

ParkIt! API Documentation

API Overview

S/N	Service	Description
1.	HDB Carpark Lots	This data service will return the list of HDB carpark available lots in JSON format.
2.	LTA Carpark Lots	This data service will return the list of LTA carpark available lots in JSON format.
3.	Get User	This data service will return a user ID in JSON format.
4.	Check User	This data service will verify if a user ID exists in the database.
5.	Get Bookmarks	This data service will return a list of bookmarked locations and their coordinates for a specific user.
6.	Add Bookmarks	This data service will add a new bookmark with location name and coordinates for a specific user.
7.	Delete Bookmarks	This data service will remove a specified bookmark for a specific user.
8.	Get Carparks	This data service will return a list of carparks with detailed information including agency, location, pricing, and EV charging availability.
9.	Find Carpark	This data service will return nearby carparks based on provided latitude and longitude coordinates.
10.	Update Sorting Preference	This data service will return the user's carpark search result sorting preference in JSON format.

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1. HDB Carpark Lots

URL	https://api.data.gov.sg/v1/transport/carpark-availability		
Update Frequency	Every minute		
<i>Request</i>			
Parameter Name	Mandatory	Description	Example
date_time (query)	No	Date and time in YYYY-MM-DD[T]HH:mm:ss (SGT) format	2024-03-15T14:30:00
AccessKey (header)	Yes	The access key included in the email upon successful activation of account.	x9f5ds8f2h3j2k3h4
<u>Sample Request</u> GET https://api.data.gov.sg/v1/transport/carpark-availability?date_time=2024-03-15T14:30:00 Headers: AccessKey: your-access-key			
<i>Response</i>			
Parameter Name	Description		Example
timestamp	Time of acquisition of data		"2024-03-15T14:30:00"
carpark_data	Array of carpark availability information		See sample response
carpark_number	Unique identifier for the carpark		"HE12"
update_datetime	Last update time of carpark data		"2024-11-17T17:36:49"
carpark_info	Array containing lot information		See sample response
total_lots	Total number of carpark lots		"100"
lot_type	Type of carpark lot		"C"
lots_available	Total number of available lots		"50"
<u>Sample Response</u>			

```
{
  "items": [
    {
      "timestamp": "2024-11-17T17:37:27+08:00",
      "carpark_data": [
        {
          "carpark_info": [
            {
              "total_lots": "105",
              "lot_type": "C",
              "lots_available": "86"
            }
          ],
          "carpark_number": "HE12",
          "update_datetime": "2024-11-17T17:36:49"
        },
        {
          "carpark_info": [
            {
              "total_lots": "583",
              "lot_type": "C",
              "lots_available": "401"
            }
          ],
          "carpark_number": "HLM",
          "update_datetime": "2024-11-17T17:37:02"
        }
      ]
    }
  ]
}
```

2. LTACarpark Lots

URL	https://datamall2.mytransport.sg/ltaodataservice/CarParkAvailabilityv2		
Update Frequency	Every minute		
Request			
Parameter Name	Mandatory	Description	Example
AccountKey (header)	Yes	The access key included in the email upon successful activation of account.	fflREUgvym9dG4NcD xZ1rw==
<u>Sample Request</u> GET https://datamall2.mytransport.sg/ltaodataservice/CarParkAvailabilityv2 Headers: AccountKey: your-access-key			
Response			
Parameter Name	Description		Example
CarParkID	A unique code for this carpark		1
Area	Area of development / building:		Marina
Development	Major landmark or address where carpark is located		Suntec City
Location	Latitude and Longitude map coordinates		1.29375 103.85718
AvailableLots	Number of lots available at point of data retrieval		352
LotType	Type of lots		C
Agency	Agencies		LTA
<u>Sample Response</u> [{ "CarParkID": "1", "Area": "Marina",			

```
"Development": "Suntec City",  
"Location": "1.29375 103.85718",  
"AvailableLots": 830,  
"LotType": "C",  
"Agency": "LTA"
```

```
},
```

```
...
```

```
1
```

3. Get User

URL	http://localhost:5000/user		
Update Frequency			
<i>Request</i>			
Parameter Name	Mandatory	Description	Example
uid	No	Unique 10-digit user ID	1234567890
<u>Sample Request</u> GET http://localhost:5000/user			
<i>Response</i>			
Parameter Name	Description		Example
uid	Unique 10-digit user ID		1234567890
<u>Sample Response</u> { "uid": "9087654321" }			

4. Check User

URL	http://localhost:5000/checkuser		
Update Frequency			
<i>Request</i>			
Parameter Name	Mandatory	Description	Example
uid	Yes	Unique 10-digit user ID	1234567890
<u>Sample Request</u> GET http://localhost:5000/checkuser?uid=1234567890			
<i>Response</i>			
Parameter Name	Description		Example
uid	Unique 10-digit user ID		1234567890
<u>Sample Response</u> { "uid": "1234567890" }			

5. Get bookmarks

URL	http://localhost:5000/bookmarks		
Update Frequency			
<i>Request</i>			
Parameter Name	Mandatory	Description	Example
uid	Yes	Unique 10-digit user ID	1234567890
<u>Sample Request</u> GET http://localhost:5000/bookmarks?uid=1234567890			
<i>Response</i>			
Parameter Name	Description		Example
location	Name or description of bookmark		Gardens by the Bay
coordinates	Latitude and longitude of the location		1.2816,103.8636
<u>Sample Response</u> <pre>[{ "location": "Marina Bay Sands", "coordinates": "1.2834,103.8607" }, { "location": "Sentosa", "coordinates": "1.2494,103.8303" }]</pre>			

