

**The Great Mind Challenge 11**  
Nurturing Great Minds



**INDIAN  
WILDLIFE**

**Software Requirement Specification**



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## 1. INTRODUCTION

### 1.1 Methodology

#### Rational Unified Process:

The Rational Unified Process brings together the elements from all of the generic process models, supports iteration and illustrates good practice in specification and design.

The RUP is normally described from three perspectives:

- A **dynamic** perspective that shows the phases of the model over time
- A **static** perspective that shows the process activities that are enacted
- A **Practice** perspective that suggests good practices to be used during the process

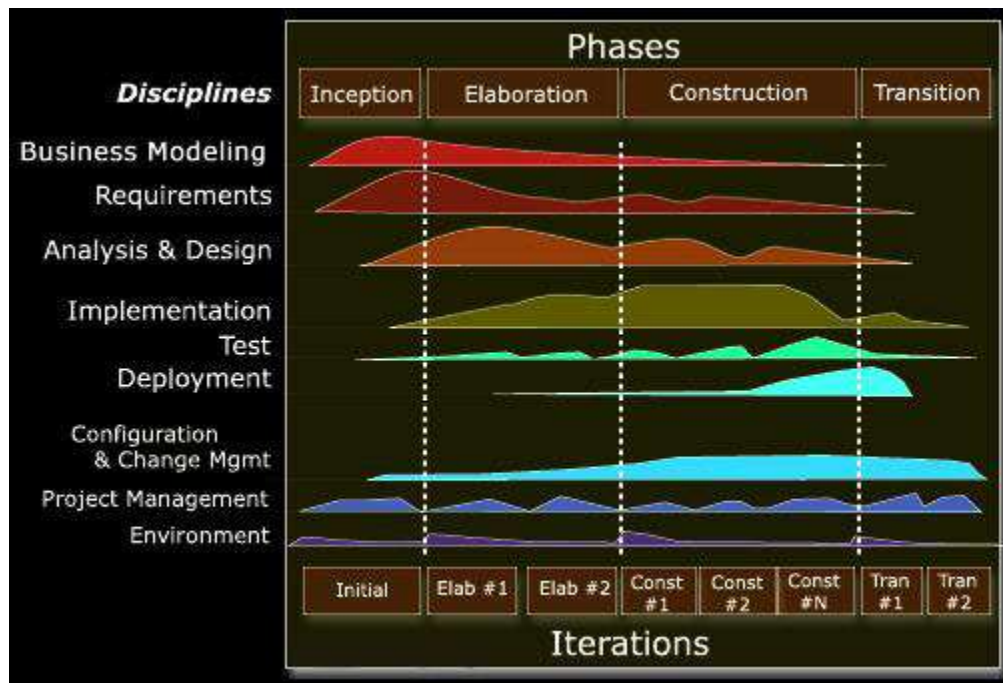


Figure 1.1 Phases of RUP

#### Phases of RUP:

The different phases in RUP are

##### Inception:

The goal of the inception phase is to establish a business case for the system. Identifying all external entities that will interact with the system and defining these interactions. This information is used to assess the contribution of system to business.

**Elaboration:**

The goals of the elaboration phase are to develop an understanding of the problem domain, establish an architectural framework, develop project plan and identify key project risks.

**Construction:**

This phase is concerned with system design, programming and testing. Parts of the system are developed in parallel and integrated during this phase.

**Transition:**

This is the final phase of RUP and is concerned with moving the system from the development community to the user community and making it work in real environment.

## 1.2 Purpose

Indian Wildlife is an amusing cum knowledge website for promoting awareness and conservation of India's wildlife. This will serve as a platform for wildlife conservation activists and ecologists to share their knowledge and recent trends in this field. It will incubate research and participation on subjects like animal communications, habitats wildlife health issues, effects of global warming and various disasters.

## 1.3 Scope

1. There are four basic users in INDIAN WILDLIFE administrator, registered users, Organizations and anonymous users.
2. Only administrator, registered users and organizations have their own profile and anonymous users don't have a profile of their own.
3. The anonymous users are allowed only to view posts, comments thread, photos and videos posted. They will not be allowed to post a query or answer them.
4. The registered users will be allowed to post a query and it will be reviewed by the review panel and answers will be posted.
5. Registered users can also post photos, videos or presentations related to wildlife conservation which will be reviewed by the review panelist and posted on the website.
6. A group of review panel will be set up by the administrator, who is in the government organization, on government organizations, or a wildlife conservation list, wildlife enthusiast or ecologists.
7. Administrator will manage the registered users and provide approvals along with dynamic content change in the site.





## 1.4 Definitions, Acronyms and Abbreviations

### **Admin:**

Administrator .He has the authority to add/delete users, grant permission to review panels, registered users

### **MySQL:**

MySQL is a database management system that provides a flexible and efficient database.

### **JSP:**

Java Server Pages. It is used to create dynamic web content.

### **J2EE:**

Java 2 Enterprise Edition is a platform-independent, Java-centric environment from Sun for developing, building and deploying Web-based enterprise applications online.

### **UML:**

Unified Modeling Language is a standard language for writing software blueprints. The UML may be used to visualize, specify, construct and document.

### **XML:**

Extensible Markup Language is a text based format that left developers describe, deliver and exchange structured data between a range of applications to client for display and manipulation.

### **HTTP:**

Hyper Text Transfer Protocol. It's a service protocol.





## 1.5 Tools used

### **JAVA:**

Java is a computer programming language. Java was created by a team led by James Gosling for Sun Microsystems and released in the year 1995. Java was mainly designed mainly for the following key principles: simple, familiar, reliability, platform independent, security, robust, portable, high performance, neutral, interpreted, threaded, dynamic in nature. It is similar to C and C++. The java programming language can be run on any machine that has JVM installed into it.

### **J2EE:**

Java 2 Platform Enterprise Edition. J2EE is a platform-independent, Java-centric environment from Sun for developing, building and deploying Web-based enterprise applications online. The J2EE platform consists of a set of services, APIs, and protocols that provide the functionality for developing multitier, Web-based applications. Some of the key features and services of J2EE: At the client tier, J2EE supports pure HTML, as well as Java applets or applications.

It relies on Java Server Pages and servlet code to create HTML or other formatted data for the client. Enterprise JavaBeans (EJBs) provide another layer where the platform's logic is stored. An EJB server provides functions such as threading, concurrency, security and memory management. These services are transparent to the author. Java Database Connectivity (JDBC), which is the Java equivalent to ODBC, is the standard interface for Java databases. The Java servlet API enhances consistency for developers without requiring a graphical user interface.

### **Apache TOMCAT :**

Apache Tomcat (or simply Tomcat, formerly also Jakarta Tomcat) is an open source web server and servlet container developed by the Apache Software Foundation (ASF). Tomcat implements the Java Servlet and the Java Server Pages (JSP) specifications from Oracle Corporation, and provides a "pure Java" HTTP web server environment for Java code to run. Apache Tomcat includes tools for configuration and management, but can also be configured by editing XML configuration files.

### **Development tool: NETBEANS IDE**

NetBeans refers to both a platform framework for Java desktop applications, and an integrated development environment (IDE) for developing with Java, JavaScript, PHP, Python (no longer supported after NetBeans 7), Groovy, C, C++, Scala, Clojure, and others. The NetBeans IDE 7.0 no longer supports Ruby and Ruby on Rails, but a third party has begun work on a separate plug-in.

The NetBeans IDE is written in Java and can run on Windows, Mac OS, Linux, Solaris and other platforms supporting a compatible JVM. A pre-existing JVM or a JDK is not required.

The NetBeans platform allows applications to be developed from a set of modular software components called modules. Applications based on the NetBeans platform (including the NetBeans IDE) can be extended by third party developers.





