

CHAPTER IV

ANALYSIS AND DESIGN

4.1 Google API

This project using Google Maps API. The main script to call Google Maps API is `<script src="https://maps.googleapis.com/maps/api/js?v=3.exp"></script>`. Function `initialize()` is used to create map and its option. Then map will be display in HTML body.

```
14 <script src="https://maps.googleapis.com/maps/api/js?v=3.exp"></script>
15 <script>
16 function initialize() {
17   var Latlng = new google.maps.LatLng(-6.9667, 110.41677);
18   var mapOptions = {
19     zoom: 13,
20     center: Latlng
21   }
22   var map = new google.maps.Map(document.getElementById('map-canvas'), mapOptions);
23
24   var marker = new google.maps.Marker({
25     position: myLatlng,
26     map: map,
27   });
28 }
29 google.maps.event.addDomListener(window, 'load', initialize);
30 </script>
```

Figure 4.1 Example listing of Google API source code

4.2 HTML 5

Basically, HTML 5 is just like previous HTML. Mainly, using <html> at the beginning and </html> at the end of html code. There are two parts that are used in HTML, those are head and body. In head usually contains title, CSS or CSS link, Javascript. Body is used to display the content of HTML code. In this project, the main function of HTML body is as map canvas. After map created, it has to give ID by typing map = new google.maps.Map(document.getElementById('map'), mapOptions);. Then, map can be displayed in HTML body using div like this <div id="map"></div>.

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <meta name="viewport" content="initial-scale=1.0, user-scalable=no">
5     <meta charset="utf-8">
6     <title>Simple markers</title>
7     <style>
8       html, body, #map-canvas {
9         height: 100%;
10      }
11     </style>
12     <script src="https://maps.googleapis.com/maps/api/js?v=3.exp"></script>
13   </head>
14   <function initialize() {
15     var myLatlng = new google.maps.LatLng(-6.9667, 110.41677);
16     var mapOptions = {
17       zoom: 13,
18       center: myLatlng
19     }
20     var map = new google.maps.Map(document.getElementById('map-canvas'), mapOptions);
21     var marker = new google.maps.Marker({
22       position: myLatlng,
23       map: map,
24     });
25   }
26 }
27 <google.maps.event.addDomListener(window, 'load', initialize);>
28 </script>
29 </head>
30 <body>
31   <div id="map-canvas"></div>
32 </body>
33 </html>
```

Figure 4.2 Example listing of HTML 5 source code

4.3 PHP

PHP is a server-side scripting language designed for web development but also used as a general-purpose programming language. PHP code can be placed in HTML body or in its own file. To use PHP, begin with <?php and end with ?>.

Code \$filetxt = '/opt/lampp/htdocs/project/data.txt'; is directory path where data is located.

Code if(isset(\$_POST['(attribute)'])) will return TRUE only *if* all of the parameters are set.

Code if(empty(\$_POST['(attribute)'])) will check whether a variable is *empty* or not.

Code \$data = array is used to send data to array where data is added.

```
1 //php
2 $filetxt = '/opt/lampp/htdocs/project/data.txt';
3 if(isset($_POST['title'])) && isset($_POST['lat']) && isset($_POST['long']) && isset($_POST['description']) && isset($_POST['category']) && isset($_POST['image'])) {
4     if(empty($_POST['title']) || empty($_POST['lat']) || empty($_POST['long']) || empty($_POST['description']) || empty($_POST['category']) || empty($_POST['image'])) {
5         echo "Ketua! field harus diisi!";
6     } else {
7         $data = array(
8             'title' => $_POST['title'],
9             'lat' => (float) $_POST['lat'],
10            'long' => (float) $_POST['long'],
11            'description' => $_POST['description'],
12            'category' => $_POST['category'],
13            'image' => $_POST['image']);
14     }
15     $filetxt = '/opt/lampp/htdocs/project/data.txt';
16     $arr_data = array();
17     if(file_exists($filetxt)) {
18         $jumldata = file_get_contents($filetxt);
19         $arr_data = json_decode($jumldata, true);
20     }
21     $arr_data[] = $data;
22     $jsondata = json_encode($arr_data, JSON_PRETTY_PRINT);
23     if(file_put_contents('/opt/lampp/htdocs/project/data.txt', $jsondata)) echo "Data berhasil tersimpan";
24     else echo "Data gagal menyimpan data di '/opt/lampp/htdocs/project/data.txt'";
25 }
26 else echo "Form tidak terkirim";
27 }
```

Figure 4.3 Example listing of PHP source code

4.4 JSON

JSON or JavaScript Object Notation, is an open standard format that uses human-readable text to transmit data objects consisting of attribute–value pairs. It is used primarily to transmit data between a server and web application. JSON is used in the Javascript to get data inside or outside of the file. Jquery is required to use JSON in Javascript. `<script type="text/javascript" src="http://code.jquery.com/jquery-latest.min.js"></script>` is required to use JSON. In this project, data is stored in file named data.txt. Code `$.getJSON` is used to get data from other file where data is stored. JSON generally contains data attribute in array. Code `"$('#start').append($('<option/>')` means dropdown select with ID="start" contains option that is read from `option.title`. Code `.text(option.title));` means option select displays title data attributes. Code `.attr("value",option.lat + ", " + option.lng)` is used to read data latitude and longitude.

```
128 <script type="text/javascript">
129     $(document).ready(function(){
130         $.getJSON('data.txt', function(data) {
131             $.each(data, function(i, option){
132                 console.log(option.title)
133                 $('#start').append($('<option/>')
134                     .attr("value",option.lat + ", " + option.lng)
135                     .text(option.title));
136             });
137         });
138     });
139 });
140 </script>
```

Figure 4.4 Example listing of JSON source code

This is typing format of data.txt. Each array contains data attributes. There are six data attributes, those are title, latitude, longitude, description, category and image url. In example, [{ "title": "Lawang Sewu", "lat": -6.984, "lng": 110.41, "description": "Lawang Sewu", "category": "sejarah", "image": "image\lawangsewu.jpg" }].

```
1 [
2   {
3     "title": "Lawang Sewu",
4     "lat": -6.984,
5     "lng": 110.41,
6     "description": "Lawang Sewu",
7     "category": "sejarah",
8     "image": "image\lawangsewu.jpg"
9   },
10  {
11    "title": "Sam Poo Kong",
12    "lat": -6.9963,
13    "lng": 110.398,
14    "description": "Sam Poo Kong",
15    "category": "religi",
16    "image": "image\sampookong.jpg"
17  }
18 ]
```

Figure 4.5 Example listing of JSON txt format file