alternative implementations of these Sun technologies, such as the GNU Compiler for Java (bytecode compiler), GNU Classpath (standard libraries), and IcedTea-Web (browser plugin for applets).

The latest version is Java 8, which is the only version currently supported for free by Oracle, although earlier versions are supported both by Oracle and other companies on a commercial basis. [5]

4.4 MySQL Database

MySQL is an open-source relational database management system (RDBMS). In July 2013, it was the world's second most widely used RDBMS, and the most widely used open-source client—server model RDBMS. Its name is a combination of "My", the name of co-founder Michael Widenius' daughter, and "SQL", the abbreviation for Structured Query Language. The MySQL development project has made its source code available under the terms of the GNU General Public License, as well as under a variety of proprietary agreements. MySQL was owned and sponsored by a single for-profit firm, the Swedish company MySQL AB, now owned by Oracle Corporation. For proprietary use, several paid editions are available, and offer additional functionality.

MySQL is a popular choice of database for use in web applications, and is a central component of the widely used LAMP open-source web application software stack (and other "AMP" stacks). LAMP is an acronym for "Linux, Apache, MySQL, Perl/PHP/Python". Free-software open-source projects that require a full-featured database management system often use MySQL. Applications that use the MySQL database include: TYPO3, MODx, Joomla, WordPress, phpBB, MyBB, Drupal and other software. MySQL is also used in many high-profile, large-scale websites, including Google (though not for searches), Facebook, Twitter, Flickr, and YouTube.

4.5 Xampp

XAMPP is a free and open source cross-platform web server solution stack package developed by Apache Friends, consisting mainly of the Apache HTTP

Server, MariaDB database, and interpreters for scripts written in the PHP and Perl programming languages.XAMPP stands for Cross-Platform (X), Apache (A), MariaDB (M), PHP (P) and Perl (P). It is a simple, lightweight Apache distribution that makes it extremely easy for developers to create a local web server for testing and deployment purposes. Everything needed to set up a web server – server application (Apache), database (MariaDB), and scripting language (PHP) – is included in an extractable file. XAMPP is also cross-platform, which means it works equally well on Linux, Mac and Windows. Since most actual web server deployments use the same components as XAMPP, it makes transitioning from a local test server to a live server extremely easy as well.[7]

4.6 Cakephp

CakePHP is an open-source web framework. It follows the model-view-controller (MVC) approach and is written in PHP, modeled after the concepts of Ruby on Rails, and distributed under the MIT License.

CakePHP uses well-known software engineering concepts and software design patterns, such as convention over configuration, model—view—controller, active record, association data mapping, and front controller.

CakePHP started in April 2005, when a Polish programmer Michal Tatarynowicz wrote a minimal version of a rapid application development in PHP, dubbing it Cake.He published the framework under the MIT license, and opened it up to the online community of developers. In December 2005, L. Masters and G. J. Woodworth founded the Cake Software Foundation to promote development related to CakePHP. Version 1.0 was released on May 2006.

One of the project's inspirations was Ruby on Rails, using many of its concepts. The community has since grown and spawned several sub-projects.

In October 2009, project manager Woodworth and developer N. Abele resigned from the project to focus on their own projects, including the Lithium web framework (previously part of the CakePHP project). The remaining development team continued to focus on the original roadmap that was previously defined [8]

4.7 php

PHP is a server-side scripting language designed for web development but also used as a general-purpose programming language. Originally created by Rasmus Lerdorf in 1994,the PHP reference implementation is now produced by The PHP Group. PHP originally stood for *Personal Home Page*, but it now stands for the recursive acronym *PHP: Hypertext Preprocessor*.

PHP code may be embedded into HTML code, or it can be used in combination with various web template systems, web content management systems and web frameworks. PHP code is usually processed by a PHP interpreter implemented as a module in the web server or as a Common Gateway Interface (CGI) executable. The web server combines the results of the interpreted and executed PHP code, which may be any type of data, including images, with the generated web page. PHP code may also be executed with a command-line interface (CLI) and can be used to implement standalone graphical applications.

