## Code Document

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## 1 Global Variable

- map. Global google map.
- heatmap. All heatmap layals.
- current\_heatmap. Currently used heatmap whose map setted to variable map.
- flag. Used to control state of play.
- time. All time data.
- current\_time. Currently used time.
- types. current selected types.
- marker. Marker showing storm position and state.
- position. All positions for marker use.
- deltalat, deltalng. Value used to point out the step of marker moving.

#### 2 Function

#### 2.1 transfer(time)

Transform the form of time. input:

- time. Array represent datetime.
- output:
- anonymous. String could represent datetime.

## 2.2 stop()

Stop animation when triggered. Influenced global variable:

• flag.

#### 2.3 hurricane\_change()

Update hurricane location and information when triggered. Influenced global variable:

• deltalng, deltalat

# $2.4 ext{ select\_onchange}()$

Update necessary information including hurricane, type, time when triggered.

### 2.5 initMap()

Initialize map. Influenced global variable:

• map

## 2.6 play()

Start animation when triggered.