

## Trend Micro Prototyping Exercise

Please create HTML codes compatible with Internet Explorer (from version 9 to latest version), Firefox, and Chrome.

You can use JavaScript and CSS, but **no Flash**. If you are unsure about the question, feel free to make all the necessary UI behavior assumptions and state them in a separate document.

**Your deliverables are:**

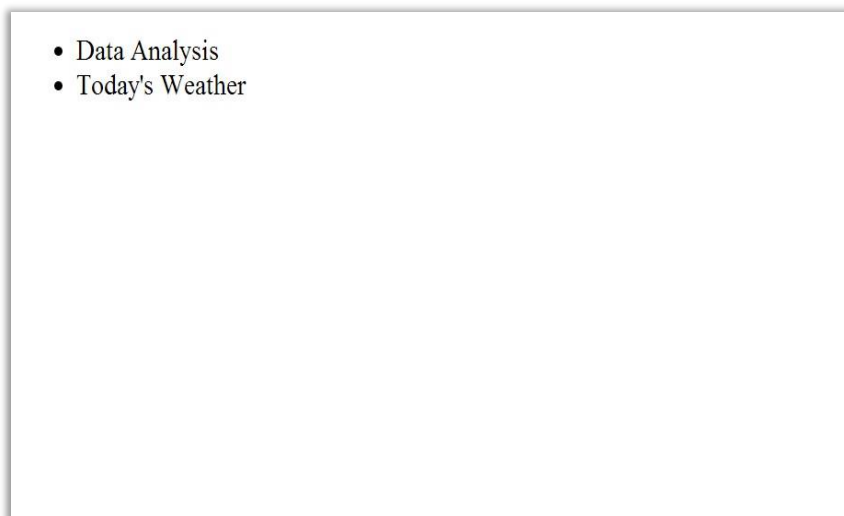
- HTML pages containing the answers to the questions
- Any additional files (images, JavaScript, CSS) that accompany the HTML files - (optional) a separate MS Word or txt file containing your assumptions

**Your answer will be evaluated based on:**

- Feature completeness
- Code readability (naming convention, comments, etc)
- Web Standards compliance
- Code reusability and extendibility
- Compatible with different display resolution of clients

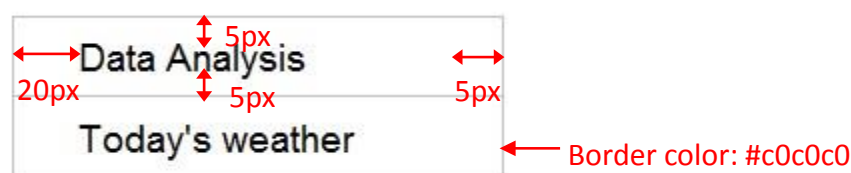
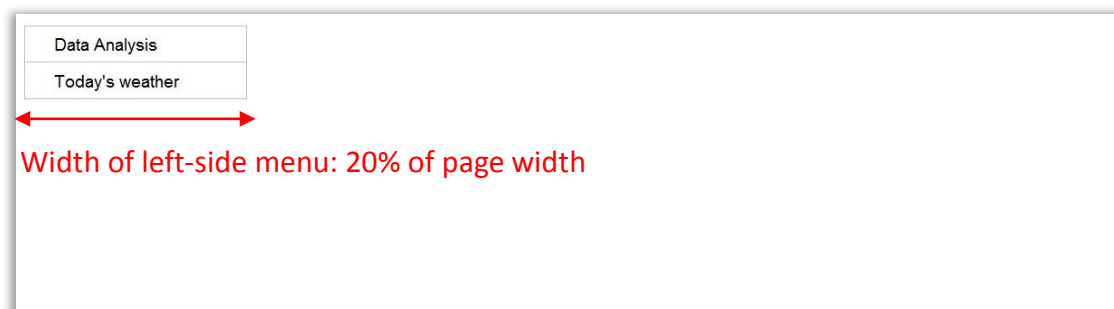
## Task 1.