### Database platform- MySQL

MySQL is a open source Relational Database Management System. MySQL is very fast reliable and flexible Database Management System. It provides a very high performance and it is multi threaded and multi user Relational Database management system.

MySQL is one of the most popular relational database Management System on the web. The MySQL Database has become the world's most popular open source Database, because it is free and available on almost all the platforms. The MySQL can run on Unix , window, and Mac OS. MySQL is used for the internet applications as it provides good speed and is very secure. MySQL was developed to manage large volumes of data at very high speed to overcome the problems of existing solutions. MySQL can be used for verity of applications but it is mostly used for the web applications on the internet.

### Design tool-Rational Rose

Rational Rose was founded by Paul Levy and Mike Devlin in 1981 to provide tools to expand the use of modern software engineering practices particular explicit modular architecture and iterative development. Rational was bought by IBM in the year 2003. Rational Rose is an object oriented Unified Modeling Language software design tool intended for visual modeling and component construction of enterprise level software applications. Rational Rose documents the diagram as it is being constructed and then generates code in the designer's choice of C++, Visual Basic, Java, Oracle8, cobra or Data Definition Language.

## 1.6 References

- Wikipedia-wikipedia.com
- IBM TGMC Sample Synopsis
- IBM-www.ibm.com
- Webopedia.com
- Answers.com
- About.com
- Software Engineering eight edition-Ian Somerville
- Object Oriented Modeling and Design with UML-Michael Blaha, James Rumbaugh

## 1.7 Technologies to be used

- **MySQL**: Relational database management system
- **Apache Tomcat**: Application Server community Edition
- **Netbeans IDE** : Integrated Development Environment
- Design tool-**Rational ROSE**
- OS- **Windows Os**







## 1.8 Overview

Existing Systems:

- Registration for users
- Discussion forums
- Adopting endangered species
- Donating

Drawbacks:

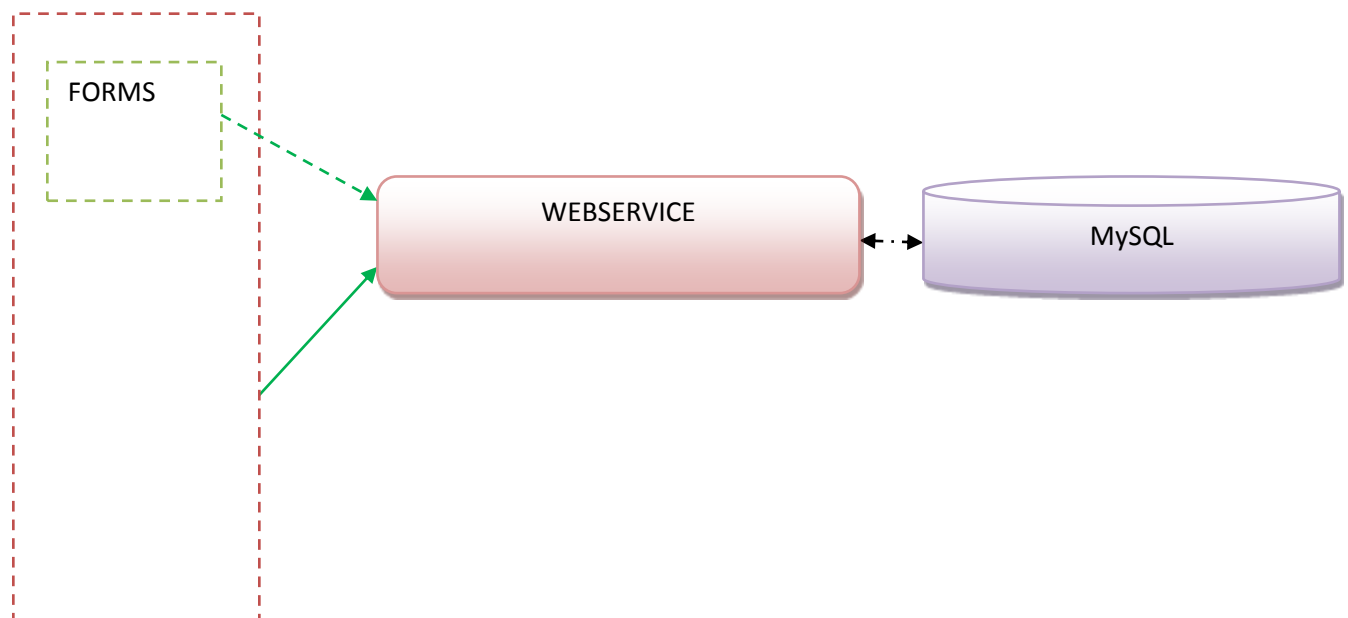
User cannot interact directly with the higher officials and share their ideas.

Proposed system:

Creating awareness by means of multimedia and also conducting events regarding that. Also, job careers were let known, wildlife activists were encouraged to form groups and interact with the common and official people directly. All the details about Indian Wildlife were provided with the statistics for the users to make them understand the immediate need to preserve wildlife. Also photography contests are conducted under the jury of professional wildlife photographers.

## 2. OVERALL DESCRIPTION

### 2.1 Product Perspective





## Level-0 Data Flow Diagram



## 2.2 Software Interface

### Client on Internet:

Web browser, operating system (any)

### Client on intranet:

Web browser, Operating system (any)

### Web Server:

Apache Tomcat, operating system (any)

### Data Base Server:

MySQL, operating system (any)

### Development End:

Netbeans IDE(J@EE, Java, JavaBean, Servlets, HTML, XML, AJAX, DB2, OS (Windows),  
Apache Tomcat (WebServer)

## 2.3 Hardware Interface

### Minimum Requirements:

Client Side			
	Processor	RAM	Disk Space
Internet Explorer	Intel Core i3 – 2310 processor	128 MB	100MB

Server Side			
	Processor	RAM	Disk Space
MySQL 5.5.20	Intel Core i3 – 2310M	256 MB	500MB





	processor		
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### Recommended Requirements:

Client Side			
	Processor	RAM	Disk Space
Firefox/ Safari /Chrome	Intel Core i3 – 2310M processor	256 MB	100MB

Server Side			
	Processor	RAM	Disk Space
MySQL 5.5.20	Intel Core i3 – 2310 processor	512 MB	500MB

## 2.4 Communication Interface

- Client (customer) on internet will be using HTTP/HTTPS protocol.
- Client (system user) on internet will be using HTTP/HTTPS protocol.

## 2.5 Constrains

- GUI is only in English.
- Login and passwords is used for the identification of users.
- Only registered users will be authorized to use the services.
- Limited to HTTP/HTTPS.
- This system is working for single server.