6. Add bookmarks

URL	http://localhost:5000/bookmarks/add		
Update Frequency			
<i>Request</i>			
Parameter Name	Mandatory	Description	Example
uid	Yes	Unique 10-digit user ID	1234567890
location	Yes	Name or description of bookmark	Gardens by the Bay
coordinates	Yes	Latitude and Longitude of the location	1.2816,103.8636
<u>Sample Request</u> POST http://localhost:5000/bookmarks/add Content-Type: application/json { "uid": "1234567890", "location": "Gardens by the Bay", "coordinates": "1.2816,103.8636" }			
<i>Response</i>			
Parameter Name	Description		Example
location	Name or description of bookmark		Gardens by the Bay
coordinates	Latitude and longitude of the location		1.2816,103.8636
<u>Sample Response</u> { "message": "Bookmark created successfully" }			

7. Delete bookmark

URL	http://localhost:5000/bookmarks/delete		
Update Frequency			
<i>Request</i>			
Parameter Name	Mandatory	Description	Example
uid	Yes	Unique 10-digit user ID	1234567890
location	Yes	Name or description of bookmark	Gardens by the Bay
<u>Sample Request</u> POST http://localhost:5000/bookmarks/delete Content-Type: application/json { "uid": "1234567890", "location": "Gardens by the Bay" }			
<i>Response</i>			
Parameter Name	Description		Example
location	Name or description of bookmark		Gardens by the Bay
coordinates	Latitude and longitude of the location		1.2816,103.8636
<u>Sample Response</u> { "message": "Bookmark remove successfully" }			

8. Get Carparks

URL	http://localhost:5000/carparks		
Update Frequency			
Request			
Parameter Name	Mandatory	Description	Example
<u>Sample Request</u>			
GET http://localhost:5000/bookmarks			
Response			
Parameter Name	Description		Example
agency	Agency managing the carpark		LTA
carpark_id	Unique ID for the carpark		CP1
address	Carpark address		123 Bedok North ave 4
lat	Latitude of the carpark		1.3334
long	Longitude of the carpark		103.9455
price	Weekday parking price		\$2.40/hr
price_weekend	Weekend parking price		\$3.00/hr
EV	Indicates if EV charging is available		Yes
<u>Sample Response</u>			
{ "CP1": { "agency": "HDB", "carpark_id": "CP1", "address": "123 Bedok North Ave 4", "lat": "1.3334", "long": "103.9455", "price": "\$2.40/hr", "price_weekend": "\$3.00/hr", "EV": "Yes" }, "CP2": {			

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    "agency": "URA",
    "carpark_id": "CP2",
    "address": "Jurong East Central",
    "lat": "1.3349",
    "long": "103.7438",
    "price": "$1.50/hr",
    "price_weekend": "$2.00/hr",
    "EV": "No"
  }
}

```

9. Find Carpark

URL	http://localhost:5000/find		
Update Frequency			
<i>Request</i>			
Parameter Name	Mandatory	Description	Example
lat	Yes	Latitude of the location	1.3521
lon	Yes	Longitude of the location	103.8198
<u>Sample Request</u>			
GET http://localhost:5000/find?lat=1.3521&lon=103.8198			
<i>Response</i>			
Parameter Name	Description		Example
agency	Agency managing the carpark		LTA
carpark_id	Unique ID for the carpark		CP1
address	Carpark address		123 Bedok North ave 4
lat	Latitude of the carpark		1.3334
long	Longitude of the carpark		103.9455

price	Weekday parking price	\$2.40/hr
price_weekend	Weekend parking price	\$3.00/hr
EV	Indicates if EV charging is available	Yes

Sample Response

```
{
  "status": "success",
  "data": [
    {
      "carpark_id": "CP1",
      "agency": "HDB",
      "address": "123 Bedok North Ave 4",
      "lat": "1.3334",
      "long": "103.9455",
      "price": "$2.40/hr",
      "price_weekend": "$3.00/hr",
      "EV": 1,
      "lot_type": "C",
      "available_lots": 50
    },
    {
      "carpark_id": "CP2",
      "agency": "URA",
      "address": "Jurong East Central",
      "lat": "1.3349",
      "long": "103.7438",
      "price": "$1.50/hr",
      "price_weekend": "$2.00/hr",
      "EV": 0,
      "lot_type": "C",
      "available_lots": 30
    }
  ]
}
```

10. Update sorting preference

URL	http://localhost:5000/sort		
Update Frequency			
<i>Request</i>			
Parameter Name	Mandatory	Description	Example
sort_type	No	The current sorting preference	location
max_radius	No	The current search radius in meters	1500
max_results	No	The current maximum number of results to return	5
veh_type	No	The current vehicle type	car
show_ev	No	The current preference for showing EV carparks (true or false)	false
<u>Sample Request</u> GET http://localhost:5000/sort?sort_type=location&sort_radius=1500&sort_max_results=5&veh_type=car&show_ev=false			
<i>Response</i>			
Parameter Name	Description		Example
sort_type	The current sorting preference		location
max_radius	The current search radius in meters		1500
max_results	The current maximum number of results to return		5
veh_type	The current vehicle type		car
show_ev	The current preference for showing EV carparks (true or false)		false

Sample Response

```
{  
  "sort_type": "location",  
  "max_radius": "1500",  
  "max_results": "5",  
  "veh_type": "car",  
  "show_ev": "false"  
}
```