TEAM ZULU – Sprint 1

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A. URL of GitHub Project Board
   https://github.com/users/mcdoul/projects/1/
B. User Stories

- Calories Calculation – As a person who cares about his/her own health, I would like to know about how many calories that I have burnt based on my movement, so that I could better take control of my health
- Travel History Visualization – As an enthusiastic traveler, I would like to keep track of where I have been every single day in the past, so that I can better plan where I can visit in the future and to remind myself of those wonderful places that I have been to
- Place Analysis Dashboard – As a disciplined person, I would like to understand the frequency of me going to specific places within a given time intervals (e.g. How many days a week do I usually go to a grocery store? How many days a month do I go to restaurants? How frequent do I go to the gym? etc.), so that I can have a better sense on where I have spent my time and money to.

C. Initial Design
   a. Inputs: Data will mainly be imported from **storyline json** file, and further data cleaning and manipulation are required for fulfilling different user stories abovementioned. In order to fulfill specific function in user stories, additional inputs are also needed and will be specified as follows:
      - Calories Calculation: **calories burning formula** is needed, so that we can calculate calories burnt on a specific day based on the **movement type** and **time elapsed**, in which these two could be obtained from **storyline json file**.
      - Travel History Visualization: an **external map API** might be needed, along with **place, coordinates, time, and movement info** from the **storyline json file**.
      - Place Analysis Dashboard: **place** and **time** info from the **storyline json file**.
   b. Outputs:
      - Calories Calculation: **calories burnt** per day.
      - Travel History Visualization: cleaned or/and manipulated data incorporated with external map API to render a single-day travel history on frontend. To be specified further.
      - Place Analysis Dashboard: a dashboard where user can specify a time

interval and/or place categories, showing analysis result on the most frequently visited places given the filters requested. To be specified further.

c. Major Abstractions:
   - Main class - Data: will be the class the import the storyline json file, and execute necessary data cleaning/manipulation process for fulfilling other classes below.
   - CaloriesCalculator class: obtain data from the Data class above, and perform function/methods that fulfill user stories.
   - TravelHistoryVisualization class: same as above.
   - PlaceAnalysisDashboard class: same as above.

d. Programming Language and External Libraries Identified:
   - Java, main language
   - Spring, main framework to build our application
   - Bootify, build up Spring Boot Prototypes
   - Bootstrap, frontend framework
   - Other frontend languages (to be decided)
   - Map API (to be decided)
   - Data visualization tools (to be decided)