Screening Survey (Part 1)

Details:

Title: Package and Code Search in Node.js (Part 1, Screening Survey)
Which devices can participants use to take your study: Desktop
Does your study require any of the following: Audio, Microphone, Download Software

Pre-screening:

Fluent languages: English
Computer Programming: Yes
Video call interview: Yes
Approval Rate: Minimum Approval Rate: 95, Maximum Approval Rate: 100

Survey

Section P (Prescreening Validation)

P1: Do you have computer programming skills?

☐ Yes
☐ No
☐ I don't know

P2: Are you willing to participate in a face to face video call interview?

☐ Yes I would be willing to take part in a face to face interview over a video call
☐ No I would not be willing to take part in a face to face interview over a video call

Section D (Demographics)

D1: How many years experience do you have programming in Node.js?

D2: What is your main profession?

D2: How often do you program in Node.js?

☐ Never
☐ Once every few months
☐ Once per month, on average
☐ Once per week, on average
☐ Once per day, on average
☐ Multiple times a day

Section K (Programming Knowledge)

K1: Which of these websites do you most frequently use as aid when programming?

☐ Wikipedia
☑ Stack Overflow
☐ LinkedIn
☐ MemoryAlpha
☐ None of the above

K2: Choose the answer that best fits the definition of a recursive function.

☐ A function that runs for an infinite time
☑ A function that calls itself
☐ A function that does not require any inputs
☐ A function that does not have a return value
☐ A function that can be called from other functions
☐ I don't know

K3: Choose the answer that best fits the description of a compiler's function.

☐ Refactoring code
☐ Connecting to the network
☐ Aggregating user data
☑ Translating code into executable instructions
☐ Collecting user data
☐ I don’t know

K4: Which of these values would be the most fitting for a Boolean?

☐ “abcd”
☐ 20
☑ False
☐ “True”
☐ I don’t know

Code Snippet 1:

```
function f1(in){
  var out = "";
  var length = in.length;
  for(var i=length-1; i>=0; i--){
       out+= in[i];
  }
  return out;
}

function main(){
  console.log(f1("Hello World"));
}
```

K5: Look at the above code (Code Snippet 1), what is the parameter of the function?

☐ out
☐ var length = toCopy.length
☐ var i=0; i<length; i++
☑ in
☐ Outputting a string
☐ I don’t know

K6: What is the output of the above code snippet (Code Snippet 1)?

☐Hello World
☐ Hello World 10
☐ World Hello
☑ dlroW olleH
☐ I don't know

Code Snippet 2:

```
var f = [];
function testfunction (n)
 {
  if (n < 1)
       return 0.1234;
  if (0.98<=f[n])
       return f[n]*321;
  return f[n] =
testfunction(n/2-1.234) * n;
}
console.log(Math.round(testfunction(12
3)))
```

K6: Execute the above code in Node.js, what is the result?

Section A (Attention Check)

When asked your favourite programming language, answer "Java".

A1: Based on the above text, what is your favourite programming language?

☐ Node.js
☐ C++
☐ Java
☐ Python
☐ Other… (custom)

Description:

We are lookings for Node.js developers to fill out a 2-5 minute survey that will assess suitability for a second, video interview study, where you will complete 2 simple programming tasks.

Requirements:

- Must have programming skills
- Must be willing to take part in a video interview
- Please have Node.js installed, or access to Node.js, as you will be asked to run code.

You will be asked to return your spot if you do not meet the prescreening requirements.

About this Study

We have developed a tool to search for NPM packages and example code snippets, which also allows developers to install and try out these packages and code snippets in a REPL environment. Our tool is based on the Node.js REPL, the same one you can access using the 'node' command (See here for more information on the Node.js REPL: https://nodejs.dev/learn/how-to-use-the-nodejs-repl).

The aim of our study is to see how our tool aids Node.js developers in finding NPM packages and code snippets, compared to traditional editors and online search. The results of this study will be published in a research paper.

You can contact me, Brittany Reid, at brittany.reid@adelaide.edu.au, if you have any questions. I am a PhD student at the University of Adelaide.

Part 1 (This survey)

We are looking for Node.js developers to fill out a 2-5 minute survey, which will assess your suitability for a second study. The questions will ask about your programming experience, programming knowledge and ability to take part in a user study video call session. The details of the second study, part 2, are described below. Suitable participants will be contacted through Prolific and invited to the second study, where you will schedule a session.

Part 2 (1 hour scheduled video call)

The second part of our study involves Node.js developers undertaking an hour long session where you will complete two simple programming tasks. Developers will be asked to complete a programming task using a basic editor and internet access, to find NPM packages online, and a second task using our tool. The sessions will take place remotely using AnyDesk and Skype. You will need to install this software and remote into a VM that has been set up for the session. Your session (audio and screen recording) will be recorded and used for research purposes.

Participants are asked to use their Prolific ID as their skype name if they prefer. You will not need to use a camera.

Part 2 Pay: £7.50/hr