Silicon Institute of Technology | An Autonomous Institute

AJP Project Report

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World CLOCK

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1.Abstract

Our project is World Clock and Alarm manager. It facilitates user from any part of the world with their local time of their respective time zone and also they can use alarm facility according to their time zone. We have used HTML, CSS, JavaScript, Servlets, JSP, Oracle Database and Apache Tomcat server to make this website. The project proceeds through a sequence of well-designed forms provided with validations to ensure consistency, reliability and most importantly correctness of information fed into the database.

2.Introducion

We all know that every part of the world has their own time zone. Imagine if we could see every possible clock of the world at one place. Isn't it would be wonderful. Well that is what our project is aiming at. The project is collecting current local date and time of the user. The goal is to display all the time zone around the world at one place. In this project, we have built many digital clock with 12 hour count time. The clock runs from 00:00:00 to 11:59:59 and then back to 00:00:00. Our display has six digits, two-two digits for hours and minutes respectively and two for seconds. Apart from time it also displays the date in DD/MM/YYYY format. Our project is also capable of managing alarm. We have a sign up as well as sign in page where user can view their profile in the website. And also Home page, about us page and contact us helps in reaching us.

3. System Analysis

3.1 Objective

The World Clock Project aims first and foremost to capture as many clock faces as possible from around the world. It is also capable of setting alarm for the users around the globe according to their time zone.

3.2 Scope

In this project the current local time of all the places around the globe are displayed without any delay.

3.3 Functionalities of the System

The central concept of the application is to allow the user to get access to all the time zone of the world at one place and also user can view their current local time and schedule alarm based on its own time zone. The information of the new user given in sign up page is stored in the database and can be used anytime whenever they want to login.

3.4 Tools and Environment

- Processor: Intel(R) Core(TM) i5-10300H CPU @ 2.50GHz 2.50 GHz
- Installed RAM: 8.00 GB (7.84 GB usable)
- Product ID: 00356-24575-76312-AAOEM
- System type: 64-bit operating system, x64-based processor
- Edition: Windows 11 Home Single Language
- Text Editor: Eclipse IDE
- Server: Tomcat v9.0 Server
- Database: Oracle Database 10g Express Edition

4. Technical Specification

4.1 HTML

HTML stands for Hypertext Markup Language which describes the structure of a web pages. HTML consists of a series of elements. HTML elements tell the browser how to display the content. HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.

4.2 CSS

CSS stands for Cascading Style Sheets. CSS describes how HTML elements are to be displayed on screen, paper, or in other media.CSS saves a lot of work. It can control the layout of multiple web pages all at once.

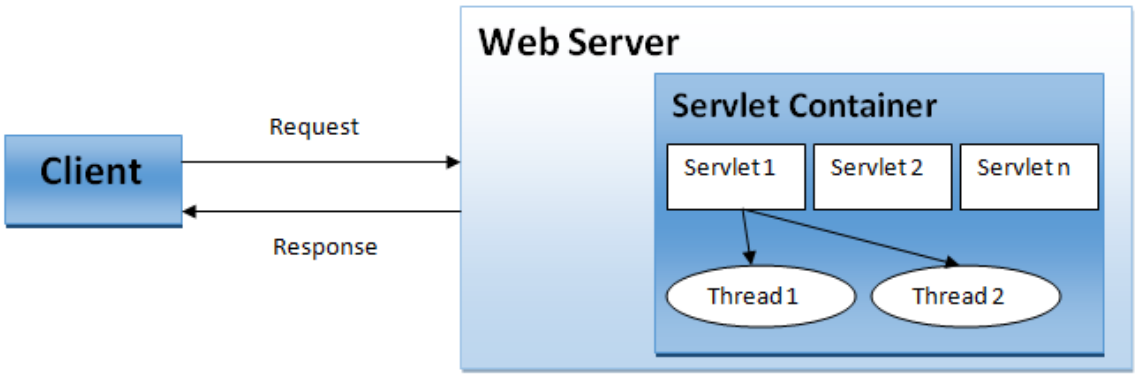
4.3 JavaScript

JavaScript is a lightweight, cross-platform, and interpreted compiled programming language which is also known as the scripting language for webpages. It is well-known for the development of web pages. JavaScript can be used for Client-side developments as well as Server-side developments. JavaScript contains a standard library of objects, like Array, Date, and Math, and a core set of language elements like operators, control structures, and statements.

