Team No: 1
Name of the App: Travel App

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Objective of the Experiment

We want to ensure that congestion information is easily accessible and available for users finding directions on our app.

Our application combines direction services with crowdsourced congestion reports. If users finds retrieving congestion reports a hassle or too time consuming, they might be less inclined to do so, therefore reducing the value of our app.

Hypothesis

Users are able to view congestion reports after searching for directions on our system without a significant increase in total time taken.

Independent Variable (list variables)

1. **Find directions**
2. **Find directions then view congestion reports**

Dependent Variable (list variables)

- **Efficiency, i.e. time taken to choose the best route**

Experiment Design

Design: Between subjects

Control group G1*: Find directions

Experimental group G2*: Find directions and then view congestion reports

*Same number of users in each group so that the experiment will be fair.

Control Group G1:
Find directions

Experimental Group G2:
Find directions and then view
congestion reports

Independent Variable 1

Independent Variable 2

Subjects 1 to 5

Subjects 6 to 10
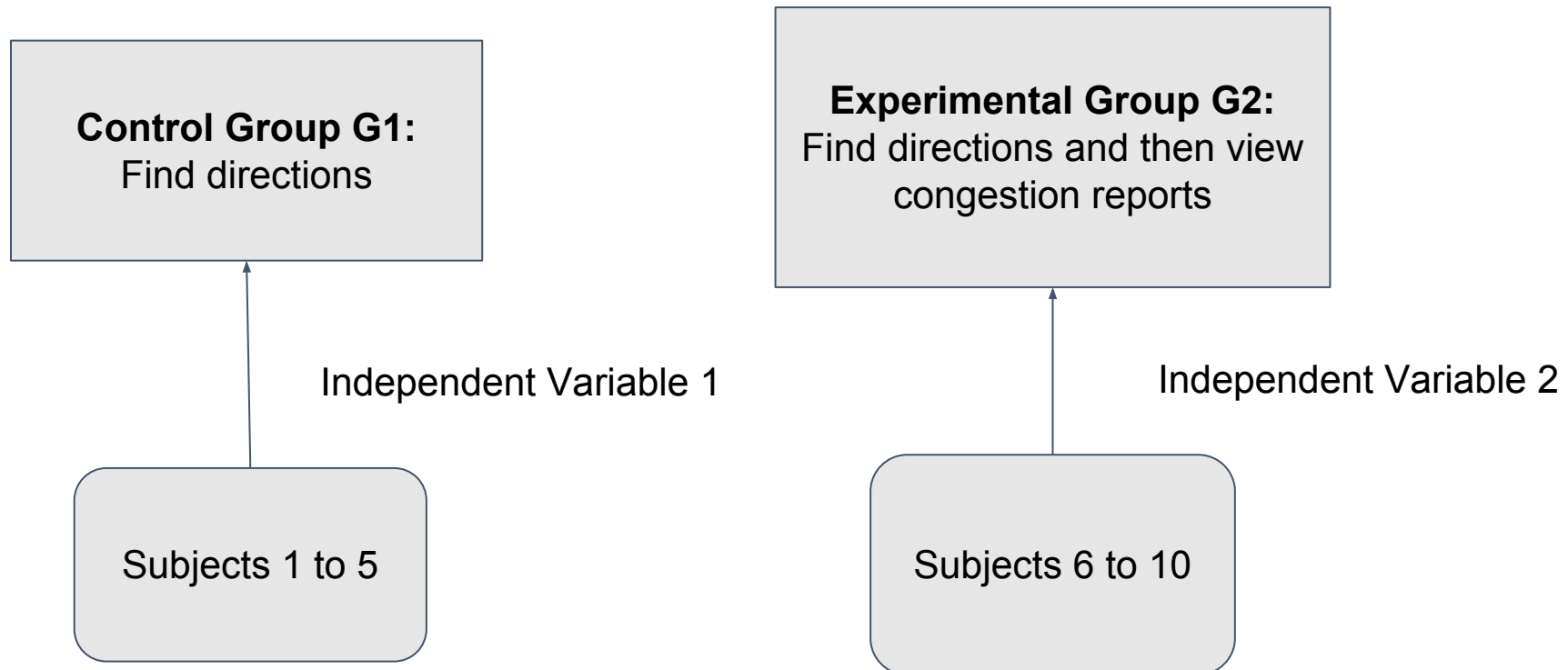
Control Variable (list any two)

✓ **Location inputs**

✓ **Congestion list**

Confounding Variable (list any two)

✓ **Participant's proficiency with navigation systems**

✓ **Congestion reports not up-to-date**

✓ **Google Map API's service time**

What data will be collected

✓ **Time taken to complete task**

How it will be collected

✓ **Each participant to input location for direction search**
✓ **Log current time on console upon focus on input textbox. (G1 and G2's start time)**
✓ **After directions results returned, log time onto console (G1's end time)**
✓ **G2 participant continues by going to view congestion report**
✓ **Log time when congestion reports are displayed to user. (G2's end time)**
✓ **Derive total time for each participant based on their start and end time.**

Type of data

✓ **Interval/ Ratio**

Statistical test to be used

✓ **Parametric Test - Independent t-test**

Justify (list 2 reasons)

✓ **Most suitable option for ratio data**

✓ **Easily characterize data by measures of central tendency (mean, median, standard error)**