Lookup an IP address through API

This assignment is about looking up information about an IP (a.o. City, country) by using a simple API. In this assignment you will be working with Javascript, Ajax and Php.

Step 1 - Prepare Ajax request

Look at the supplied files and try to understand what is going on.

1) Look at the XMLHttpRequest()
Open *"lookup_ip.php"*.
Explain what is going on. Is anything returned from the server?

2) Change the request type
In XMLHttpRequest()[1] change the request type to `GET`
Discuss why use GET instead of POST?

3) Send request to API
Currently a request is sent to google.com. We need to use the API supplied by http://ip-api.com/. More specifically we need to get a JSON response back. Therefore change the request URL to `http://ip-api.com/json/8.8.8.8` to look up the IP address used by Google.

Step 2 - Handle response from Ajax request
Now we are sending something, but we need to handle what comes back.

1) Create a variable for the result
Create a new javascript variable after **xhr.send()** called `result`.

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[1] http://docs.webplatform.org/wiki/apis/xhr/XMLHttpRequest

Assign the xhr.response value.
```
var result = xhr.response;
```

2) Look at what came back
Output the variable result in your console.
```
console.log(result);
```

3) Parse the JSON response
In order to use the text that came back from the response, parse the JSON so that
Javascript understands it as an object. Discuss what it means. Compare the difference in
the console with the previous step.
```
var result = JSON.parse(xhr.response);
```

4) Output the city
Use the city information from the xhr.response to show it in your HTML.
e.g. Create an element that you can output the city value in.

Step 3 - Check an IP through php
Lets define the IP we want to check through php.

1) Create a variable for the IP
Create a new php variable called $ip.
Assign it the value "195.254.169.69"

2) Output the variable in Javascript
Though we can't access Javascript through php we can echo out the value of the variable
in the text that later will be interpreted by the browser as Javascript.
Wrap it in a Javascript variable called myIP.
```
var myIP = "<?php echo $ip;?>";
```
Discuss why use the quotation marks?

3) Modify the xhr request
Replace the IP address part of the request URL with the value of the myIP variable.
```
xhr.open("GET", "http://ip-api.com/json/"+myIP, false);
```
Does it work? If so, your city should say **"Viby"**.

4) Use the server IP
Optional: You can edit ip assignment in php to use the server's IP address using the
superglobal $_SERVER.
```
$ip = $_SERVER['SERVER_ADDR'];
```

*NOTICE: this does not work on your local server, since all local installations use the same
IP, i.e. 127.0.0.1*