

CS-243

Report

World TimeZone

Submitted by

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Abstract

The project "World TimeZone" gives information regarding different time-zones of the map as well as current time of different countries can be found out. For perfection with time zones, a quiz is also been provided which makes sure of the knowledge you have. Time is shown in both analog and digital form. One of the pros of this application is that time is displayed on the same page as map and the clicked position is also marked for reference.

Chapter 1

Introduction

1.1 Platform

Visual Studio 2013

1.2 Language Used

Visual Basic

1.3 Objective

World Clock - should have 2 parts on screen, whenever a part on world map is clicked, corresponding current time is displayed in analog clock.

1.4 Description of Problem

A map is shown on the left hand side of the screen. The map is divided into timezones. When a position is clicked, we get the coordinates of the map, and calculate the timezone it falls into. Then according to that time zone, we calculate the duration gap between the time zone and local time. Hence, we get the time of the selected place. We show the time in analog clock on the right side of the screen.

1.5 Major Functionalities

- Display Time on click on the map
- Display Time of each country
- Quiz to excel in knowledge of time zones

1.6 Target User Group

- School Students learning about time zones
- Travellers
- All those people who are interested in knowing about the current time in different countries.

Chapter 2

Modules

2.1 User Interface Design

User Interface of the project is neatly designed so as to let the user understand how the application works. Analog clock is shown on the same screen as map and it updates after every click on map or change in country name in combo-box. A Quiz pops up on clicking start quiz. A help button is included in the right hand corner of the screen. Two buttons are included which allow easy access to local time and GMT time.

2.2 Map

2.2.1 Display Map

Map is displayed in a panel.

2.2.2 Divide Map into timezones

Map is divided into rectangles each with different time zones. On mouse click, coordinates of the point are retrieved. The rectangle or the time zone it falls into is found out.

2.2.3 Pass variables to display time

According to the time zone, two variables are passed to another form, one is hour and the other is minutes which are corresponding to their time lag from GMT. Every 15 degree change in longitude corresponds to change in half an hour time duration. Hence timezone can be calculated.

2.3 Combo-box for showing countries

2.3.1 List countries in combo-box

A list of 145 countries is displayed in the combo-box. It allows search of a country or selection from the list. If a country not in list is searched for, then a warning appears to choose a country from the combo-box.

2.3.2 Find timezone of each country

Each country has two parameters hour and minute. Hence the timezone can be found out.

2.3.3 Pass variables to display time

Once the timezone is calculated, we can pass the hour and minute as variables to another form

2.4 Analog Clock

2.5 draw clock

An analog clock is drawn with boundary as an ellipse and 12 points are numbered on the clock. Three hands are drawn with different lengths corresponding to minute, hour and second.

2.6 show current time

Current time is calculate and with that angle that each hand makes is also calculate. Hence the exact position of arrow pointer is also calculated. Hence

time is shown.

2.7 show time corresponding to passed variables

When timezone variables are passed to the form, we calculate the local time of the selected place by adding the duration of time gap between that location and current location. Hence corresponding angles are found out and time is shown.

2.8 Quiz

2.8.1 make questions

There are five questions in the quiz which has either single or multiple choice answers.

2.8.2 check for correct answers

The given answer is checked with correct answer; if that matches, message box appears showing correct answer.

2.9 Help

This section provides user information on how to use the application.

2.10 Integration

All the modules are integrated in a single application and submitted.

2.11 Documentation

Four types of Documentation is presented:

- In-line Documentation

- Technical Documentation
- User Manual
- Assignment Report

Chapter 3

Conclusion

The application solved the problem statement and a few more features were included like selection of country from combo-box and quiz. In future versions of this application we would like to include the following:

- Make the map zoom-able
- Make the quiz more interactive supposedly game type quiz
- Add additional features like showing time at two different places at the same time.

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Group 01

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Individual Contributions

K. Sowmya - 130101028:

1. Logic behind calculating time for different time zones.
2. display time in analog clock.
3. Organizing all the modules together.
4. Report

Kanhaiya Rathi - 130101033:

1. Quiz: questions preparation and writing code
2. Code for calculation of time zone from map
3. Technical Documentation

Sudhanshu - 130101074:

1. Quiz: questions preparation and writing code
2. User manual
3. code for calculation of time zone from combo-box

Sai Krishna - 130101039:

1. User Interface design
2. Code for calculation of timezone from combo-box
3. code for calculation of timezone from map

Bhanu Prakash - 130101076:

1. Help button
2. code for calculating time zone from combo-box
3. Listing of countries in combo-box

Bibliography

- [1] Visual basic Tutorial
<http://www.vbtutor.net/>
- [2] Tutorials Point
<http://www.tutorialspoint.com/listtutorials/visual-basic/1>
- [3] Analog Clock tutorial
https://www.youtube.com/watch?v=XBGm9_5krU