4.4 Servlet

A servlet is a Java programming language class that is used to extend the capabilities of servers that host applications accessed by means of a request-response programming model. Servlet have access to the entire family of java APIs. The javax.servlet and javax.servlet.http packages provides interfaces and classes for writing servlets.

Servlet Architecture is can be depicted from the image itself as provided below as follows:



4.5 JSP

Java Server Pages (JSP) technology is a server-side technology. It gives web and java developers a mechanism for creating web application that supports dynamic content.

A JSP page is a text document that contains two types of text:

- Static data, which can be expressed in any text-based format (such as HTML, SVG, WML and XML)
- JSP elements, which construct dynamic content.

4.6 Oracle

The purpose of a database is to store and retrieve related information. An Oracle database is a collection of data treated as a unit. Oracle Database is the first database designed for enterprise grid computing, the most flexible and cost-effective way to manage information and applications.

4.7 Apache Tomcat

Apache Tomcat is a popular open-source web server and Servlet container for Java code. It is also known as Tomcat server, proves to be a popular choice for web developers building and maintaining

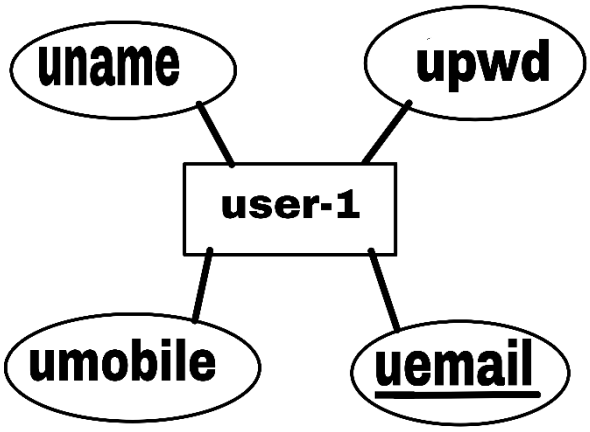
dynamic websites and applications based on the Java software platform. It's reportedly called the 'Tomcat' web server because the founder saw it as an animal that could take care of and fend for itself.

5. System Analysis

5.1 ERD

Query:

create table user1(uname varchar(50), upwd varchar(20),uemail varchar(50) primary key,umobile varchar(20));



5.2. Table Structure

Query:

create table user1(uname varchar(50),upwd varchar(20),uemail varchar(50) primary key,umobile varchar(20));

user1 Table:

Table	Column	Data Type	Length	Precision	Scale	Primary Key	Nullable	Default	Comment
USER1	UNAME	Varchar2	50	-	-	-	✓	-	-
	UPWD	Varchar2	20	-	-	-	✓	-	-
	UEMAIL	Varchar2	50	-	-	1	-	-	-
	UMOBILE	Varchar2	20	-	-	-	✓	-	-