## 2.6 ER Diagram

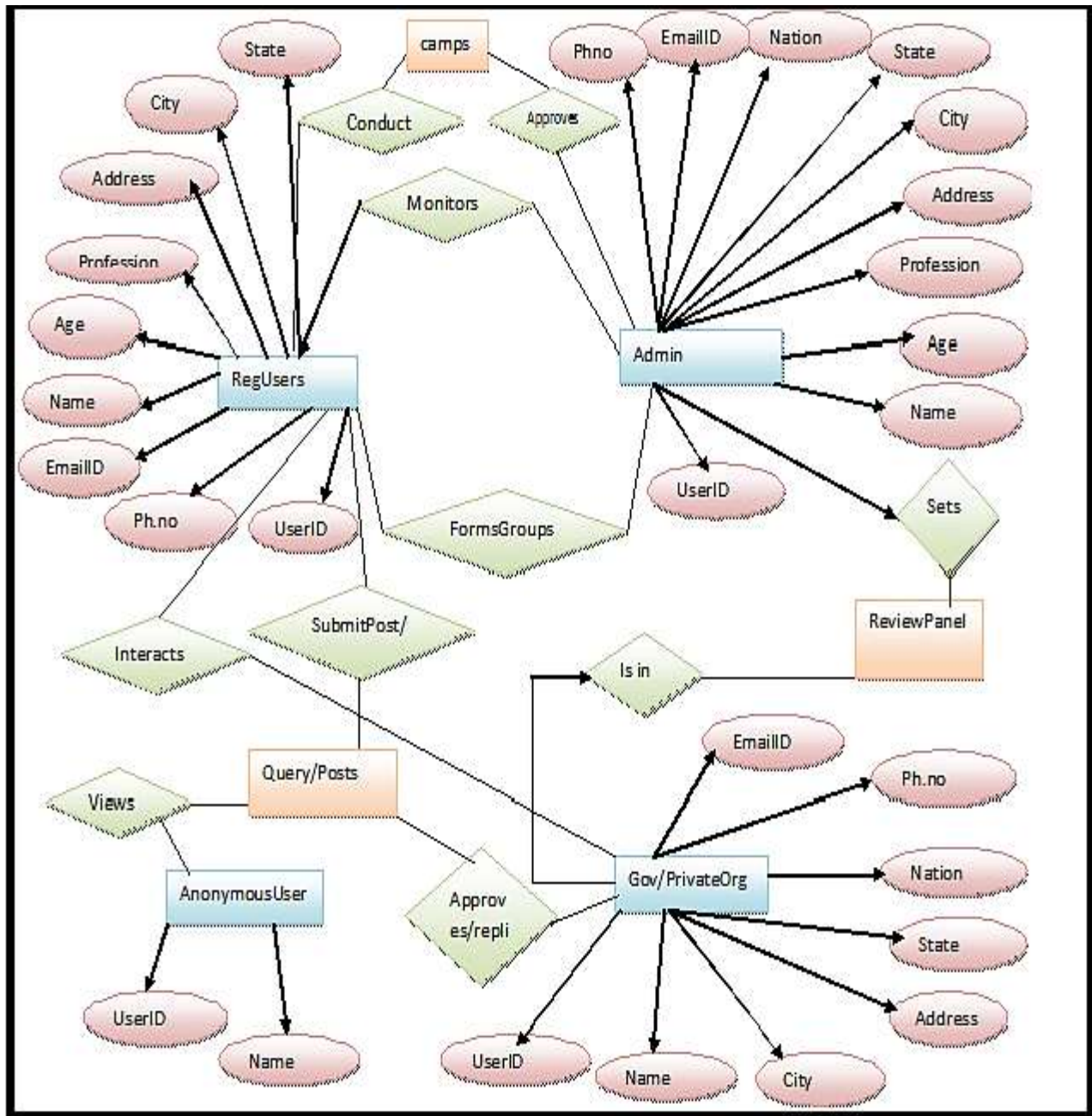
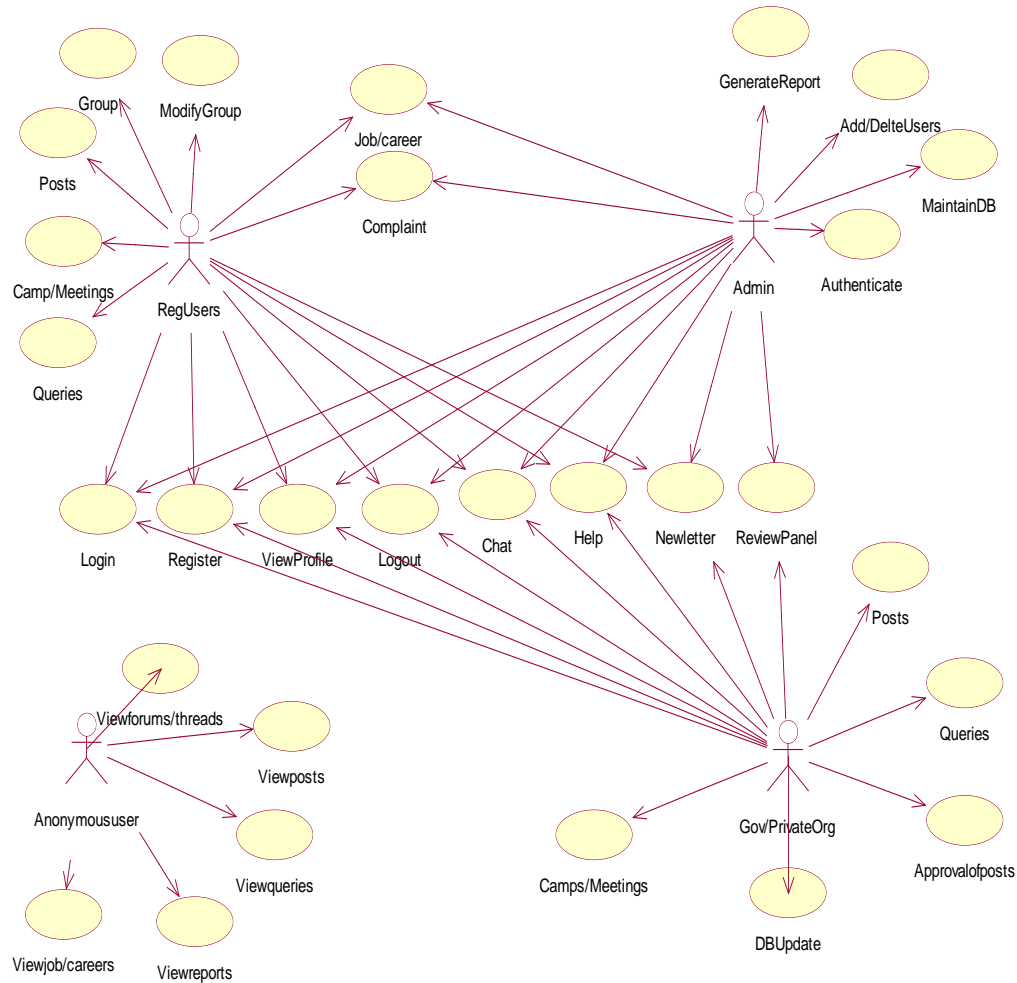


Figure 2.1 ER Diagram

## 2.7 Use Case Model survey



**Figure 2.2 Use Case Model survey**

### Anonymous Users:

The anonymous users can view posts, forums and threads. They have the privilege of viewing photos, videos, Presentations related to Wildlife conservations posted by the registered users or the wildlife enthusiasts.

### Admin:

Admin approves the requests for adding or deleting members. Admin approves the request for forming groups, conducting meetings, camps etc. He also generates reports and maintains the system database. He is responsible for setting the review panel.

