Using Locations and Maps

in TouchDevelop

So what is a Location?

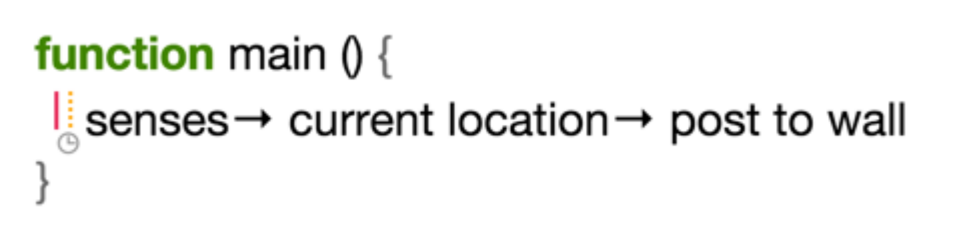
TouchDevelop offers a data structure known as *Location*

- Location stores a GPS coordinate on earth, using latitude and longitude (in degrees)
    - i.e. (51.9, 10.27)
- Location offers many useful features, such as:
    - `senses -> current location`
        - gets our user’s current GPS location
    - `locations -> search location(address, postalCode, city, country)`
        - returns a GPS location as close as possible to the given address information

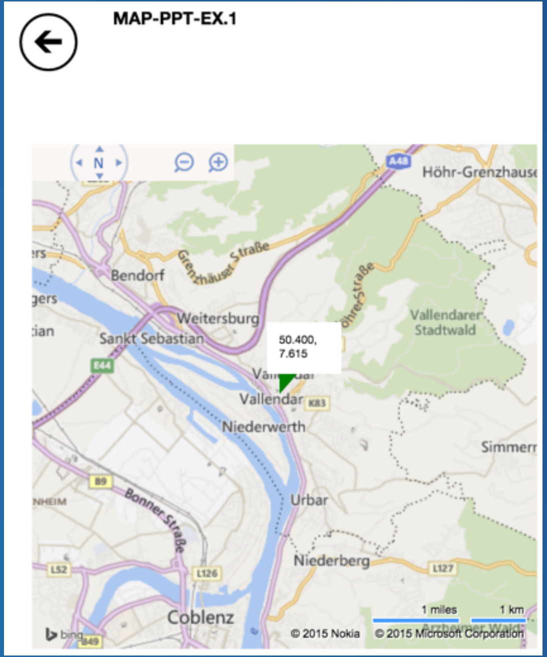
How can we use Locations?

Let’s say the user wants to see where he/she is on a map

- we can do this in one easy-to-read line of code



```
function main () {
    senses → current location → post to wall
}
```