The standard PHP interpreter, powered by the Zend Engine, is free software released under the PHP License. PHP has been widely ported and can be deployed on most web servers on almost every operating system and platform, free of charge.

The PHP language evolved without a written formal specification or standard until 2014, leaving the canonical PHP interpreter as a *de facto* standard. Since 2014 work has gone on to create a formal PHP specification.

During the 2010s there have been increased efforts towards standardisation and code sharing in PHP applications by projects such as PHP-FIG in the form of PSR-initiatives as well as Composer dependency manager and the Packagist repository.[9]

4.8 HTML

HyperText Markup Language, commonly abbreviated as HTML, is the standard markup language used to create web pages. Along with CSS, and JavaScript, HTML is a cornerstone technology used to create web pages, as well as to create user interfaces for mobile and web applications. Web browsers can read HTML files and render them into visible or audible web pages. HTML describes the structure of a website semantically and, before the advent of Cascading Style Sheets (CSS), included cues for the presentation or appearance of the document (web page), making it a markup language, rather than a programming language.

HTML elements form the building blocks of HTML pages. HTML allows images and other objects to be embedded and it can be used to create interactive forms. It provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. HTML elements are delineated by *tags*, written using angle brackets. Tags such as and <input/> introduce content into the page directly. Others such as ... surround and provide information about document text and may include other tags as sub-elements. Browsers do not display the HTML tags, but use them to interpret the content of the page.

HTML can embed scripts written in languages such as JavaScript which affect the behavior of HTML web pages. HTML markup can also refer the browser to Cascading Style Sheets (CSS) to define the look and layout of text and other material. The World Wide Web Consortium (W3C), maintainer of both the HTML and the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1997.[10]

4.9 CSS

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language. Although most often used to set the visual style of web pages and user interfaces written in HTML and XHTML, the language can be applied to any XML document, including plain XML, SVG and XUL, and is applicable to rendering in speech, or on other media. Along with HTML and JavaScript, CSS is a cornerstone technology used by most

websites to create visually engaging webpages, user interfaces for web applications, and user interfaces for many mobile applications.

CSS is designed primarily to enable the separation of document content from document presentation, including aspects such as the layout, colors, and fonts. This separation can improve content accessibility, provide more flexibility and control in the specification of presentation characteristics, enable multiple HTML pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

This separation of formatting and content makes it possible to present the same markup page in different styles for different rendering methods, such as on-screen, in print, by voice (when read out by a speech-based browser or screen reader) and on Braille-based, tactile devices. It can also be used to display the web page differently depending on the screen size or device on which it is being viewed. Readers can also specify a different style sheet, such as a CSS file stored on their own computer, to override the one the author has specified.

Changes to the graphic design of a document (or hundreds of documents) can be applied quickly and easily, by editing a few lines in the CSS file they use, rather than by changing markup in the documents.

The CSS specification describes a priority scheme to determine which style rules apply if more than one rule matches against a particular element. In this so-called *cascade*, priorities (or *weights*) are calculated and assigned to rules, so that the results are predictable.

The CSS specifications are maintained by the World Wide Web Consortium (W3C). Internet media type (MIME type) text/css is registered for use with CSS by RFC 2318 (March 1998). The W3C operates a free CSS validation service for CSS documents.[11]

4.10 Javascript

JavaScript is a high-level, dynamic, untyped, and interpreted programming language. It has been standardized in the ECMAScript language specification. Alongside HTML and CSS, it is one of the three core technologies of

World Wide Web content production; the majority of websites employ it and it is supported by all modern Web browsers without plug-ins. JavaScript is prototype-based with first-class functions, making it a multi-paradigm language, supporting object-oriented, imperative, and functional programming styles. It has an API for working with text, arrays, dates and regular expressions, but does not include any I/O, such as networking, storage, or graphics facilities, relying for these upon the host environment in which it is embedded.

Although there are strong outward similarities between JavaScript and Java, including language name, syntax, and respective standard libraries, the two are distinct languages and differ greatly in their design. JavaScript was influenced by programming languages such as Self and Scheme.