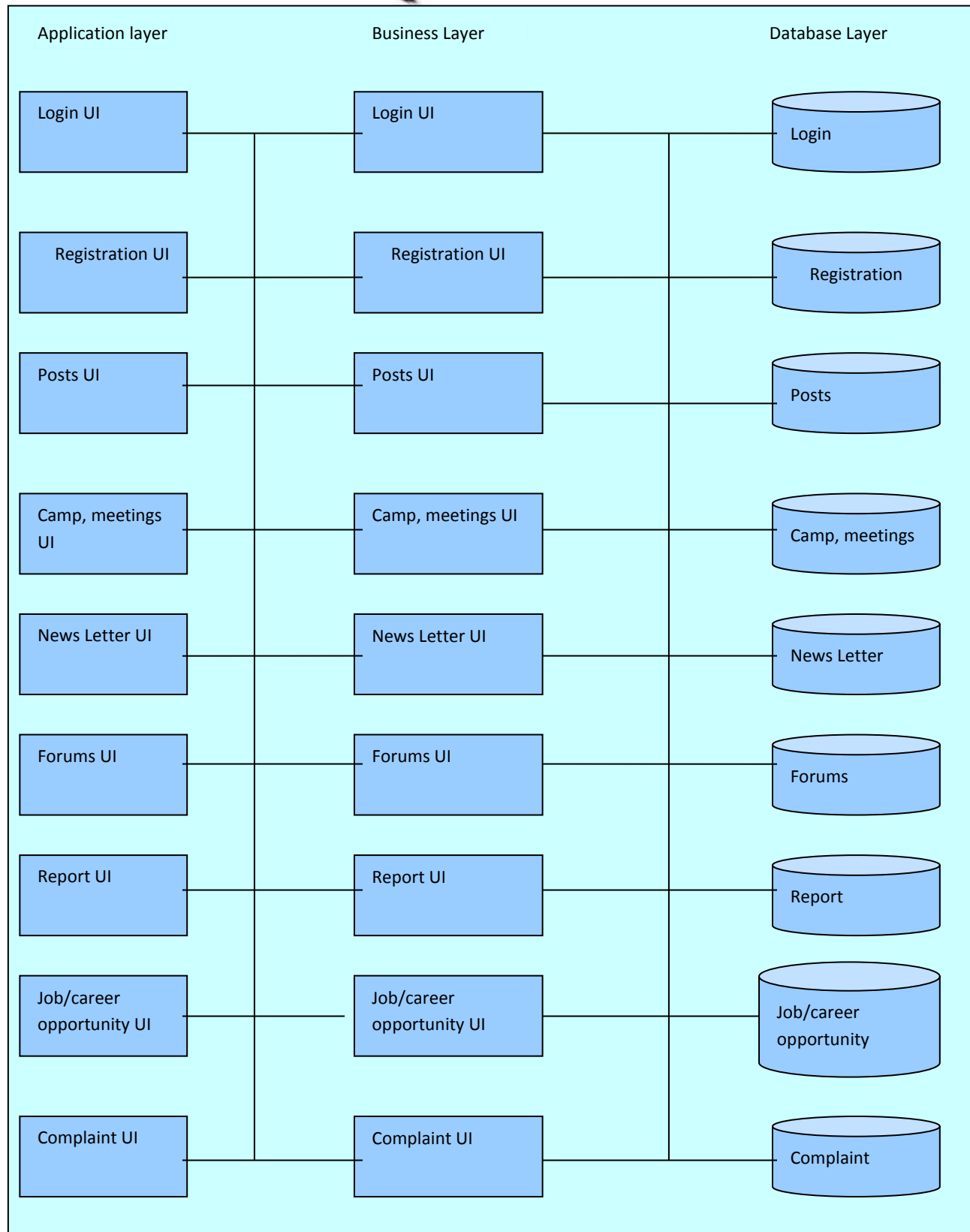
**Registered Users:**

The group users have the privilege of forming group, adding or deleting members from group .They also have the privilege of conducting camps, meetings and they maintain the details about the camp, meetings etc. They post photos, videos, presentations related to wildlife conservations. They start a thread, post queries and comment in forums.

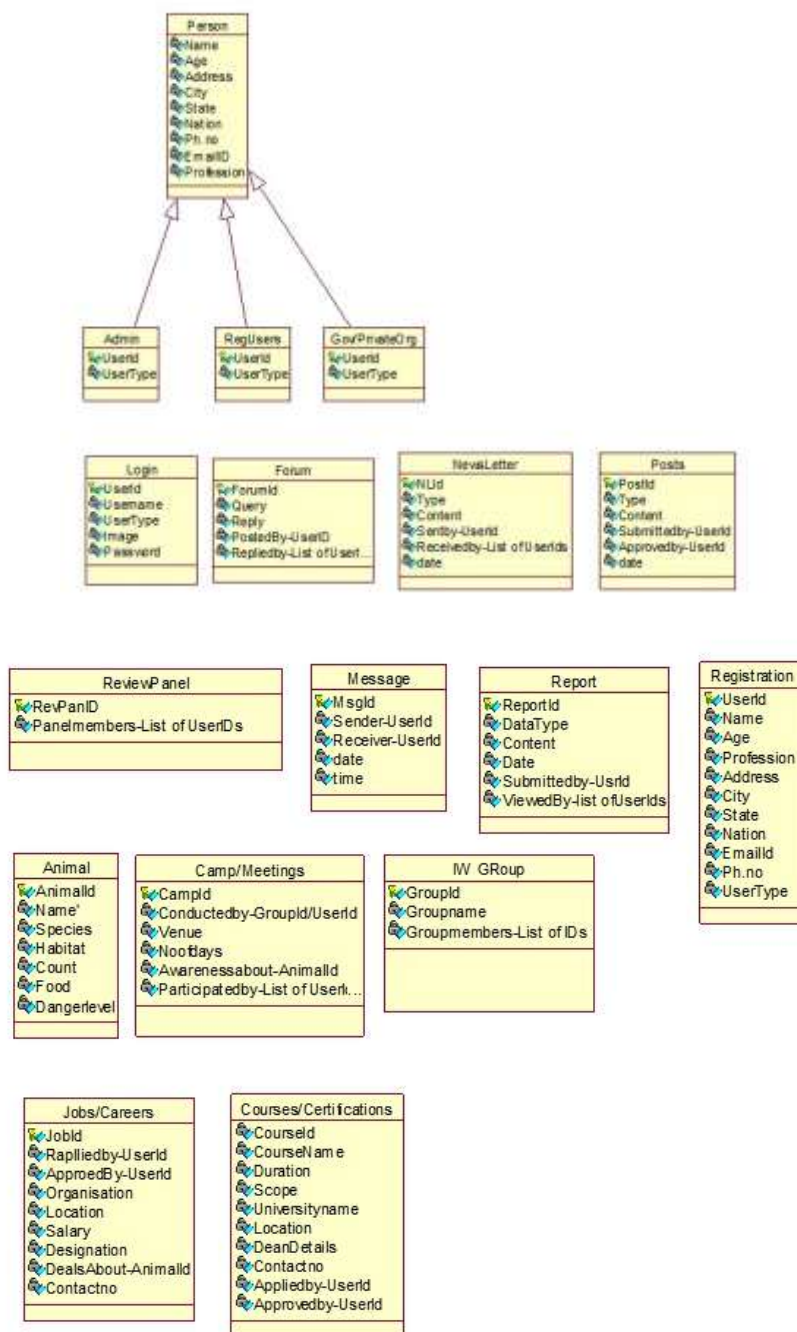
**Gov. Private Organizations:**

This user has the privilege of replying to the queries, approving the posts posted by registered users, update the database, post reports and they can also post photos, videos, presentations related to wildlife. A review panel is set up by the admin which consists of members under this category.