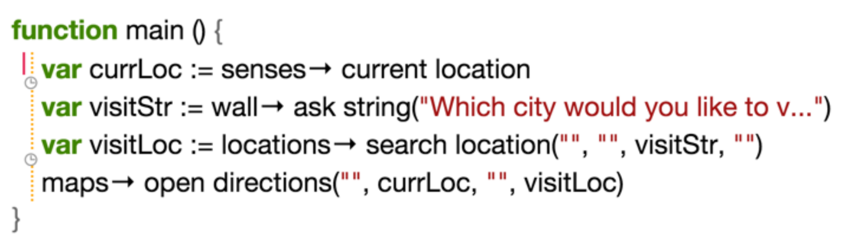


MAP-PPT-EX.1

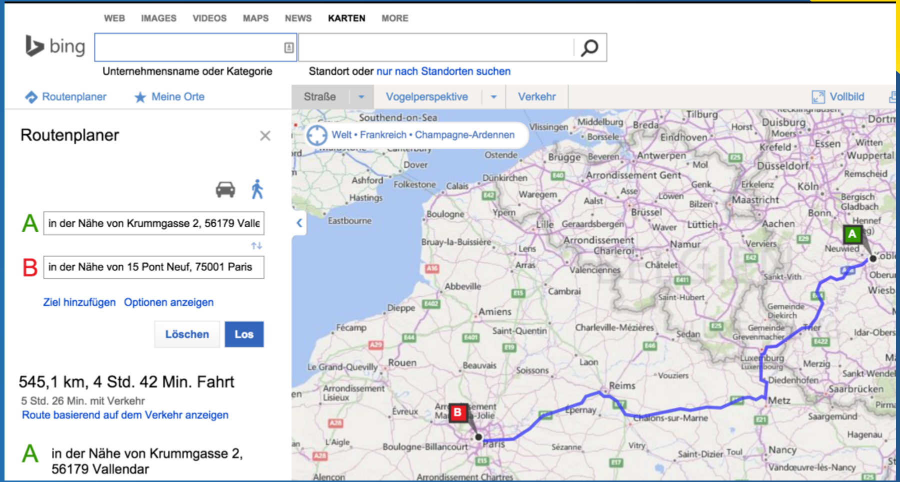
50.400, 7.615

Providing directions

Sending directions to the user is almost as simple:



```
function main () {
  var currLoc := senses→ current location
  var visitStr := wall→ ask string("Which city would you like to v...")
  var visitLoc := locations→ search location("", "", visitStr, "")
  maps→ open directions("", currLoc, "", visitLoc)
}
```



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bing
Unternehmensname oder Kategorie
Standort oder nur nach Standorten suchen
Routenplaner
Meine Orte
Straße
Vogelperspektive
Verkehr
Vollbild
Welt • Frankreich • Champagne-Ardennen
Ziel hinzufügen
Optionen anzeigen
Löschen
Los

Routenplaner

A in der Nähe von Krummgasse 2, 56179 Valle

B in der Nähe von 15 Pont Neuf, 75001 Paris

545,1 km, 4 Std. 42 Min. Fahrt

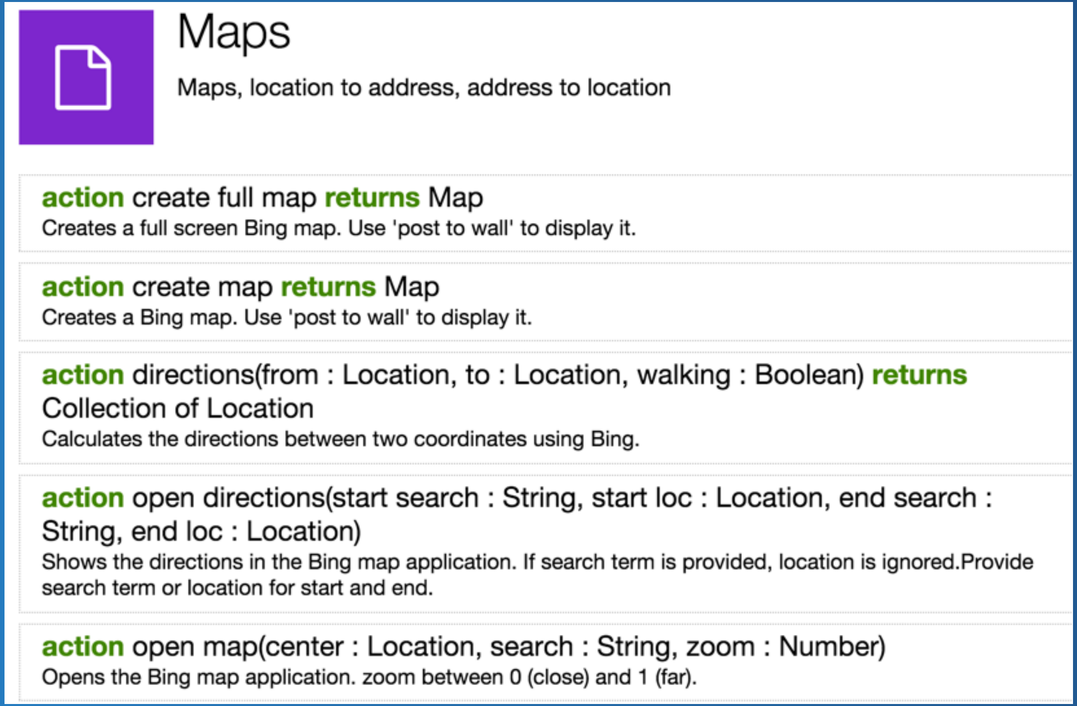
5 Std. 26 Min. mit Verkehr

Route basierend auf dem Verkehr anzeigen

A in der Nähe von Krummgasse 2, 56179 Vallendar

Maps

Maps utilize Locations to provide powerful Bing maps for the user to interact with



Maps

Maps, location to address, address to location

action create full map **returns** Map
Creates a full screen Bing map. Use 'post to wall' to display it.

action create map **returns** Map
Creates a Bing map. Use 'post to wall' to display it.

