

TECNOLÓGICO NACIONAL DE MÉXICO INSTITUTO TECNOLÓGICO DE ENSENADA

PROGRAMA DE INGENIERÍA EN SISTEMAS COMPUTACIONALES

REPORTE

Conectar con API

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Programación de dispositivos móviles Android (enero-junio 2022)

Ensenada B.C. México
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1. PRUEBAS

```
import 'package:flutter/material.dart';
import 'package:http/http.dart' as http;

class NeoWsServices extends ChangeNotifier {
  final String urlBase = 'api.nasa.gov';
  final String apiKey = 'DEMO_KEY';

  Future<void> getFeed(String start, String end) async {
    final response = await http.get(Uri.https(urlBase, '/neo/rest/v1/feed',
      {'start_date': start, 'end_date': end, 'api_key': apiKey}));
    print(response.body);
  }

  Future<void> getLookup(String id) async {
    final response = await http
      .get(Uri.https(urlBase, '/neo/rest/v1/neo/$id', {'api_key': apiKey}));
    print(response.body);
  }

  Future<void> getBrowse() async {
    final response = await http.get(
      Uri.https(urlBase, '/neo/rest/v1/neo/browse', {'api_key': apiKey}));
    print(response.body);
  }
}
```

Figura 1: Clase NeoWsServices

```
Restarted application in 907ms.
I/flutter (20391): {"links":{"next":"http://www.newsapp.com/rest/v1/feed?start_date=2015-09-08&end_date=2015-09-09&detailed=false&api_key=DEMO_KEY","prev":"http://www.newsapp.com/rest/v1/feed?start_date=2015-09-06&end_date=2015-09-07&detailed=false&api_key=DEMO_KEY"},"element_count":25,"near_earth_objects":{"2015-09-08":[{"links":{"self":"http://www.newsapp.com/rest/v1/neo/2465633?api_key=DEMO_KEY"},"id":"2465633","neo_reference_id":"2465633","name":"465633 (2009 JR5)","nasa_jpl_url":"http://ssd.jpl.nasa.gov/sbdb.cgi?sstr=2465633","absolute_magnitude_h":20.30,"estimated_diameter":{"kilometers":{"estimated_diameter_min":0.2251930467,"estimated_diameter_max":0.5035469604},"meters":{"estimated_diameter_min":225.1930466786,"estimated_diameter_max":503.5469604336},"miles":{"estimated_diameter_min":0.1399284286,"estimated_diameter_max":0.3128894784},"feet":{"estimated_diameter_min":738.8223552649,"estimated_diameter_max":1586.5469604336}}]}
```

Figura 2: getFeed

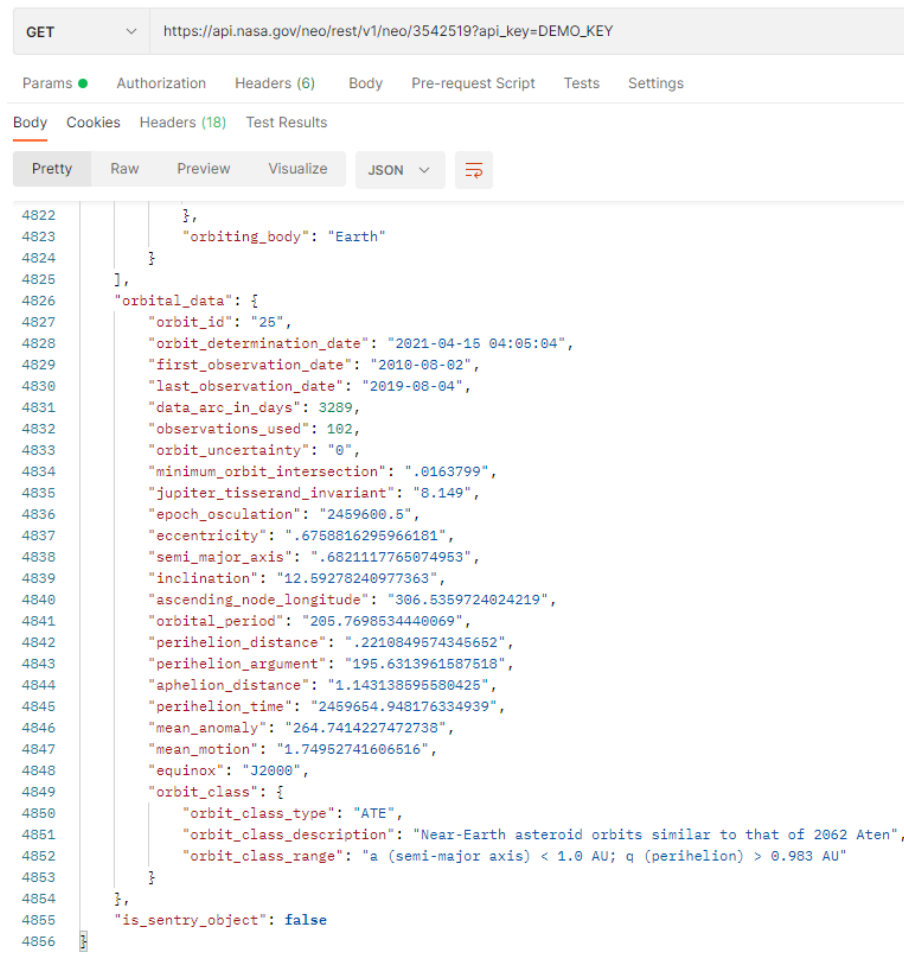
```
Restarted application in 873ms.
I/flutter (20391): {"links":{"self":"http://www.newsapp.com/rest/v1/neo/3542519?api_key=DEMO_KEY"},"id":"3542519","neo_reference_id":"3542519","name":"(2010 PK9)","designation":"2010 PK9","nasa_jpl_url":"http://ssd.jpl.nasa.gov/sbdb.cgi?sstr=3542519","absolute_magnitude_h":21.8,"estimated_diameter":{"kilometers":{"estimated_diameter_min":0.1160259082,"estimated_diameter_max":0.2594418179},"meters":{"estimated_diameter_min":116.0259082094,"estimated_diameter_max":259.4418179074},"miles":{"estimated_diameter_min":0.0720951346,"estimated_diameter_max":0.1612096218},"feet":{"estimated_diameter_min":380.6624406898,"estimated_diameter_max":851.1870938635}}},"is_potentially_hazardous_asteroid":true,"close_approach_data":[{"close_approach_date":"1900-06-01","close_approach_date_full":"1900-Jun-01 16:40","epoch_date_close_approach":2195882400000,"relative_velocity":{"kilometers_per_second":"30.9365099986","kilometers_per_hour":"111371.4359950604","miles_per_hour":"69201.8792159307"},"miss_distance":{"astronomical":"0.0445445894","luna
```