**2.8 Architecture Diagram**



## 2.9 Database design







## 2.10 Gantt chart

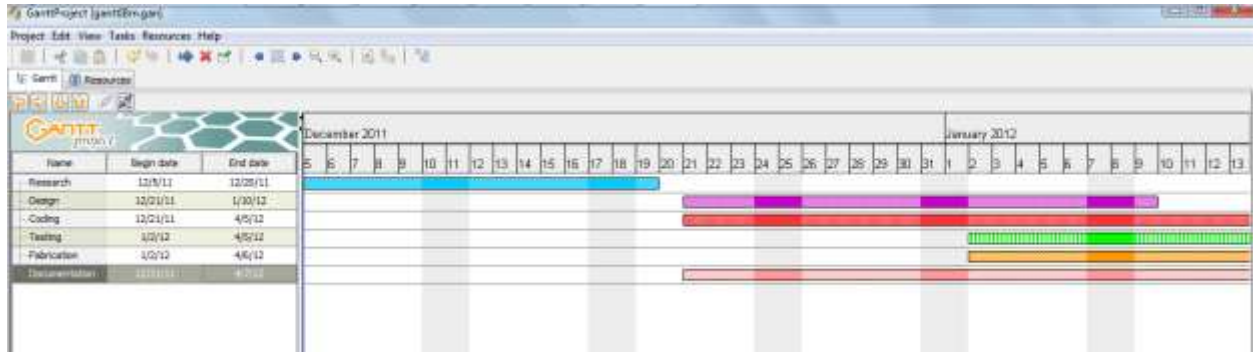


Figure 2.3 Gantt chart for Dec 5 to Jan 13



Figure 2.4 Gantt chat for Jan 13-Feb 21

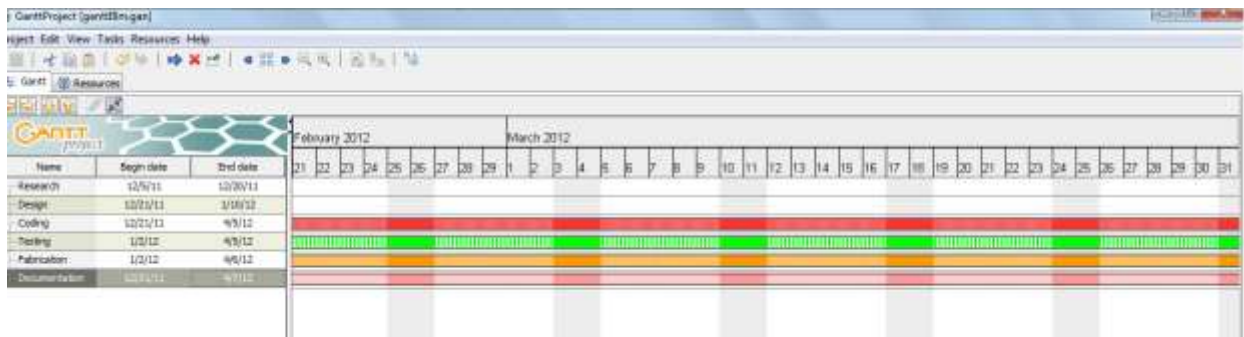


Figure 2.5 Gantt chat for Feb 22 to Mar 31





Figure 2.5 Gantt chat for March 13 to April 7

### 3. Specific requirements

#### 3. 1 Use case reports

##### 3.1.1 Anonymous Users Use Case Reports:

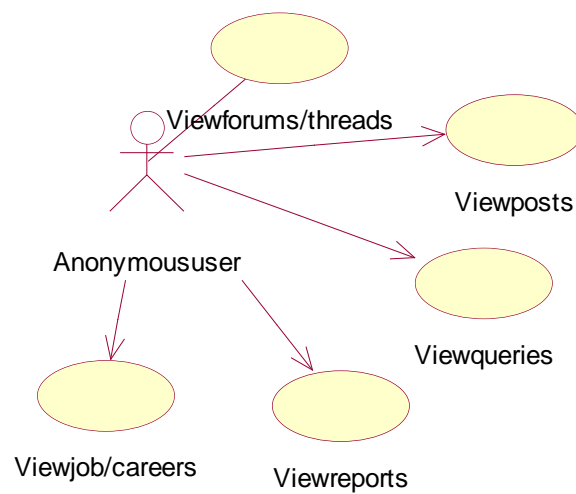


Figure 3.1 Use case for Anonymous User

USECASE	DESCRIPTION
View forums	Anonymous users can view forums, posts, threads, comments
View Posts	They can view photos videos, presentations related to wildlife conservations
Post Query	They can post a query
View Job Opportunity	They can view job/career opportunity
View Statistical data	They can view reports, statistical data

### 3.1.2 Government/Private Organizations/ Wildlife enthusiast /Ecologists /Veterinarians:

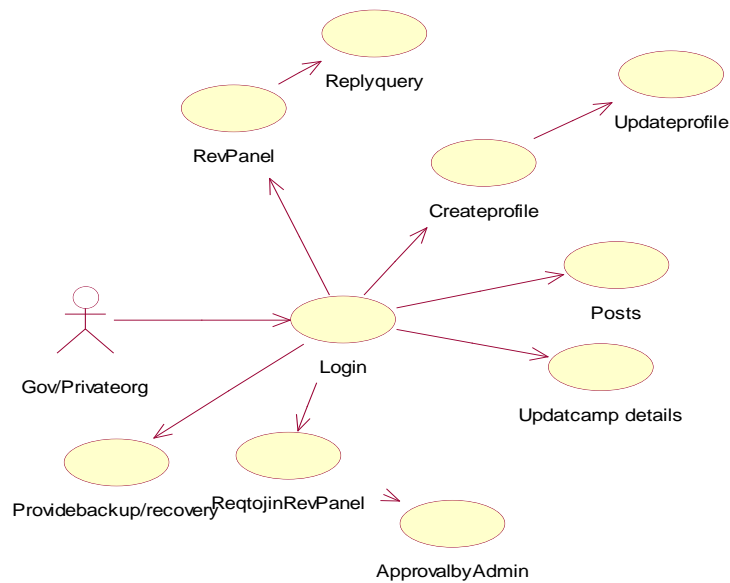


Figure 3.2 Use Case for Officials



USECASE	DESCRIPTION
Login	Each user has their own Id with which they sign in
RevPanelLogin	With this the user replies query and approves the posts suggested by registered users
Request to join RevPanel	This request is submitted to the Admin who approves it and sets a review panel
Post Reports	They can post reports and statistical data
Post Photos, videos,Presentaions	They can post photos, videos, news, presentations about wildlife conservations
Update News	They update details about the camps/meetings to be held
ProvideBackup	They can also provide backup recovery data which help organizing the database
Create Profile	They can create their own profile containing their details
Update profile	They can update their details

### 3.1.3 Registered Users:

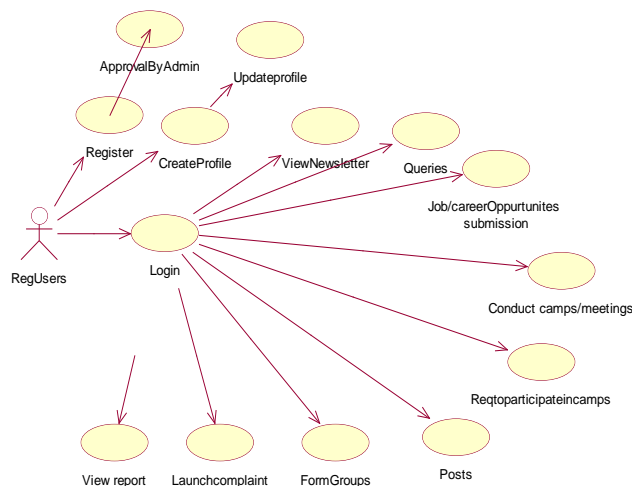


Figure 3.3 Use Case for registered users





USE CASE	DESCRIPTION
Register	The user registers his details
Approval by Admin	The request by the user to register is approved by the Admin
Login	The user can sign in with his own ID
Create profile	The user can create profile for him with his legal details
Update Profile	The user can update his profile
Conduct Camp	The user can conduct camp/meetings/conferences
Form Group	The user can form groups
Post Photos,videos,presentaions	The user can post any photo, video, presentaions related to wildlife conservation
Request for participation	The user can request to take part in meetings, camps or conferences
Post query	The user can post a query related to wildlife conservation
Start Forum	The user can start a wildlife forum
View Reports	The user can view reports or statistical data
Request for Job oppurtunity	The user can submit their resume requesting for job/career opportunities

