

# Objective

This coding exercise involves designing and implementing a function that returns the closest car parks to a user, together with each parking lot's availability.

## Data Sources

### Car park information

Dataset: <https://data.gov.sg/dataset/hdb-carpark-information>

This dataset provides detailed information about each car park. This can be treated as static and is to be loaded with a task from the CSV file provided in the link above.

Hint: The coordinates provided are in a SVY21 format. You may have to do some conversion to a more widely used format. An option is to use a converter (<https://www.onemap.gov.sg/docs/#coordinates-converters>) when importing or a similarly implemented library. Feel free to use Google to find out more about SVY21 and what kind of conversion is required.

### Car park availability

Dataset: <https://data.gov.sg/dataset/carpark-availability>

The API endpoint in that link provides live updates on the parking lot availability for the car parks.

## Business Requirements

- Write a function that takes the 2 parameters `latitude` and `longitude`, that returns an array of car parks sorted by distance ascending with the total and available parking lots (i.e. Only car parks with available parking lots should be returned).

Example:

```
[
  %Carpark{
    number: "HG2C",
    address: "BLK 364 / 365 UPP SERANGOON RD",
    location: %Location{
      latitude: 1.37011,
      longitude: 103.897
    },
    total_lots: 471,
    available_lots: 324
  }
]
```

```
} ,  
...  
]
```

- Input validation of `latitude` and `longitude` should be implemented where you see fit.