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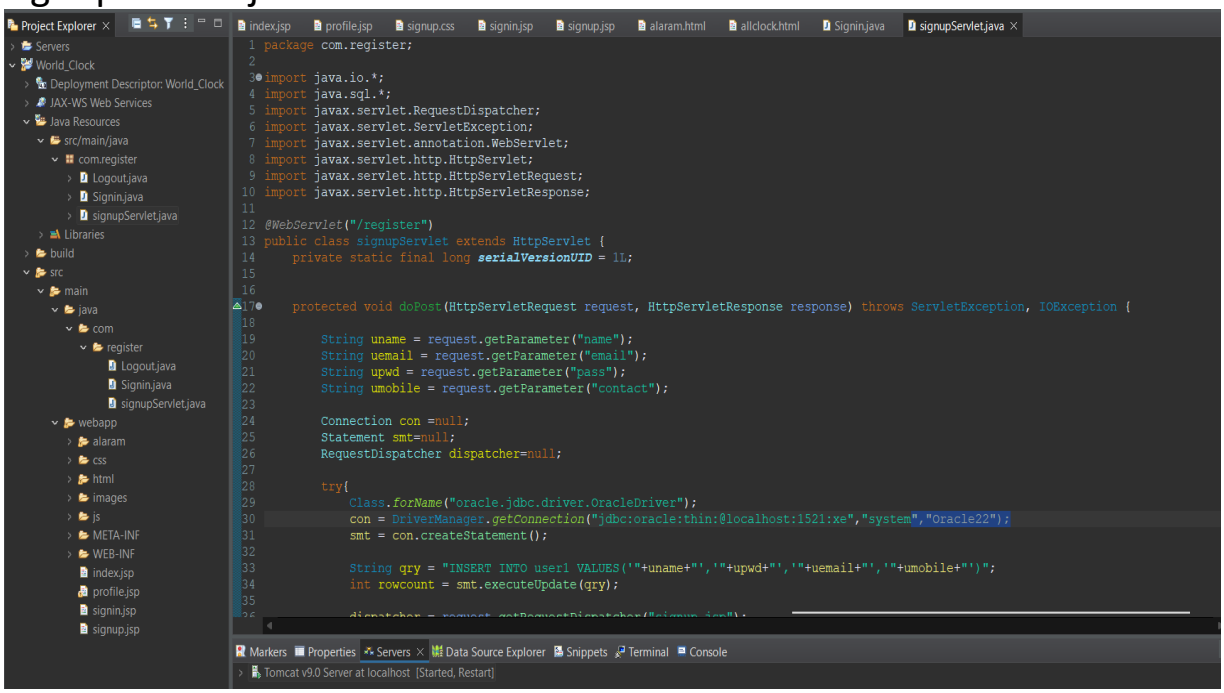
Some inputted data inside user1 table:

Query: select * from user1;

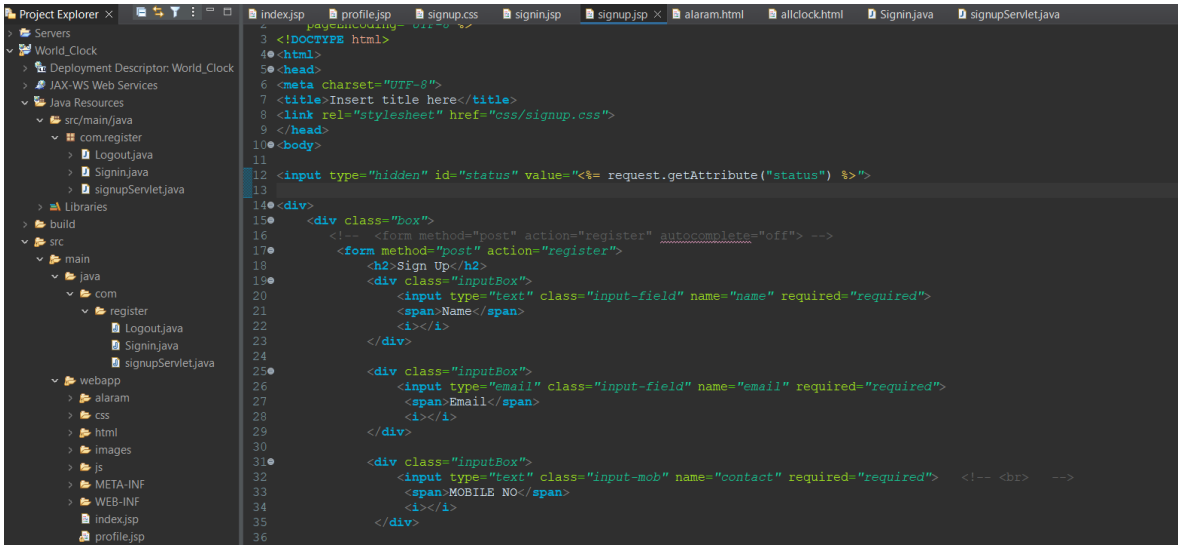
UNAME	UPWD	UEMAIL	UMOBILE
Biku	1234	biku@gmail.com	8974376321
Dibya Ranjan Rath	1234	xyz@gmail.com	9675635323
Hello	1111	hello@hotmail.com	4789246276