### 3.1.4 Administrator:

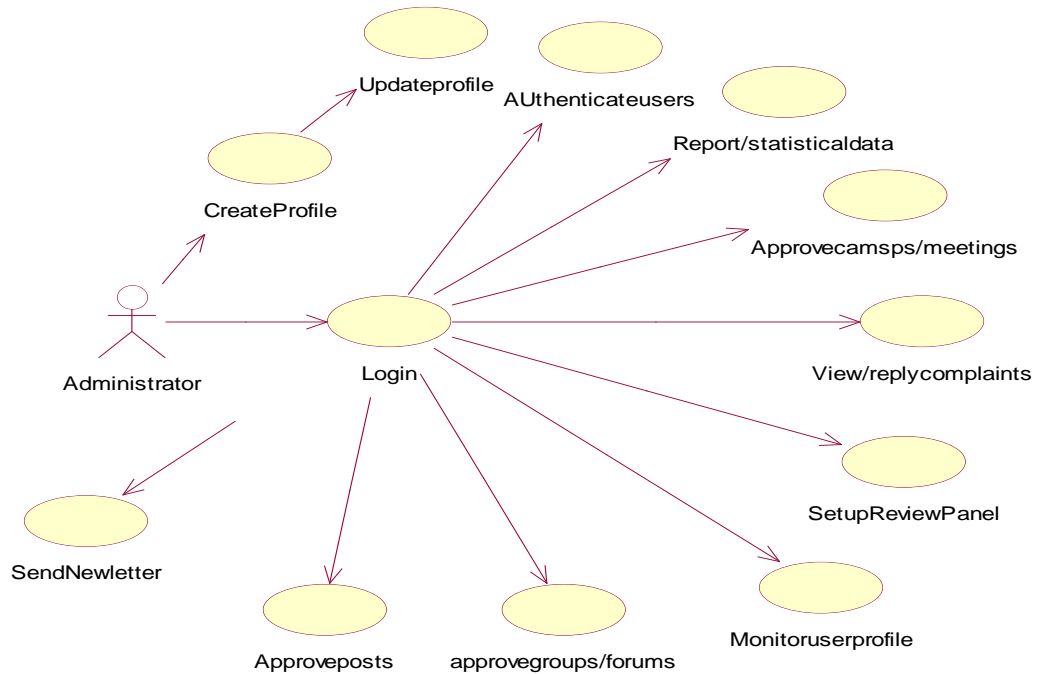


Figure 3.4 Use Case for Administrator

USECASE	DESCRIPTION
Login	The Admin logs in with his own ID
Create Profile	The Admin can create a profile containing his professional details
Update Profile	The Admin can update his profile
Report/statistical data	The Admin can generate report /statistical data so that others can view it in the website
Authenticate	The Admin can add or delete users
View/reply Complaint	The Admin can view or reply to a complaint



Secure Registered users	The Admin can secure sign in of the registered users
Send Newsletter	The Admin can send the newsletter to registered users on request
Approve groups/forums	The Admin can approve the formation of group among registered users and starting of forums
Setup Review Panel	The Admin can set up a review panel who are in charge of approving the contents to be posted in the website
Manage Users	The Admin can manage all kind of users
Job/career	The Admin can update news about job/career opportunities and also approve the request submitted for it
Approve Camps/meetings	The Admin can approve the organization of caroms/meetings/conferences.

### 3.2 Activity Diagram

#### 3.2.1 User Registration Activity:

Initially the user is made to fill in mandatory fields filled in registration form. Once the user clicks submit, the username is verified. If the username is already present, then the user is taken back, so that the user can change the username. If the username is not present in then it checks for password and remaining mandatory fields. If any of the mandatory field is left empty or filled incorrect, then the user is informed to enter correct values. Once all these verifications are succeeded , then the registration is done.