There is a home page as the following picture:



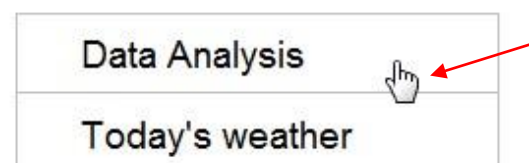
(File location: *index.html*)

Please change the style of the left-side menu based on the following specification:



Font size: 12px; Font family: Arial

When the cursor hovers menu items, change the cursor to the following style:



When user clicks a menu item, highlight the selected item to the following style:

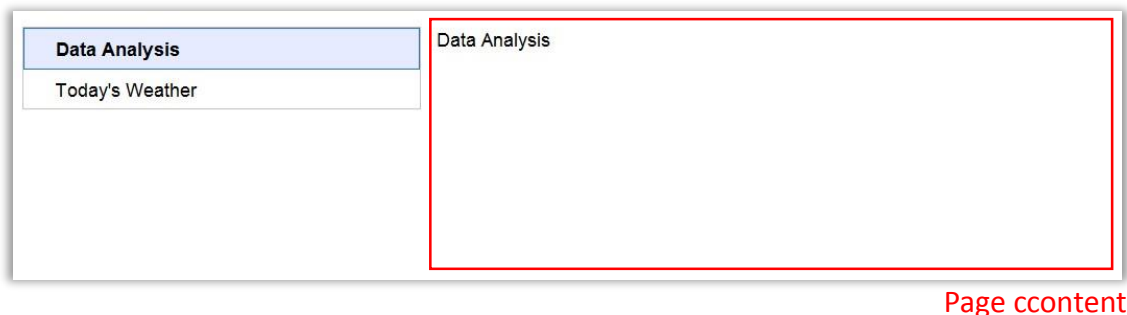


Font style: bold

## Task2.

When user selects a menu item, **dynamically** load corresponded page and resources files to home page.

Ex: When user clicks the link “Data Analysis”, show as the following picture:



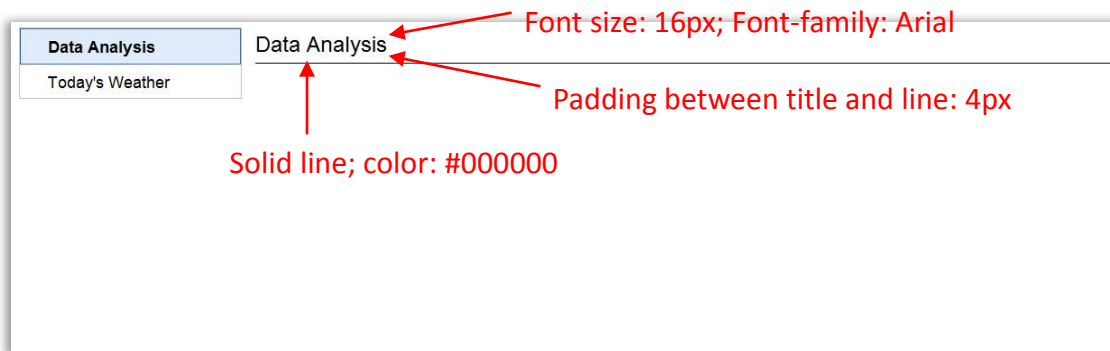
If user select the other menu item, switch the content to corresponded page.

Please refer the following information to implement:

Menu item	Page and resource files
Data Analysis	template\dataAnalysis.html
	css\dataAnalysisStyle.css
	js\dataAnalysisController.js
Today's Weather	template\todayWeather.html
	css\todayWeatherStyle.css
	js\todayWeatherController.js

**Task3.**

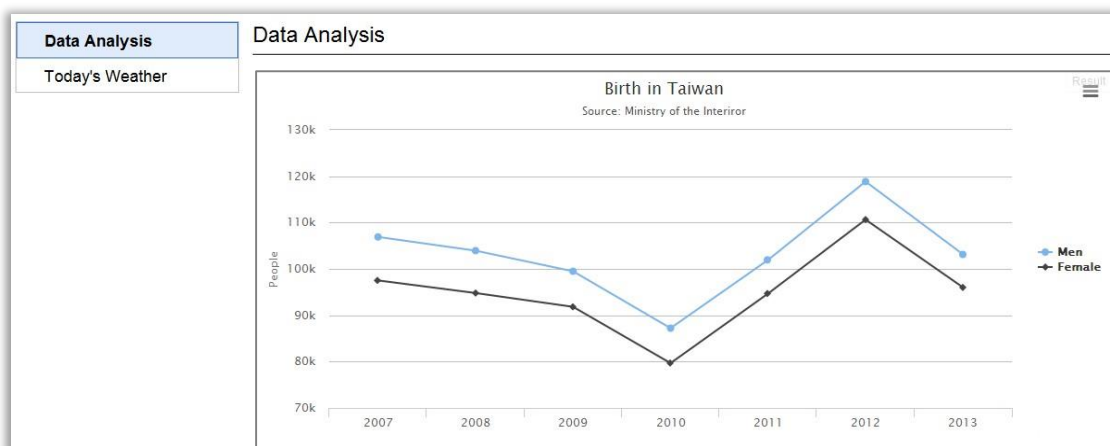
Please refer to the following information to implement page “Data Analysis”.



