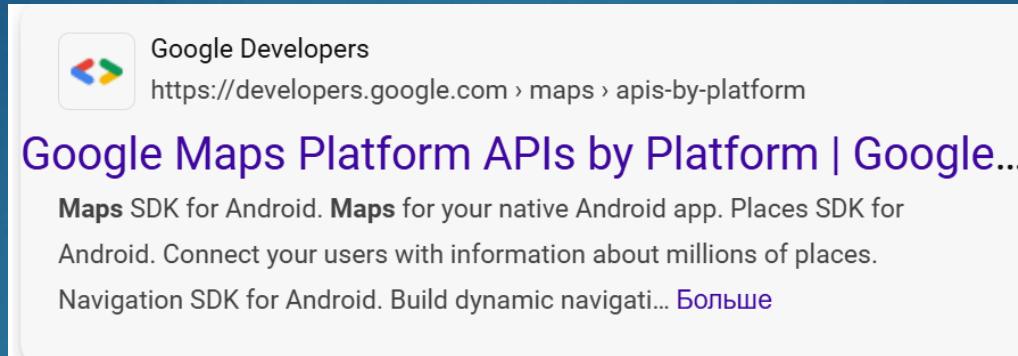


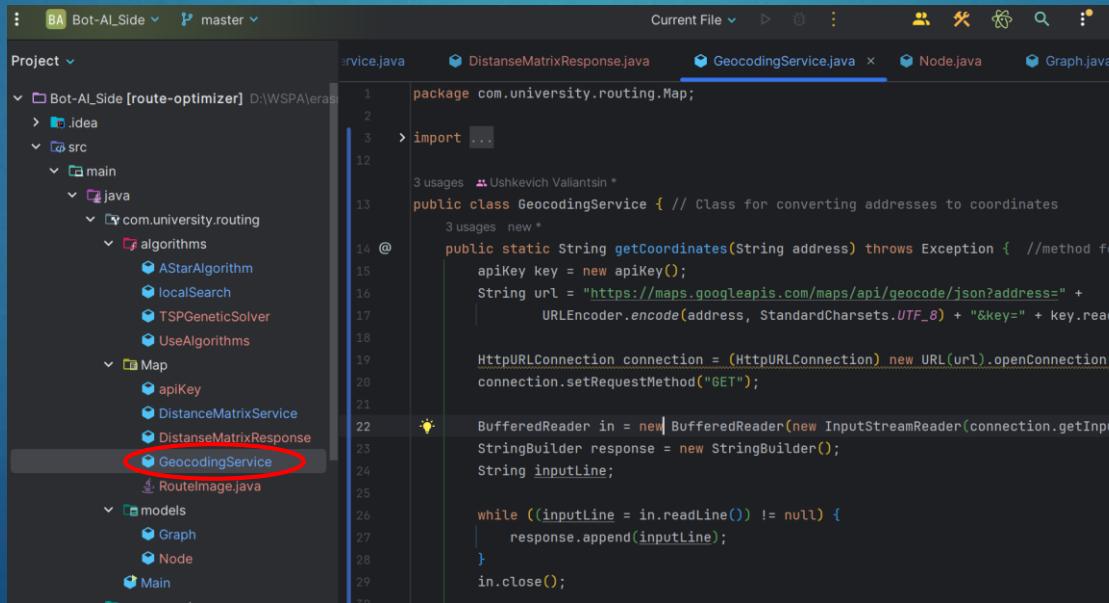
Algorithm side

We get real geodata using Google Maps Platform APIs.



The screenshot shows a browser window with the Google Developers logo and URL. The main content is titled "Google Maps Platform APIs by Platform | Google..." and describes the Maps SDK for Android, which provides places and navigation services. A "More" link is visible at the bottom.

Coordinates based on addresses are obtained in the Geocoding Service class.



The screenshot shows an IDE interface with the project "Bot-AI_Side" and branch "master". The "GeocodingService.java" file is open in the editor. The code implements a service for converting addresses to coordinates using the Google Maps Geocoding API. A red circle highlights the "GeocodingService" class in the project tree.

```
package com.university.routing.Map;
import ...;

public class GeocodingService { // Class for converting addresses to coordinates
    public static String getCoordinates(String address) throws Exception {
        apiKey key = new apiKey();
        String url = "https://maps.googleapis.com/maps/api/geocode/json?address=" +
                     URLEncoder.encode(address, StandardCharsets.UTF_8) + "&key=" + key.readApiKey();
        HttpURLConnection connection = (HttpURLConnection) new URL(url).openConnection();
        connection.setRequestMethod("GET");

        BufferedReader in = new BufferedReader(new InputStreamReader(connection.getInputStream()));
        StringBuilder response = new StringBuilder();
        String inputLine;

        while ((inputLine = in.readLine()) != null) {
            response.append(inputLine);
        }
        in.close();
    }
}
```