

# Google Directions API

The added functionality allows a user to enter their starting address, select a campus from the dropdown list and hit enter. The user will then receive a journey summary of the time and distance followed by a break down of steps (Journey details) with remaining distance and time having completed each step.

The 'maps' app contains all functionality of this addition to the project with the following breakdown (with explanation):

## urls.py

Points to the function '**maps**' and is referred to as '**index**'. There is no added string to the url here

## form.py

Creates a form that comprises of a text field(users starting address/origin) and a dropdown list (three car park destinations).

## views.py

Comprises of two functions:

### 1) '**maps**'

1. Initially pipes the form to the maps.html.
2. Once the file is filled the function takes the values ('origin' and 'destination') and passes them to the function below with an empty dictionary('context'). Once it receives the returned context it then pipes it to maps.html (No change of pages)

### 2) '**maps\_results**'

1. Retrieves Google Directions API data
2. Has error clauses in place
3. Create an array of each step with pre-formatted html syntax, distance and duration
4. Get the total duration and distance of the leg (trip) and add to context
5. Set values to calculate distance and duration left on each step
6. Getting the relevant HTML needed for each step
7. Returning the context with all the values (be that errors or steps)

## Scripts/time\_func.py

This file contains a class comprised of 4 functions:

- 1) **time\_math** - converts an integer(representing seconds) to minutes and hours
- 2) **time\_str** - adds strings to the end of those integers for their units (e.g. hour/hours)
- 3) **dis\_math** - converts an integer(representing meters) to kilometres (if valid)
- 4) **dis\_str** - adds strings to the end of those integers for their units (e.g. m/km)

**Return:** a string in the following format "<str distance and units for step>, <str distance and units for step>", e.g. "1 hr 5 mins, 20 km"