6. Sample Coding

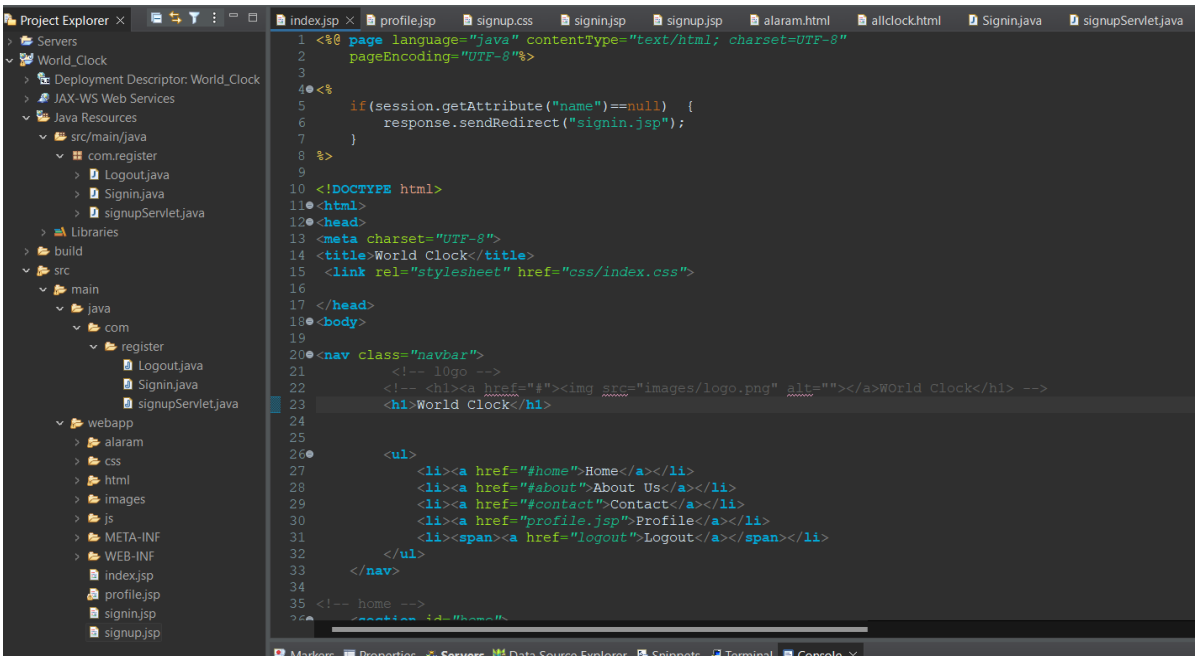
signupServlet.java



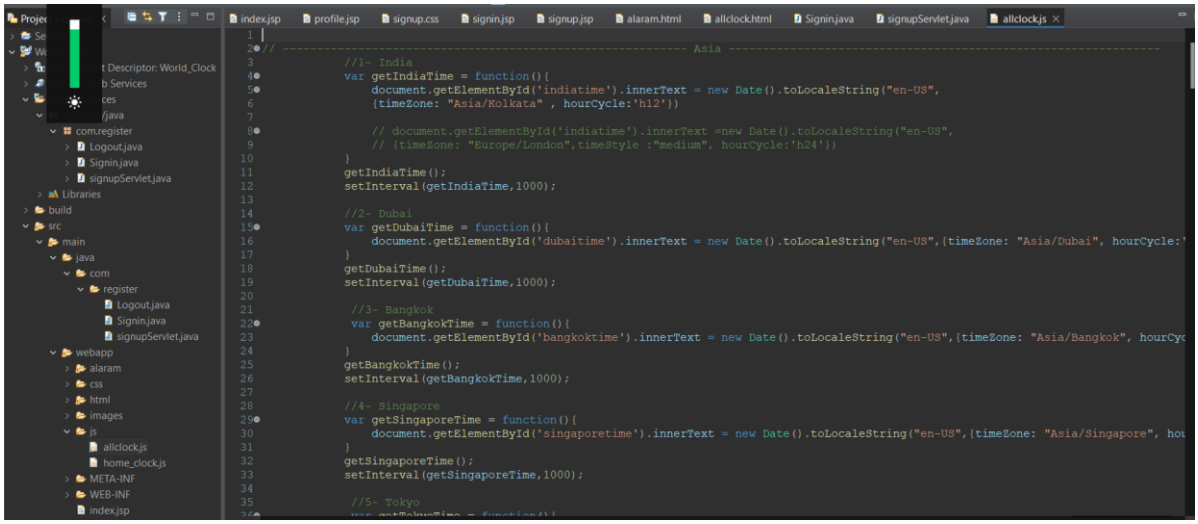
signup.jsp



index.jsp