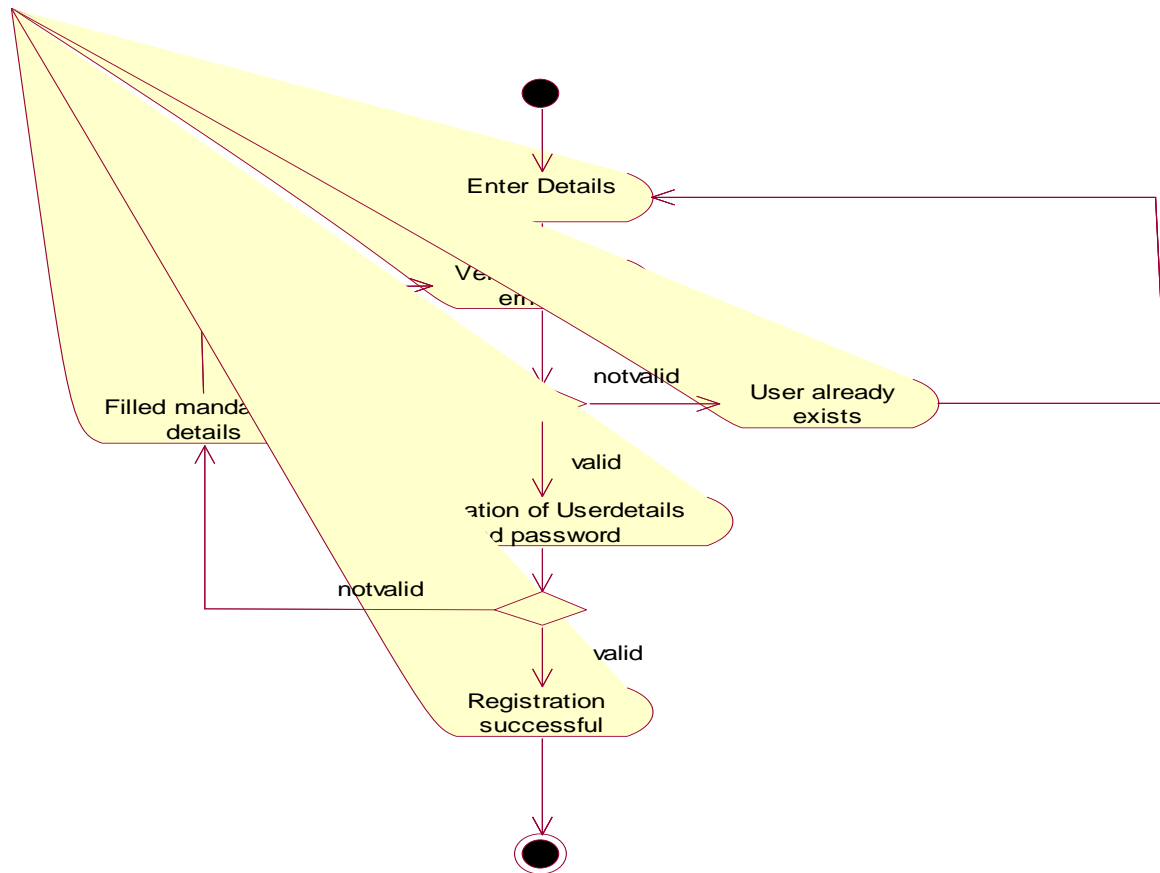


Figure 3.5 Activity diagram for user registration





### 3.2.2 Activity diagram for User Login:

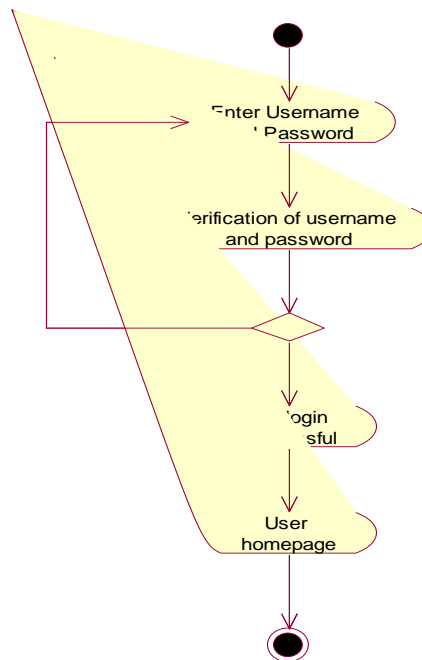


Figure 3.6 Activity diagram for login

### 3.2.3 Activity Diagram for Submission of Posts:

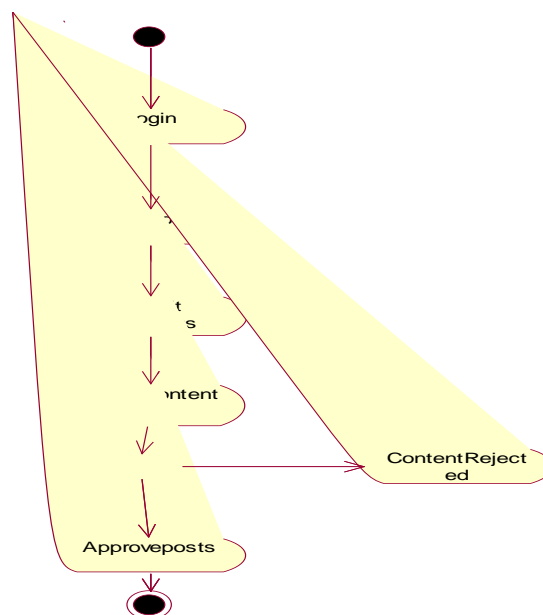


Figure 3.7 Activity diagram for post submission





This system allows users to view posts also allows users to submit their own posts which include photos, videos, presentations related to wildlife conservation.

### 3.2.4 Activity Diagram for Conducting camps/Posts:

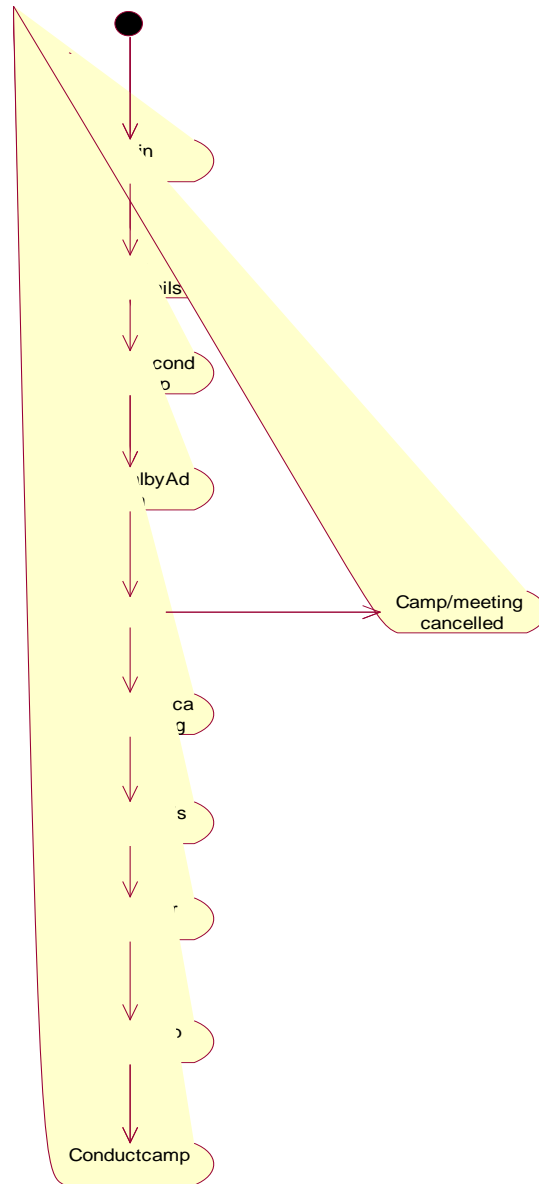


Figure 3.8 Activity diagram for conducting camps/posts

### 3.2.5 Activity Diagram for Forming Groups:

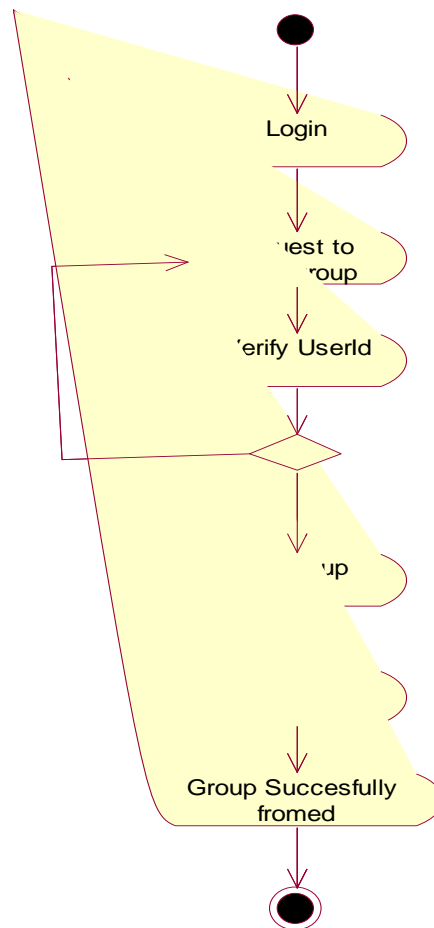


Figure 3.9 Activity diagram for forming groups

### 3.2.6 Activity diagram for Newsletter:

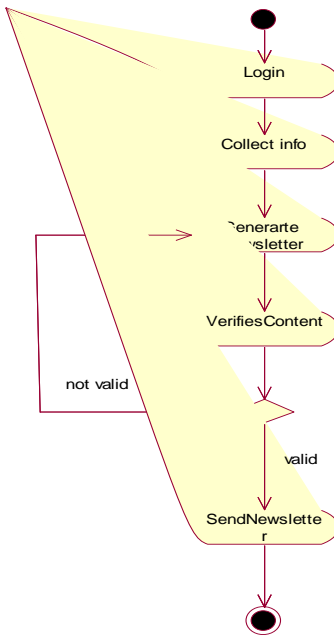


Figure 3.10 Activity diagram for sending newsletter

### 3.2.7 Activity Diagram for discussion forum:

This system helps in discussion forums as follows. It will help search a topic and post a new thread or reply to already present thread. This also enables us to create a new thread.

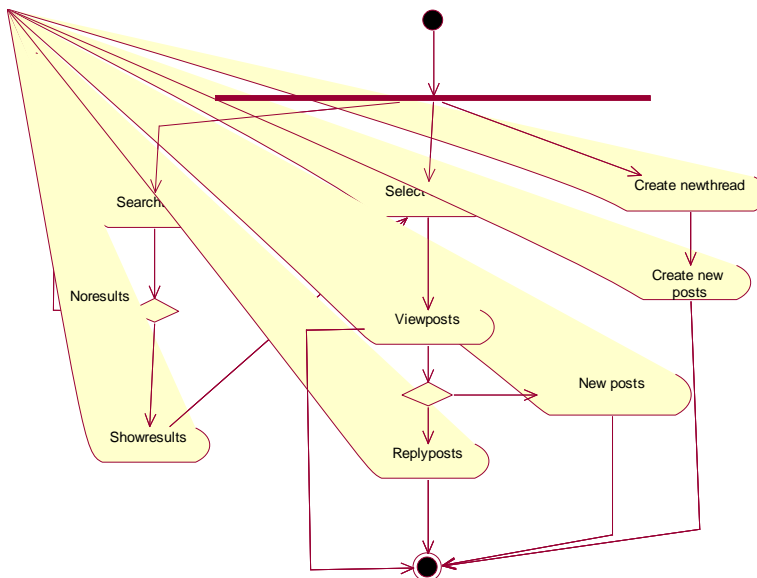
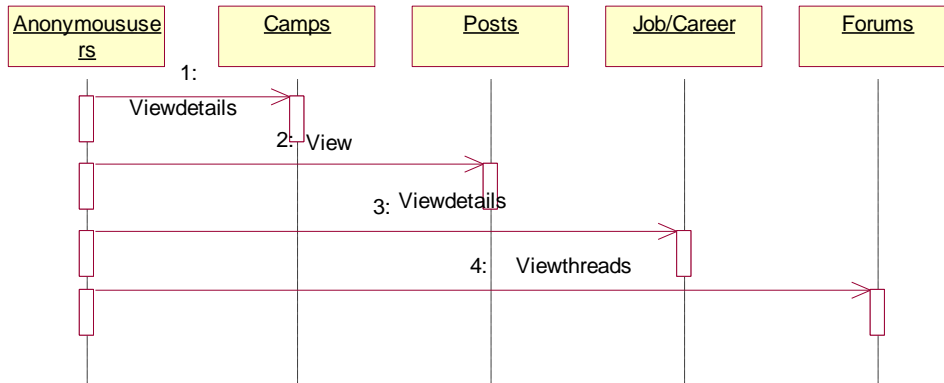


