Università
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Experimentation & Evaluation - 2023

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Assignment 2: camelCase *vs* kebab-case

Studies performed in natural language reading show that people read better (*i.e.,* 20% faster) when an explicit separator is used between words. It does not matter the type of separator, it could be a white space or a special symbol. The overall message is that *readingthistext* is more difficult than *reading_this_text* or *reading this text.*

Here comes our question: *Is this finding valid for source code as well?* In other words, can we speedup code reading using a specific separator when writing composed identifiers (*i.e.,* identifiers featuring more than one word)?

Design a controlled experiment to answer such a research question. In particular, you must investigate **whether people read faster identifiers written in camelCase or in kebab-case**. Following there is a suggested experimental design. You are free (and encouraged) to improve it.

Suggested Design and Steps to Perform

1. Create a tool (we suggest a web application, but it's up to you) to run your experiment:
   - The welcome page of the tool shows clear instructions to the participants and explaining the goal of the experiment and what they are supposed to do.
   - After the instructions page, it features a form allowing to collect demographics about participants. This can be useful during data analysis. Which demographics to collect is up to you.
   - Show to the participant a short sentence composed by two or more words, such as "move south".
   - Then, show a number of identifiers written using one of the two styles (*i.e.,* camelCase or kebab-case). One of the shown identifiers correspond to the sentence previously visualized, the others are just distractors. For example, you can show "move-source", "move-south", "more-south", and "mover-sound". Keep track of the time needed to select the identifier and of whether it was correctly or wrongly picked by the participant.
   - Ask each participant to perform *n* of this tasks, half of which involving camelCase and half involving kebab-case style.
   - The answers are stored in a `csv` file, together with the time needed by each participant to perform each task.
2. Invite people to participate (include your friends, us). Try to collect at least 10 participants. Me and Stefano must be invited by every group using one of the options described below. There are three ways to collect the data:
   (a) You deploy a web application on a server and share the link with the participants you want to invite. This is the best option but not everyone has a server on which the deployment can be done.
   (b) You send the program to the participants together with instructions on how to run it and ask the participants to send you back the produced `csv` file once they complete the experiment.
   (c) You ask participants to perform the experiment directly on your laptop.
3. Analyze the collected data: Are people more effective when reading in camelCase or in kebab-case?
4. Summarize your experiment and its findings in the experiment report by making a copy of this template: `https://docs.google.com/document/d/15bMj3uRYM_1-wCPNZNBcXN3XaaIgWIdU_XxSeQloqb4/edit?usp=sharing`.

Deadline for submission: Friday 22 December 2023 @ 18:00. Submit your report on iCorsi.