JavaScript is also used in environments that are not Web-based, such as PDF documents, site-specific browsers, and desktop widgets. Newer and faster JavaScript virtual machines (VMs) and platforms built upon them have also increased the popularity of JavaScript for server-side Web applications. On the client side, JavaScript has been traditionally implemented as an interpreted language, but more recent browsers perform just-in-time compilation. It is also used in game development, the creation of desktop and mobile applications, and server-side network programming with run-time environments such as Node.js.[12]

4.11 jquery

jQuery is a cross-platform JavaScript library designed to simplify the client-side scripting of HTML. jQuery is the most popular JavaScript library in use today, with installation on 65% of the top 10 million highest-trafficked sites on the Web.jQuery is free, open-source software licensed under the MIT License.

jQuery's syntax is designed to make it easier to navigate a document, select DOM elements, create animations, handle events, and develop Ajax applications. jQuery also provides capabilities for developers to create plug-ins on top of the JavaScript library. This enables developers to create abstractions for low-level interaction and animation, advanced effects and high-level, themeable widgets. The modular approach to the jQuery library allows the creation of powerful dynamic web pages and Web applications.

The set of jQuery core features—DOM element selections, traversal and manipulation—enabled by its *selector engine* (named "Sizzle" from v1.3), created a new "programming style", fusing algorithms and DOM data structures. This style influenced the architecture of other JavaScript frameworks like YUI v3 and Dojo, later stimulating the creation of the standard *Selectors API*.

Microsoft and Nokia bundle jQuery on their platforms. Microsoft includes it with Visual Studio for use within Microsoft's ASP.NET AJAX and ASP.NET MVC frameworks while Nokia has integrated it into the Web Run-Time widget development platform. jQuery has also been used in MediaWiki since version 1.16.[13]

4.12 Bootstrap

Originally created by a designer and a developer at Twitter, Bootstrap has become one of the most popular front-end frameworks and open source projects in the world.

Bootstrap was created at Twitter in mid-2010 by @mdo and @fat. Prior to being an open-sourced framework, Bootstrap was known as *Twitter Blueprint*. A few months into development, Twitter held its first Hack Week and the project exploded as developers of all skill levels jumped in without any external guidance. It served as the style guide for internal tools development at the company for over a year before its public release, and continues to do so today.

Originally released on Friday, August 19, 2011, we've since had over twenty releases, including two major rewrites with v2 and v3. With Bootstrap 2, we added responsive functionality to the entire framework as an optional stylesheet. Building on that with Bootstrap 3, we rewrote the library once more to make it responsive by default with a mobile first approach.[14]

4.12 Summary

In this chapter I mainly discussed about the technology that I used in my project. Here I discuses Twitter4j, Java, mysql, xampp. Here I also explain about Cakephp, php, HTML,CSS,JavaScript,Jquery and Bootstrap. In Chapter 5 we discuses about the summary of the system.

Chapter 5

CONCLUSION

5.1 Traditional System

Before developing this application many scholar work with twitter data for their analysis or the other thesis work. And the Citizen Journalism is not a new word to us. It is now introduced whole over the world. But Citizen Journalism Analyzing Twitter Data for a Particular Geolocation is a new thought because the scholar are work with twitter data or Citizen journal, But they are not conjugate together. Here I conjugate it together and try to show some innovation .I also analyze data to make an extra portion of my project.

5.2 Outcome of The Project

The developed application has been successfully deployed. I just invited some volunteer to test the application. They use it and give me the following feedback in a summarized form:

- ➤ Workflow of the frontend is user friendly and efficient enough to work with it.
- Autometically extract data from twitter with a particular time interval made the job of entering new information very simple and time saving.
- > Two filters are really helpfull to extract and represent the expected news.
- ➤ Analysis part is really interesting to them.
- ➤ Giving feedback using email is also interesting to them
- Although the system requires more testing and risions, overall user feedback indicated that, if implemented , such a system can come to a great use of users.