Show a line chart under page title based on the following data:

Birth in Taiwan		
Year	Men	Female
2007	106,898	97,516
2008	103,937	94,796
2009	99,492	91,818
2010	87,213	79,673
2011	101,943	94,684
2012	118,848	110,633
2013	103,120	95,993

You can use any 3-party libraries to complete the task. Ex:



**Task4.**

Please refer to the following mockup to implement page "Today's Weather".

The mockup is a rectangular box with a light gray border. At the top, it says "Today's Weather" in a bold, sans-serif font. Below this is a horizontal line. Under the line, there are two input fields: "City:" followed by a box containing "Taipei", and "Country:" followed by a box containing "TW". To the right of these is a "Search" button. Below the input fields, there is a large, dark gray cloud icon on the left. To its right, the word "Clouds" is written in a large, bold font, and "overcast clouds" is written in a smaller font below it. At the bottom, there are two lines of text: "Temperature: 23°C ~ 30°C" and "Humidity: 60%".

You can set appropriate styles on your own when implementation.

Requirements:

1. User can input city and country name to get weather information and display them on UI.  
Please use **AJAX** to get weather information from \*OpenWeatherMap.
2. Display information at least based on mock up UI.

\*You can use API from OpenWeatherMap to get weather data by city and country name.

You can sign up free account to retrieve API key for OpenWeatherMap API from

<https://openweathermap.org/price>

Ex: Request URL:

[http://api.openweathermap.org/data/2.5/weather?q=Taipei,TW&units=metric&appid={YOUR\\_API\\_KEY}](http://api.openweathermap.org/data/2.5/weather?q=Taipei,TW&units=metric&appid={YOUR_API_KEY})

Response (JSON):

```
{
  "coord": {
    "lon": 121.53,
    "lat": 25.05
  },
  "sys": {
    "message": 0.0199,
    "country": "TW",
    "sunrise": 1398719962,
    "sunset": 1398766982
  },
  "weather": [
    {
      "id": 803,
      "main": "Clouds",
      "description": "overcast clouds",
      "icon": "04d"
    }
  ],
  "base": "cmc",
  "stations": [
    {
      "temp": 23.07,
      "pressure": 1013,
      "humidity": 60,
      "temp_min": 23,
      "temp_max": 30,
      "wind": {
        "speed": 6.2,
        "deg": 80,
        "var_beg": 50,
        "var_end": 110
      },
      "clouds": {
        "all": 75
      },
      "dt": 1398754800,
      "id": 1668341,
      "name": "Taipei",
      "cod": 200
    }
  ]
}
```

(You can refer <http://openweathermap.org/current> to get more detailed information)

3. Use CSS sprite to show current weather on UI. (Sprite's file location: **img\icons.png**) · If weather description contains string "cloud", show the following picture:



- If weather description contains string "rain", show the following picture:



- If weather description contains string "clear", show the following picture:



- If weather description is not in above conditions, show the following picture:

N/A

4. During weather query, an AJAX loading image is required. Ex:



5. If user inputs invalid city or country name, show appropriate message on UI.

Ex: Request URL:

<http://api.openweathermap.org/data/2.5/weather?q=notexist&appid={YOUR API KEY}>

Response (JSON):

```
{"cod":"502","message":"Error: Not found city"}
```

Today's Weather

⊗ Not found city

City: 
Country:

Clouds

overcast clouds

Temperature: 23°C ~ 30°C

Humidity: 60%