```
// Map Initialization
const map = L.map('map').setView([41.87194, 12.56738], 6); // Center on Italy,
zoom level 6

L.tileLayer('https://{s}.tile.openstreetmap.org/{z}/{x}/{y}.png', {
    attribution: '© <a href="https://www.openstreetmap.org/
copyright">OpenStreetMap</a> contributors'
}).addTo(map);

// Define Italy bounding box for the API query
const italyBounds = {
    lamin: 35.0,
    lamax: 48.0,
    lomin: 5.0,
    lomax: 20.0
};

let flightMarkers = {}; // Object to store flight markers


async function fetchData() {
    const url = `https://opensky-network.org/api/states/all?lamin=$
{italyBounds.lamin}&lamax=${italyBounds.lamax}&lomin=${italyBounds.lomin}
&lomax=${italyBounds.lomax}`;

    try {
      const response = await fetch(url);
      const data = await response.json();

      if (data && data.states) {
          updateMap(data.states);
      }
  } catch (error) {
        console.error("Error fetching data:", error);
    }
}

function updateMap(flights) {

  // 1. Delete old flight markers
  for (const icao24 in flightMarkers) {
    map.removeLayer(flightMarkers[icao24]);
  }
  flightMarkers = {}; // Clear object

  // 2. Add new or updated flight markers
  flights.forEach(flight => {
```

```
      const icao24 = flight[0];
      const longitude = flight[5];
      const latitude = flight[6];
      const heading = flight[10];

    if (longitude !== null && latitude !== null) {

          const marker = L.marker([latitude, longitude], {
            icon: L.icon({
              iconUrl: 'plane.png', // replace this with the desired marker image (e.g
plane.png)
              iconSize: [30, 30],
              iconAnchor: [15, 15],
              rotationAngle: heading,
              rotationOrigin: 'center',
            })
          }).addTo(map);

          flightMarkers[icao24] = marker;

      }

    });
}


// Initial fetch
fetchData();

// Refresh the data every 10 seconds
setInterval(fetchData, 10000);
```