5.3 Limitations

Due to the limitation of time ,many of the features that could be implemented in the system are absent. There is some problem in twitter text that is not wel formed.

- The user are not concious about how to use their hash tag. They use hash tag within that message. That makes their text bad format. For that reason representation is not so good enough as I expected.
- ➤ When I working on Analysis part that represent graphically,I think that their is lots of work on it .I can add filter that the user can make report own as their requirement.But here i only show the weekly rating of tweets on basis of their categories.
- > By using twitter data i can works a lots of analysis but this time i am not enough time to do so.
- > Limitation of data storage.

However, it cannot be guaranteed that the application give the best result in its initial run. The project can be expected to achieve its goal in near future with enought data store and user feedback.

5.4 Future Development

The application has been developed with future development possibilities in consideration. The object oriented approach of the system permits additional of new entities and methods which can be used to interact with existing ones ans to extend the functionalities. I am wish to continue my involvement and contribution to this system for future development operation.

If this application can be implemented properly and completly then it has very big future in modern citizen.

The application have more feature for brings a better impression to the citizen. Some of them are given bellow:

- > Dynamic category with respect of popularity.
- > Make an option for getting news every sub continent into the world
- > Extaxt data from multiple Geolocation and stored it with respect of sub continet.
- > Additional filter may add in Analysis part.
- > Add extra feature to make the Journal more user friendly.

5.5 Summary

In this chapter we have discuessed about the outcome of our system. We think that I am succeeded to build the system which is very inovative to our country. I tried to give my best to do this project but we all know that each and every system has some limitations and I am not free from them. I have some limitation and I already discussed about it in the above. I wish to continue my involvement and contribution to this application for further development operation.

At last everyone please pray for me that I can give more innovation thoughts and project for my instritution and country.