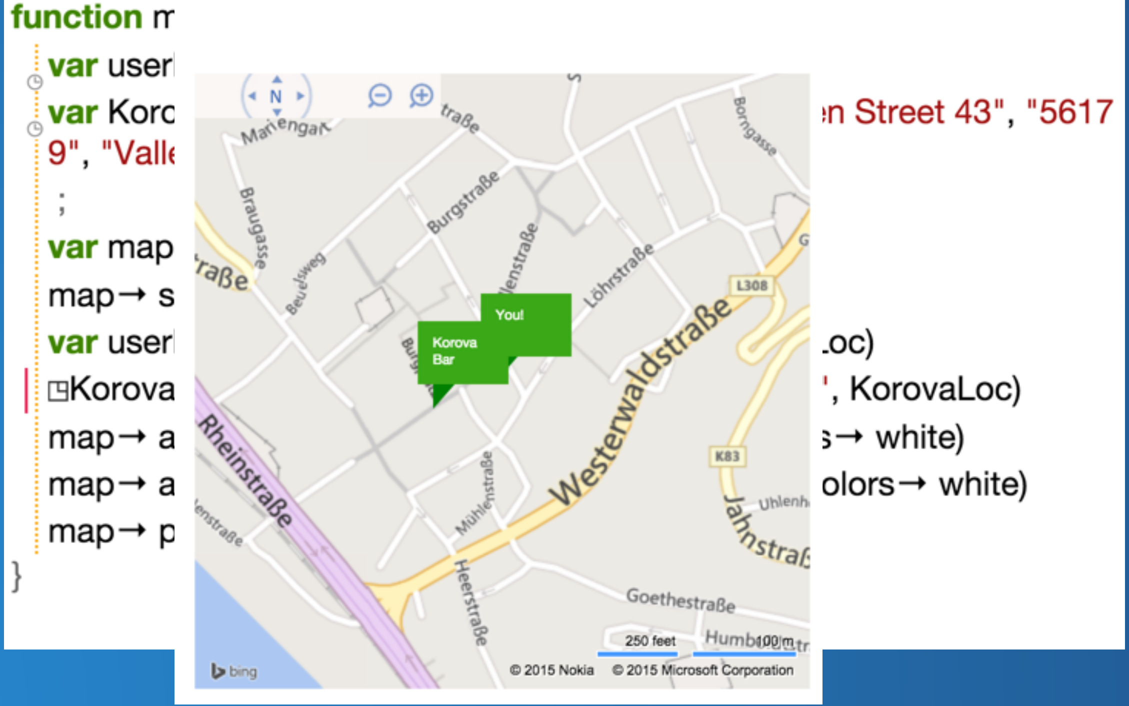
action directions(from : Location, to : Location, walking : Boolean) **returns** Collection of Location
Calculates the directions between two coordinates using Bing.

action open directions(start search : String, start loc : Location, end search : String, end loc : Location)
Shows the directions in the Bing map application. If search term is provided, location is ignored.Provide search term or location for start and end.

action open map(center : Location, search : String, zoom : Number)
Opens the Bing map application. zoom between 0 (close) and 1 (far).

Pushpin

Pushpins allow us to associate a name with a location



```
function m
  var user
  var Korc                                  n Street 43", "5617
  9", "Valle
   ;
  var map
  map→ s
  var user                                  oc)
  Korova                                    ', KorovaLoc)
  map→ a                                    s→ white)
  map→ a                                    olors→ white)
  map→ p
}
```