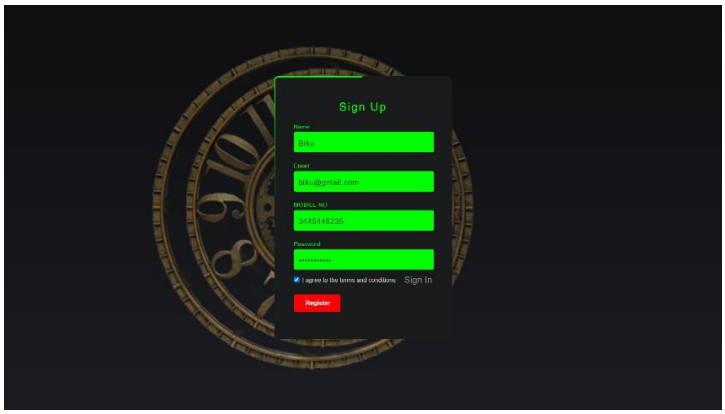


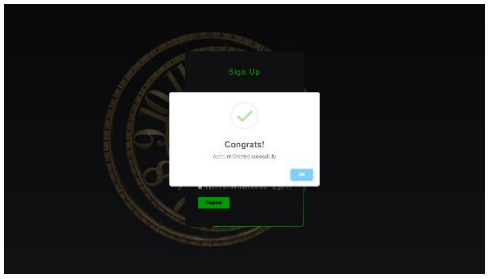
allclock.js



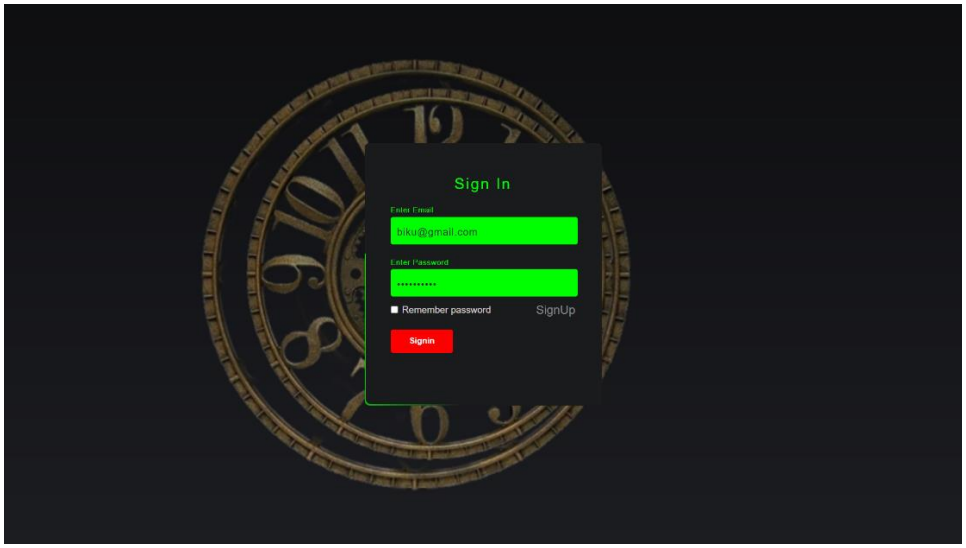
7. Implementation Screen Shot