Figura 3: getLookup

```
Restarted application in 910ms.
I/flutter (20391): {"links":{"next":"http://www.newsapp.com/rest/v1/neo/browse?page=1&size=20&api_key=DEMO_KEY","self":"http://www.newsapp.com/rest/v1/neo/browse?page=0&size=20&api_key=DEMO_KEY"},"page":{"size":20,"total_elements":29363,"total_pages":1469,"number":0},"near_earth_objects":{"2000-04-13":[{"links":{"self":"http://www.newsapp.com/rest/v1/neo/2000433?api_key=DEMO_KEY"},"id":"2000433","neo_reference_id":"2000433","name":"433 Eros (A898 PA)","name_limited":"Eros","designation":"433","nasa_jpl_url":"http://ssd.jpl.nasa.gov/sbdb.cgi?sstr=2000433","absolute_magnitude_h":10.31,"estimated_diameter":{"kilometers":{"estimated_diameter_min":23.0438466577,"estimated_diameter_max":51.5276075096},"meters":{"estimated_diameter_min":23043.8466576534,"estimated_diameter_max":51527.6075895943},"miles":{"estimated_diameter_min":14.3187780415,"estimated_diameter_max":32.0177610556},"feet":{"estimated_diameter_min":75603.1738682955,"estimated_diameter_max":169053.8368842445}}],"is_potentially_hazardous_asteroid":false,"close_approach_data":[{"clo
```

Figura 4: getBrowse

Nota: La información es tan grande que la consola la muestra recortada, aquí un ejemplo de getLookup en Postman



```

4822     },
4823     "orbiting_body": "Earth"
4824   }
4825 ],
4826 "orbital_data": {
4827   "orbit_id": "25",
4828   "orbit_determination_date": "2021-04-15 04:05:04",
4829   "first_observation_date": "2010-08-02",
4830   "last_observation_date": "2019-08-04",
4831   "data_arc_in_days": 3289,
4832   "observations_used": 102,
4833   "orbit_uncertainty": "0",
4834   "minimum_orbit_intersection": ".0163799",
4835   "jupiter_tisserand_invariant": "8.149",
4836   "epoch_osculation": "2459600.5",
4837   "eccentricity": ".6758816295966181",
4838   "semi_major_axis": ".6821117765074953",
4839   "inclination": "12.59278248977363",
4840   "ascending_node_longitude": "306.5359724024219",
4841   "orbital_period": "205.7698534440069",
4842   "perihelion_distance": ".2210849574345652",
4843   "perihelion_argument": "195.6313961587518",
4844   "aphelion_distance": "1.143138595580425",
4845   "perihelion_time": "2459654.948176334939",
4846   "mean_anomaly": "264.7414227472738",
4847   "mean_motion": "1.74952741606516",
4848   "equinox": "J2000",
4849   "orbit_class": {
4850     "orbit_class_type": "ATE",
4851     "orbit_class_description": "Near-Earth asteroid orbits similar to that of 2062 Aten",
4852     "orbit_class_range": "a (semi-major axis) < 1.0 AU; q (perihelion) > 0.983 AU"
4853   }
4854 },
4855 "is_sentry_object": false
4856

```

Figura 5