APPENDIX

Source Code

Source Code for Extracting data from Twitter:

```
import java.util.List;
import java.util.Date;
import java.sql.*;
import java.text.SimpleDateFormat;
import twitter4j.Query;
import twitter4j.Query.Unit;
import twitter4j.QueryResult;
import twitter4j.Status;
import twitter4j.Twitter;
import twitter4j.TwitterException;
import twitter4j.conf.ConfigurationBuilder;
import twitter4j.GeoLocation;
import twitter4j.MediaEntity;
import twitter4j.TwitterFactory;
public class FirstTwitterApp{
public static void main(String[] args) throws TwitterException, SQLException,
InterruptedException,BatchUpdateException {
             DBConnect connect = new DBConnect();
             ConfigurationBuilder cb = new ConfigurationBuilder();
             cb.setDebugEnabled(true)
             .setOAuthConsumerKey("PLMXWZUJk3Wl7fgTHx1939Yyb")
      .setOAuthConsumerSecret("myhFkloFqL80hPFpIh1HgAi0p46hEFBRNBW7wHdCEUE8C4dncL")
             .setOAuthAccessToken("287236748-
9wZUGyuMT0XNYxwVqwNt837QooYWgGUSrdbDGHyi")
      .setOAuthAccessTokenSecret("ieVJLtHZ728ohP7oQ3LZt18k2SXFem8nD6LHnIFNX50r0");
             Twitter twitter = new TwitterFactory(cb.build()).getInstance();
             for (int i = 0; i <= 5; i++) {
                   System.out.println("Execution in Main Thread...." + i);
             try{
                          Query query = new Query("(#TOPNEWS) OR (#HOTNEWS) OR
(#BreakingNews) OR (#ATTACK) OR (#KILLED) OR (#WIN) OR(#NASA)OR(#MOBILE) OR (#ROBOAT)
OR (#iPhone) OR(#NEWDEVICE)OR (#ACCIDENT) OR (#ISIS) OR (#SPORTS) OR (#ELECTION) OR
(#SOCKER) OR(#TESCHNOLOGY) OR (#CRICKET) OR (#TableTennis) OR (#Movies) OR(#IMDb) OR
(#BUSINESS)OR(#TRAVELS)"); //
GeoLocation location = new GeoLocation(40.712784, -74.005941); //latitude, longitude
```

```
Unit unit = Query.KILOMETERS; // or Query.MILES;
query.setGeoCode(location,150,unit); //location, radius, unit
QueryResult result;
do {
      result = twitter.search(query);
      List<Status> tweets = result.getTweets();
for (Status tweet : tweets) {
Date your date = tweet.getCreatedAt();
SimpleDateFormat formatter = new SimpleDateFormat("YYYY-MM-dd h:m:s");
String date = formatter.format(your date);
userId = tweet.getUser().getId();
String userName = tweet.getUser().getScreenName();
String textStatus = tweet.getText();
String profilePicture = tweet.getUser().getOriginalProfileImageURL();
String userUrl= "https://twitter.com/" + tweet.getUser().getScreenName()
"/status/" + tweet.getId();
MediaEntity[] media = tweet.getMediaEntities(); //get the media entities from the
status
for(MediaEntity m : media){ //search trough your entities
      String text_status_image = m.getMediaURL();
      System.out.println(userId); //get your url!
             //System.out.println(sdsd);
      String qry = " insert into twitter_datas
      (user_twitter_id,name,text_status,text_status_image,
      profile picture, user profile url, created date)"
      + " values ( ?, ?, ?, ?,?,?)";
      // create the mysql insert preparedstatement
      PreparedStatement preparedStmt = connect.con.prepareStatement(qry);
      preparedStmt.setLong (1,userId);
      preparedStmt.setString
                               (2, userName);
      preparedStmt.setString
                               (3, textStatus);
      preparedStmt.setString
                               (4,text_status_image);
                               (5, profilePicture);
      preparedStmt.setString
      preparedStmt.setString
                               (6, userUrl);
                               (7, date);
      preparedStmt.setString
      // execute the preparedstatement
      preparedStmt.execute();
}
//System.out.println(tweet.getURLEntities());
                                                             //System.out.println("@"
+ tweet.getUser().getScreenName() + " - " + tweet.getText());
System.out.println(tweet.getCreatedAt() + "/// " +
```

```
tweet.getHashtagEntities().toString() + "//// " + tweet.getGeoLocation() + "@" +
tweet.getUser().getScreenName() + " ---> " + tweet.getText());
}
}
while ((query = result.nextQuery()) != null);
               }catch (TwitterException te) {
                 System.out.println("Failed to search tweets: " + te.getMessage());
                 System.exit(-1);
            }
               Thread.sleep(600000);
               if (i == 5) {
                       i=0;
                       //System.out.println("Application Terminates");
                       //System.exit(0);
               }
       }
}
}
```

