Name of Experiment: My Location	Exp No: MC4

Background: Student should have a basic knowledge of C#.

Summary: Now days, due to advancement in technology people are always concerned about their location in terms of longitude, latitude and altitude. Where they Are? Which places are nearby Him? These are very common question which is answered spontaneously by their Smartphone or Tab with the help of A-GPS (Assisted GPS) technology embedded in mobile phone.

Learning Objective: Student is able to get his location, in terms of longitude, latitude, and altitude along with Current Timestamp.

Target Platforms: This experiment is tested on Windows Phone Emulator and Nokia Lumia 800.

Procedure:

Step 1. Repeat steps[1-4] as in experiment MC1[Hello World]

Step 2. Add Reference System.Device.Location.

Step 3. Initialise the GeoCoordinateWatcher geoWatcher= new GeoCoordinateWatcher();

Step 4. Call the PositionChanged Event.

Step 5. Start the GeoWatcher by calling geoWatcher.Start() method;

Step 6. Define the PositionChanged method.

Step 7. Save all the changes made to the project.

Step 8. Press F5 to debug the experiment, on the Windows Phone Emulator.

Step 9. After few min, an emulator screen is shown to you with the static longitude, latitude, and altitude values along with current timestamp. You can also test the experiment with few more static coordinates by recording the new location, using extension tool of emulator.

Step 10. By this way we can deploy the My Location experiment on the Emulator.

Source Code	Comments

MainPage.xaml
 	
 ``xml
<Grid x:Name="LayoutRoot" Background="CornflowerBlue">
    <Grid.RowDefinitions>
        <RowDefinition Height="Auto"/>
        <RowDefinition Height="*"/>
    </Grid.RowDefinitions>
 	
    <!--TitlePanel contains the name of the
``	

```
application and page title-->
        <StackPanel x:Name="TitlePanel" Grid.Row="0"
Margin="12,17,0,28">
            <TextBlock x:Name="ExperimentTitle"
Text="Exp No.MC4" TextAlignment="Right"
Style="{StaticResource PhoneTextNormalStyle}"/>
            <TextBlock x:Name="ApplicationTitle"
Text="Mobile Computing" Style="{StaticResource
PhoneTextNormalStyle}"/>
            <TextBlock x:Name="PageTitle" Text="My
Location " Margin="9,-7,0,0" Style="{StaticResource
PhoneTextTitle1Style}"/>
        </StackPanel>

        <!--ContentPanel - place additional content
here-->
        <Grid x:Name="ContentPanel" Grid.Row="1"
Margin="12,0,12,0">
            <TextBlock Height="247" TextWrapping="Wrap"
HorizontalAlignment="Left" Margin="43,152,0,0"
Name="textBlock1" Text="" VerticalAlignment="Top"
Width="352" />
        </Grid>
    </Grid>
```

MainPage.xaml.cs
```
using System;
using Microsoft.Phone.Controls;
using System.Device.Location;

namespace GPS_Apps
{
    public partial class GPS : PhoneApplicationPage
    {
    string txt = "";
  public GPS()
 {
 InitializeComponent();
  Update();
 }
 void Update() {
GeoCoordinateWatcher geoWatcher =
 new GeoCoordinateWatcher();
geoWatcher.PositionChanged+=new
EventHandler<GeoPositionChangedEventArgs<GeoCoordinate>>
(geoWatcher_PositionChanged);
 geoWatcher.Start();
 }
public void geoWatcher_PositionChanged
(object
sender,GeoPositionChangedEventArgs<GeoCoordinate> e)
 {
 txt = String.Format("Latitude: {0:F3} \r\n" +
 "Longitude: {1:F3}\r\n" +
  "Altitude:{2}\r\n\r\n" + "{3}",
                e.Position.Location.Latitude,
e.Position.Location.Longitude,
e.Position.Location.Altitude,e.Position.Timestamp);
 textBlock1.Text = txt;
        }
    }
}
```

← Exp No MC4(Experiment title)

← Mobile Computing(Application title)

←My Location(Page title)

← Add Reference System.Device.Location

← GeoCoordinateWatcher method
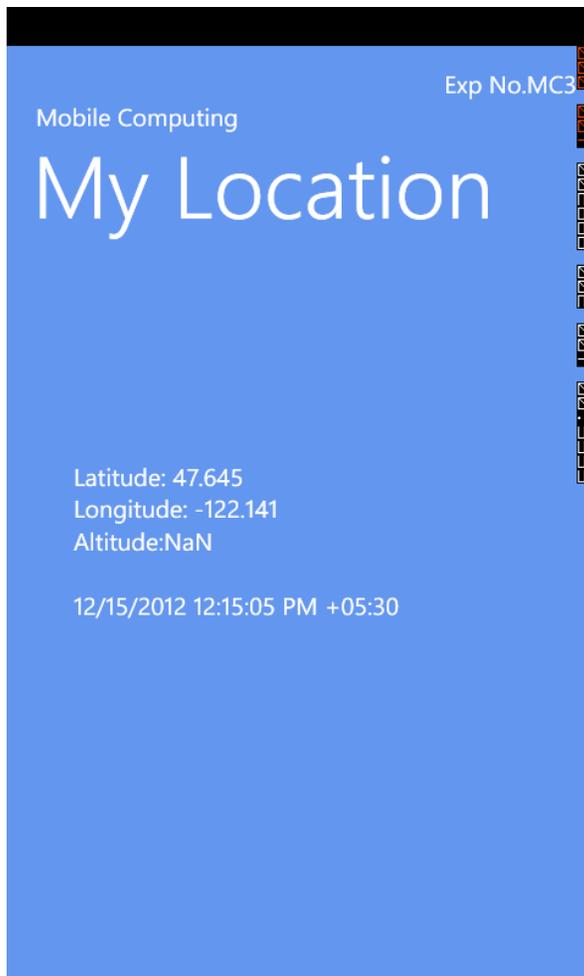
←PositionChanged Event

Screenshots:

Fig No .1 My Location " Home Page"

Observations:

It is observed that now, student can able to obtain their own location at any place using this experiment.