signup page (i.e., Registration page)

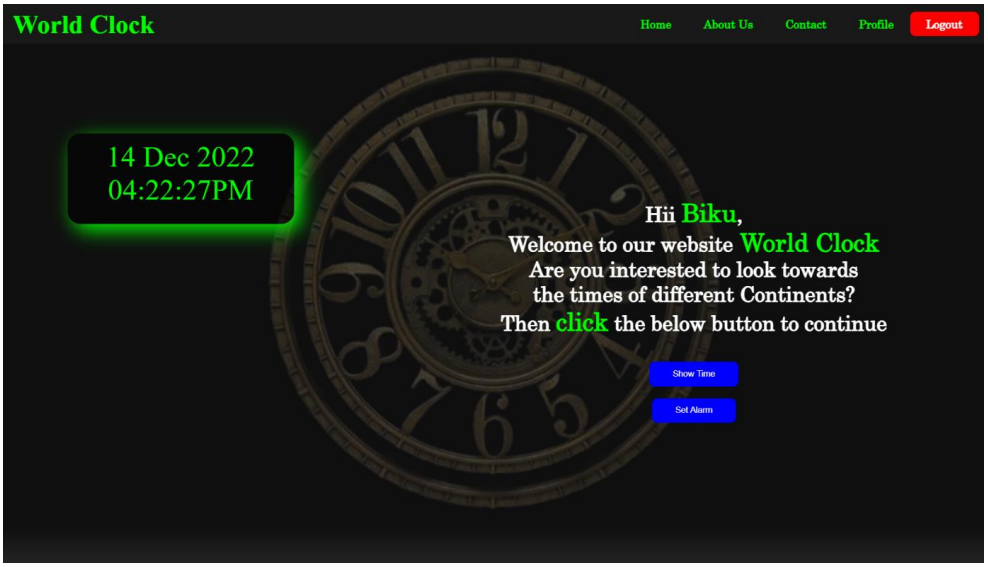




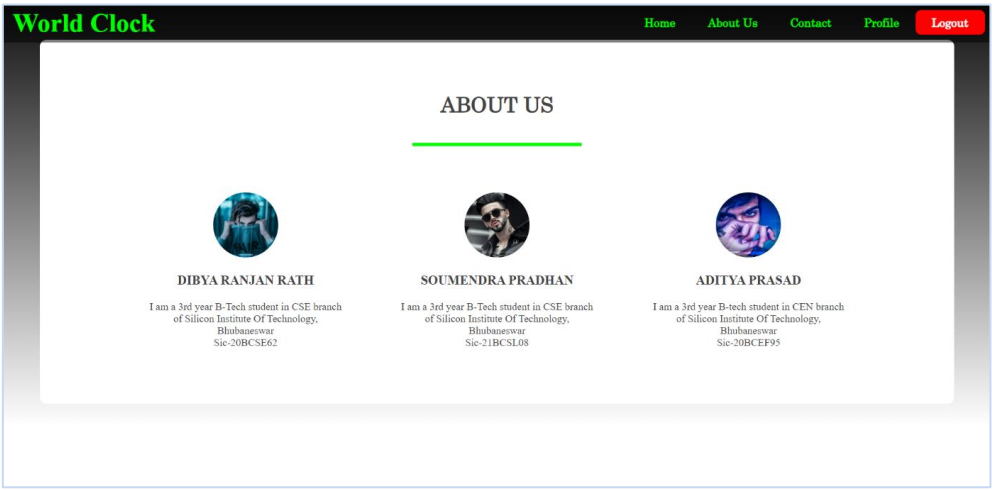
sign in page (i.e., Login page)