Source Code for index page:

```
<?php
$link = mysql connect("localhost", "root", "");
mysql select_db("citizen_journalisms", $link);
$date = date("Y-m-d");
deltade = date('Y-m-d', strtotime($date));
$privious day=date('Y-m-d', strtotime('-1 day', strtotime($date)));
$a = mysql_query("SELECT * FROM `twitter_datas` WHERE `created_date`LIKE '$privious_day%'
                    ORDER BY 'id' DESC LIMIT 0, 4");
$breaking news=mysql query("SELECT`text status`FROM`twitter datas`WHERE`text status`LIKE
'%breaking%news%'ORDER BY 'id'DESC LIMIT 0.1'');
<div class="col-md-9 total-news">
  <div class="slider">
<script src="js/responsiveslides.min.js"></script><script>
// You can also use "$(window).load(function() {"
$(function(){
$("#conference-slider").responsiveSlides({
: true,
manualControls: '#slider3-pager',
});
});
</script>
<div class="conference-slider">
<!-- Slideshow 3 -->
<?php while($row=mysql fetch array($a))</pre>
              <imgsrc="<?php echo$row[4];?>" alt=""height="335">
              <?php }?>
<!-- Slideshow 3 Pager -->
<a href="#"><img src="images/one.ipg" alt=""></a>
       <a href="#"><img src="images/two.jpg" alt=""></a>
       <a href="#"><img src="images/three.jpg" alt=""></a>
       <a href="#"><img src="images/four.jpg" alt=""></a>
```

```
<div class="breaking-news-title">
<?php
if(isset($breaking news)){
while($row1=mysql fetch array($breaking news)) { echo$row1[0];}}else{echo "nothing";}?>
</div>
</div>
<h5 class="breaking">Breaking News</h5>
</div>
<?php
$recent news=mysql query("SELECT`text status`,`text status image`,`id`FROM
`twitter_datas`WHERE`created_date`LIKE'$privious_day%'ORDERBY`id`DESC LIMIT 0,3");
$sports_recent_news=mysql_query("SELECT`text_status`,`text_status_image`,`id`FROM
'twitter_datas'WHERE 'text_status' LIKE '%sports%'ORDER BY 'id'DESC LIMIT 0,5");
$gallery_image = mysql_query("SELECT `text_status_image` FROM `twitter_datas` ORDER BY
'name'DESCLIMIT 0.5'');
       ?>
 <div class="posts">
       <div class="left-posts">
       <div class="world-news">
               <div class="main-title-head">
               <h3>Twitted News</h3>
               <a href="<?php echo $this->webroot; ?>Twitter_datas" style="text-
decoration:none;">More +</a>
               <div class="clearfix"></div>
      </div>
      <div class="world-news-grids">
               <?php while($row4=mysql fetch array($recent news))</pre>
                                                                           <; >
        <div class="world-news-grid">
          <img src="<?php echo $row4[1]; ?>" alt="" style="max-height: 6em;"/>
          <a href="singlepage.html" class="title"></a>
           ?php echo $sub = substr($row4[0],0,80)."..."; ?> 
          <?php echo $this->html->link('details', array('controller' => 'Details', 'action' => 'index',
$row4[2]));?>
        </div>
        <?php } ?>
      </div>
    </div>
    <div class="latest-articles">
```

```
</div>
    <div class="clearfix"></div>
    <div class="gallery">
    <div class="main-title-head">
       < h3 > gallery < /h3 >
<div class="clearfix"></div>
</div>
<div class="gallery-images">
<div class="course demo1">
<?php while($row6=mysql_fetch_array($gallery_image))</pre>
                                                         { }>
<img src="<?php echo pow6[0];?>" alt=""/>
<?php }?>
</div>
<link rel="stylesheet" href="css/flexslider.css" type="text/css" media="screen" />
<script type="text/javascript">
$(window).load(function() {
$("#flexiselDemo1").flexisel({
visibleItems: 3,
animationSpeed: 1000,
: true,
autoPlaySpeed: 3000,
pauseOnHover: true,
enableResponsiveBreakpoints:true,
responsiveBreakpoints: {
portrait: {
changePoint:480,
visibleItems: 2
},
landscape: {
changePoint:640,
visibleItems: 2
},tablet:{
changePoint:768,
visibleItems: 3
```

```
}
}
});
});
</script>
<script type="text/javascript" src="js/jquery.flexisel.js"></script>
                                              </div>
    </div>
    <div class="tech-news"></div>
  </div>
  <div class="right-posts">
       <div class="desk-grid">
      <h3>Twitted Sports News</h3>
      <?php while($row5=mysql_fetch_array($sports_recent_news)) { ?>
      <div class="desk">
        <a href=""class="title"></a>
        p  ?php echo $sub1 = substr($row5[0],0,80)."..."; ?> 
        <?php echo $this->html->link('details', array('controller' => 'Details', 'action' => 'index',
$row5[2]));?>
      </div>
      <?php }?>
    </div>
  </div>
  <div class="clearfix"></div>
 </div>
<div class="posts">
  </div>
</div>
```

