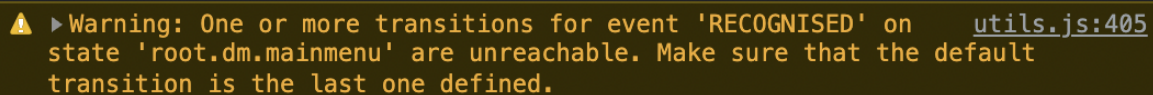# Lab II. Basic dialogue management
Errors and limitations

This lab assignment consisted of designing the dialogue for an app creating meetings based on a flowchart. The dialogue that I created is functional but still has some errors and limitations. This small report will describe those errors and limitations how I solved them or how I think they could be solved.

First, one thing I realized way too late was that my onError transition in the invocation does not work as it is supposed to. The onError has "failure" as target and once it goes into "failure", it should be stated that the search was not successful and then it would go back to what I've named "mainmenu" for the user to be able to say something new to search for. I tried solving this by directly having "mainmenu" as target on the onError transition and by defining conditions under it but was not successful. I decided to keep my code this way, with "failure" as target because I think it would be more clear for the user to hear that who they were searching for wasn't found (for whatever reason).
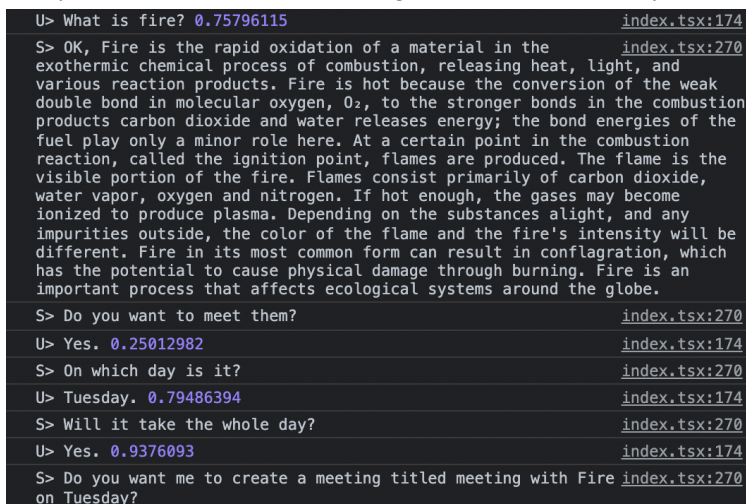
Another issue that kept coming up that I wasn't able to solve properly was this warning message:

```
⚠ ▶ Warning: One or more transitions for event 'RECOGNISED' on     utils.js:405
    state 'root.dm.mainmenu' are unreachable. Make sure that the default
    transition is the last one defined.
```

The app still works when getting this warning but I looked further into the issue to get rid of the warning. The solution I found for this was to delete the ".nomatch" as an event on "RECOGNISED" on "mainmenu". The reason why this warning arrives is because the user could say anything that they want to search for since I am assigning what has been said to "celeb" and the system would then move on to "testermenu" no matter what has been said. This leads us to my next error/limitation:

Instead of saying the name of a celebrity, anything could be said and the app would look it up and ask "Do you want to meet them?". E.g. if the user would say "what is fire?", this would be the output:

```
U> What is fire? 0.75796115                              index.tsx:174
S> OK, Fire is the rapid oxidation of a material in the  index.tsx:270
exothermic chemical process of combustion, releasing heat, light, and
various reaction products. Fire is hot because the conversion of the weak
double bond in molecular oxygen, O₂, to the stronger bonds in the combustion
products carbon dioxide and water releases energy; the bond energies of the
fuel play only a minor role here. At a certain point in the combustion
reaction, called the ignition point, flames are produced. The flame is the
visible portion of the fire. Flames consist primarily of carbon dioxide,
water vapor, oxygen and nitrogen. If hot enough, the gases may become
ionized to produce plasma. Depending on the substances alight, and any
impurities outside, the color of the flame and the fire's intensity will be
different. Fire in its most common form can result in conflagration, which
has the potential to cause physical damage through burning. Fire is an
important process that affects ecological systems around the globe.
S> Do you want to meet them?                             index.tsx:270
U> Yes. 0.25012982                                       index.tsx:174
S> On which day is it?                                   index.tsx:270
U> Tuesday. 0.79486394                                   index.tsx:174
S> Will it take the whole day?                           index.tsx:270
U> Yes. 0.9376093                                        index.tsx:174
S> Do you want me to create a meeting titled meeting with Fire index.tsx:270
on Tuesday?
```

I couldn't find any information on if this is something I could handle on my end but if it is, it may be related to the other errors that I mentioned above, that the onError transition doesn't work properly and that anything that isn't in the const grammar could be said on the mainmenu and would then be passed on to the testermenu.

A limitation that I ran into when doing this assignment is if the user chooses to search for a celebrity and then go on creating a meeting with that named celebrity. When coming to one of the final states in the flowchart where the system asks "Do you want me to create a meeting titled….?" and if the user then doesn't say anything affirmative, it now goes straight back to "what is it about?", instead of asking about the celebrity again. This was how the flowchart was done and how I followed it but in the way I implemented it, it doesn't seem that it would be possible for it to go back to "Do you want to meet them?". This is because I assign the celebrity name to "{context.title}" which is the same as if another non-celebrity meeting would be created. The only fix I can imagine for this issue at the moment is for it to start over from the beginning of the dialogue if the user says "no" to the final question.

Additionally, some more limitations were discovered when I asked my roommates to try out the app for me. Previously I had only had weekdays as possible answers to the questions "on which day is it?" so when my roommate said they wanted to create a meeting tomorrow, it was not possible. Same thing applied for when asking what time the meeting would occur. At first I had only defined e.g. "3" or "At 3:00", but then my roommate said "At 2 pm" it was not recognized by the app. I have updated the grammar with these examples but I'm sure there are more limitations similar to this, that people can express themselves in many different ways that I haven't implemented in this app.