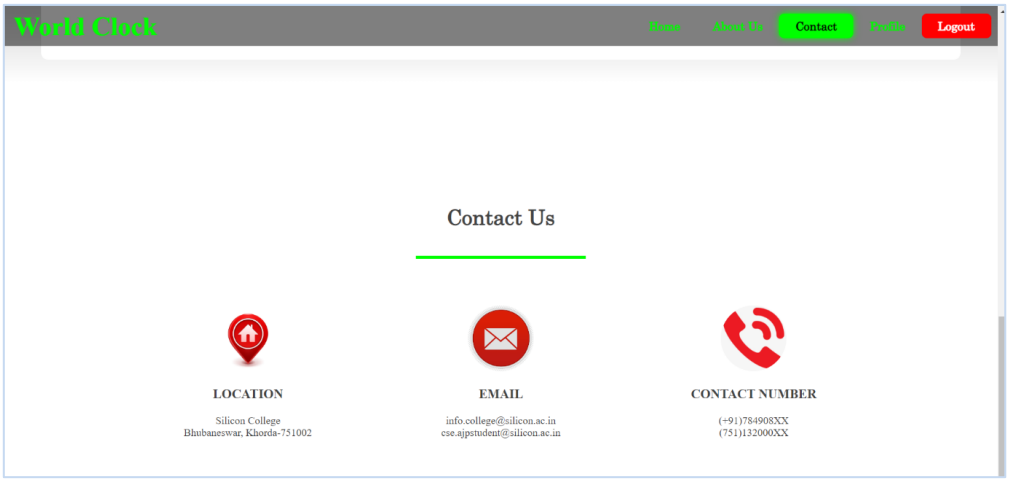
home page



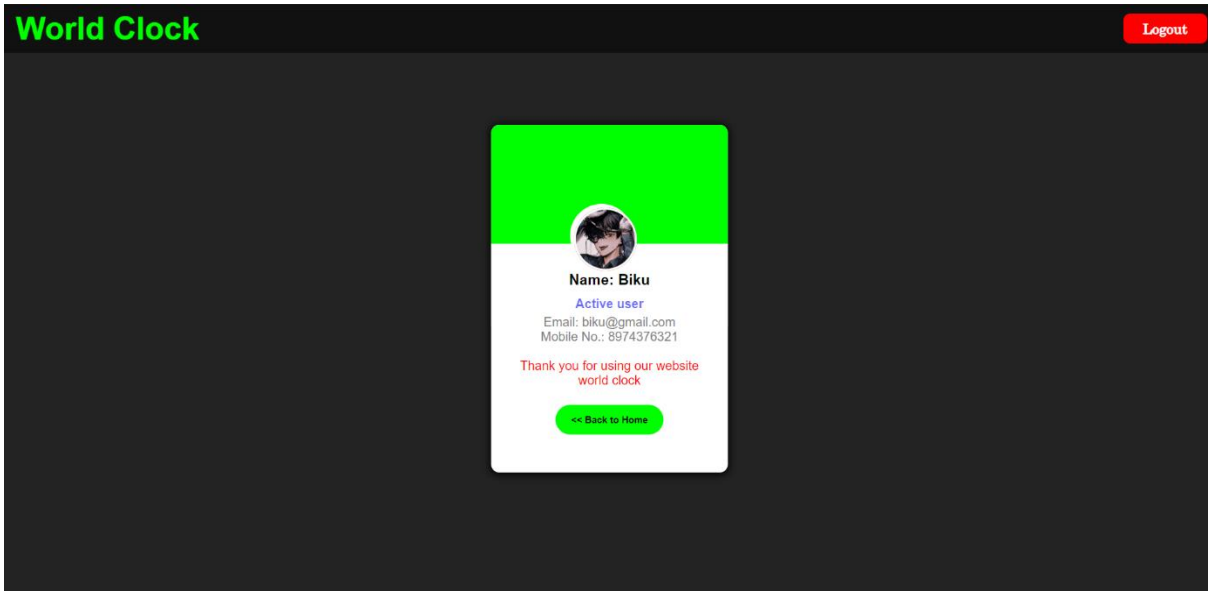
About Us page



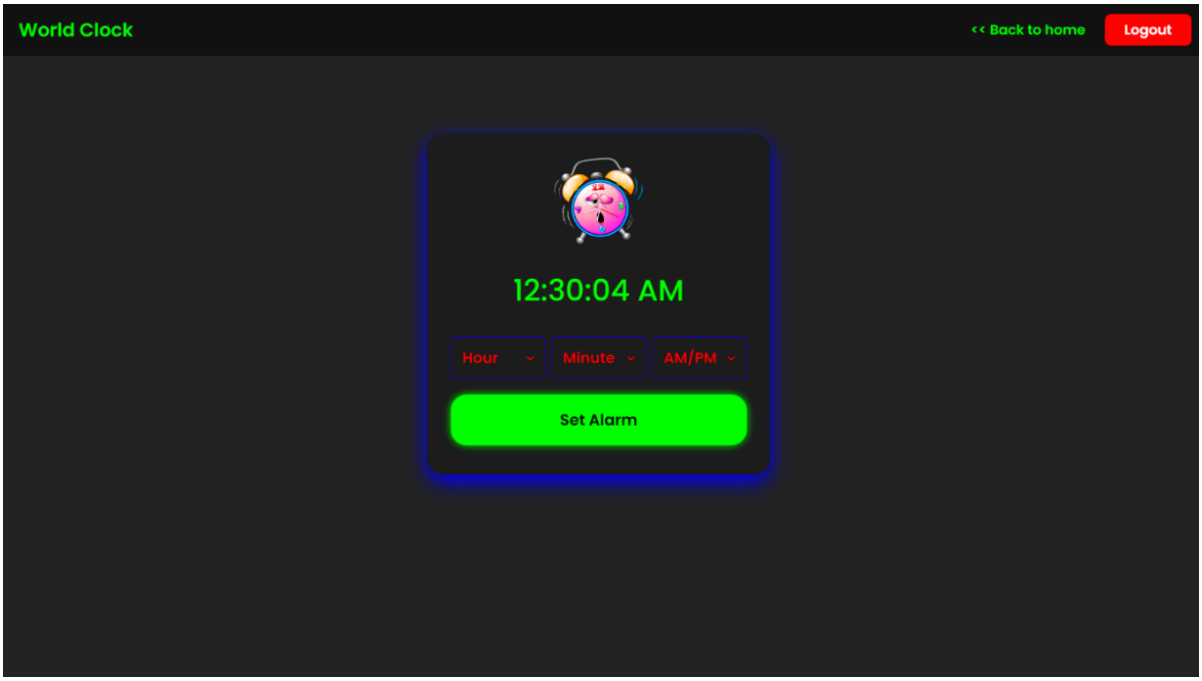
Contact Us page



Profile page



Alarm page



All continents time zone page

8. Conclusion

We have completed this project successfully using Html, CSS, JavaScript, Servlet, JSP and database and have successfully built an alarm manager and a digital clock with 12-hour count time format for every time zone of continent with current local time.