Source Code for twitter data page Controller:

```
<?php
class TwitterDatasController extends AppController {
public function index() {
$this->paginate = array('limit' => 10,'order' => array('TwitterData.id' => 'desc'));
$data = $this->paginate('TwitterData');
$this->set(compact('data'));
}
public function search() {
$customQuery = array();
 if(isset($this->request->query['name'])){
$a = $this->request->query['name'];
array_push($customQuery, array('TwitterData.text_status LIKE' => "%$a%"));
 }
        $this->paginate = array('limit' =>10);
        $data = $this->paginate('TwitterData',$customQuery);
        //$data = $this->paginate('Content');
         $this->set(compact('data'));
}
}
```

Source Code for twitter data page Model:

```
<?php
class Twitter_data extends AppModel{
                                var $name = 'Twitter_data';
                                var $useTable ='Twitter_data';
                               }
?>
Source Code for twitter data page View:
<div class="col-md-9 total-news">
<div class="cricket"><h3>Tweet News </h3></div>
    <div class="videos">
                       <?php foreach($data as $tweet){;?>
        <div class="video-grid" style="margin-left:4.5em;">
             <div style="">
                 <img style="float:left;height: 69px;width: 71px;border: 2px none !important;border-</pre>
radius: 35px;margin-top: 1em;" src="<?php echo $tweet['TwitterData']['profile picture'];?>"/>
</div>
             <div class="video-name" style="float: left; margin-left: 8px; margin-top: 19px; font-</pre>
size:12px !important">
<img style="float:right;height:69px;width:71px;border:2px none!important;;"src="<?php echo</pre>
$tweet['TwitterData']['text_status_image'];?>"/>
```

<?php echo \$tweet['TwitterData']['text_status'];?>

```
<?php echo $this->html->link('Details', array('controller' => 'Details', 'action' =>
'index',$tweet['TwitterData']['id']),array('style'=>'text-decoration: none;'));?>
                 <h5><b><a href="<?phpecho$tweet['TwitterData']['user_profile_url'];?>"
style="text-decoration:none;">-- <?php echo $tweet['TwitterData']['name'];?></a> </b></h5>
</div>
             <div class="clearfix"></div>
        </div>
        <?php }?>
                 <?php
 echo $this->Paginator->first(__('<<<', true), array('id' => 'something'));
 echo $this->Paginator->prev('«', array('tag' => 'li', 'escape' => false), '<a href="#">&laquo;</a>',
array('class' => 'prev disabled', 'tag' => 'li', 'escape' => false));
 echo $this->Paginator->numbers(array('separator' => ", 'tag' => 'li', 'currentLink' => true, 'currentClass'
=> 'active', 'currentTag' => 'a'));
 echo $this->Paginator->next('»', array('tag' => 'li', 'escape' => false), '<a href="#">&raquo;</a>',
array('class' => 'prev disabled', 'tag' => 'li', 'escape' => false));
 echo $this->Paginator->last(__('>>>>', true), array('id' => 'something1'));
?>
</ul
    </div>
</div>
</div>
```

Source Code of CSS:

```
@font-face {
  font-family: 'bebasregular';
  src: url('../fonts/BEBAS___-webfont.eot');
  src: url('../fonts/BEBAS___-webfont.eot?#iefix') format('embedded-opentype'),
    url('../fonts/BEBAS____-webfont.woff') format('woff'),
    url('../fonts/BEBAS___-webfont.ttf') format('truetype'),
     url('../fonts/BEBAS___-webfont.svg#bebasregular') format('svg');
  font-weight: normal;
  font-style: normal;
}
body{
        padding:0;
        margin:0;
        font-family: Arial, Helvetica, sans-serif;
        background:url('../images/body-bg.jpg') no-repeat 0px 0px;
        background-size: 100% 100%;
}
body a{
  transition:0.5s all;
        -webkit-transition:0.5s all;
        -moz-transition:0.5s all;
```

```
-o-transition:0.5s all;
        -ms-transition:0.5s all;
}
input[type="button"],input[type="submit"]{
       transition:0.5s all;
        -webkit-transition:0.5s all;
        -moz-transition:0.5s all;
        -o-transition:0.5s all;
        -ms-transition:0.5s all;
}
h1,h2,h3,h4,h5,h6{
        margin: 0;\\
}
p{
        margin:0;
}
etc.....
```

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