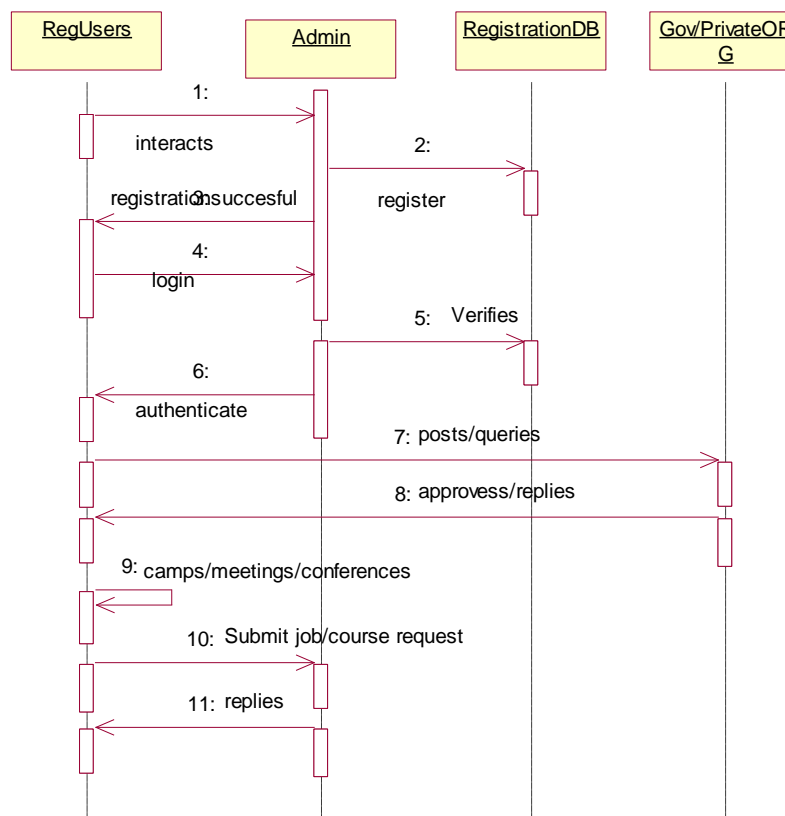
Figure 3.11 Activity diagram for discussion forum

### 3.3 Sequence Diagrams

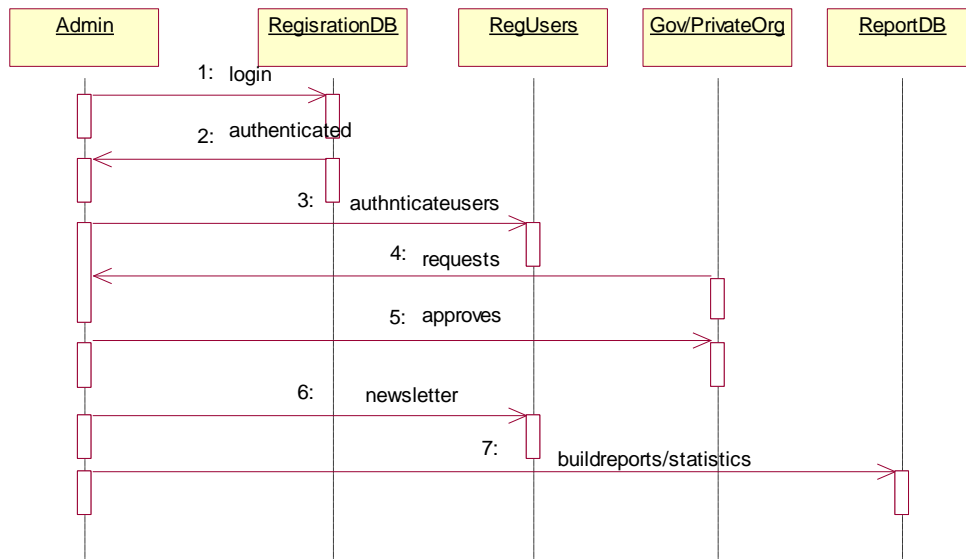
#### 3.3.1 Sequence diagram for Anonymous Users:



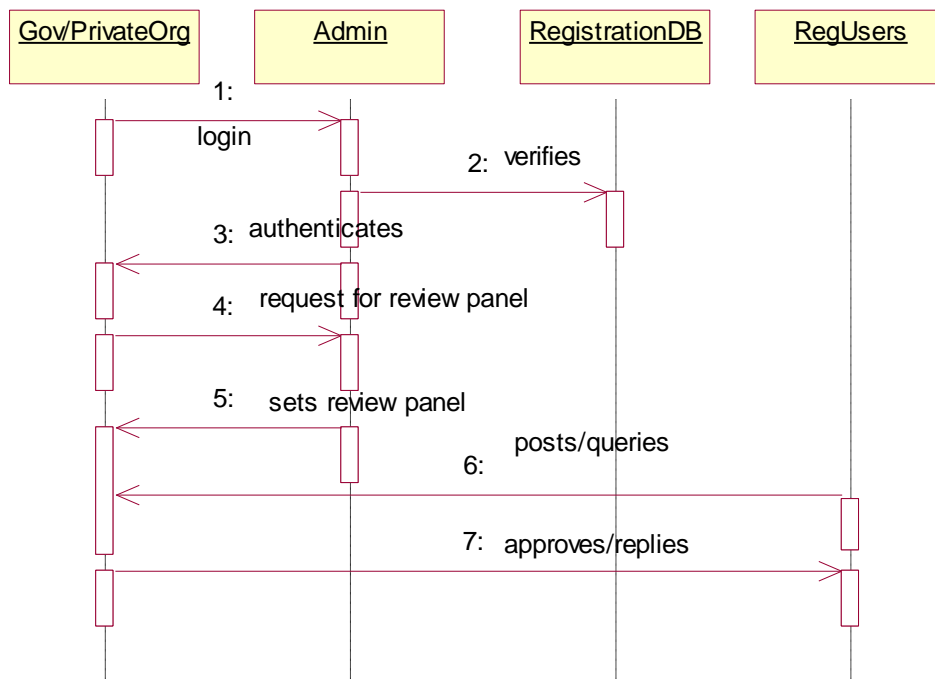
#### 3.3.2 Sequence diagram for Registered Users:



### 3.3.3 Sequence diagram for Admin:



### 3.3.4 Sequence diagram for Gov. / Private Org:





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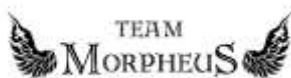
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*We convey our sincere thanks to the department, college and also to all the software and technologies, online tutorials to help us come up with this project successfully.*

