

Main limitations of the app:

### 1. Only accepts one-word user input

If the user says a full sentence, such as “I want to meet with Vlad”, the system is not able to actually extract the name “Vlad” out of that sentence. Same goes for extracting date and time.

**FIX:** Using regex to parse through some basic sentences.

- a) name regex : `((?<=(meeting |meet |with )) [A-Z] [a-zA-Z]+ | ^ [A-Z] [a-zA-Z]+ $)` , which allows for sentences where the words “meet” or “with” precede the name.
- b) day regex :  
`Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday` , which catches each weekday in the string
- c) time regex: `[0-9]{1,2}` , which matches the first 1 or 2 digit number

While these solutions still miss some cases, they allow the user to speak full sentences when providing the information.

### 2. Doesn't distinguish between AM/PM time

In the basic implementation, I can only give the time by saying a number to the program. If I say “10AM”, it will not be able to find this in the grammar, and will consider this input incorrect.

The regex fix from issue 1 allows me to say 10AM or 10PM and the system is able to parse that. But this is only a partial fix : the system still

### 3. Errors with non-english/uncommon names

One problem I had was that often my pronunciation of Tal was picked up by the ASR as “Tall”, which meant I wasn’t able to set up a meeting with him. Imagining we add more names, this could become a big issue where the program doesn’t

### 4. Endless looping

If the user is in a state that asks for something, i.e. the person we want to meet with, if the user’s input is not correct the program will just loop forever in that state.

### 5. Repeated code

The NoInput, Ask and Wrong{Name,Day,Time} states repeat the same logic across the code.

**FIX:** To make the abstraction for NoInput, I first created a NoInput state in the top level of the DM. Then, I grouped all the dialogue related states into a big Dialogue state, which contains a history state. This way I am able to invoke NoInput, emit the error message, and then come back to the last visited state of the dialogue by accessing Dialogue.hist.

**Remains an issue:** Ask and Wrong{Name,Day,Time}. These states have some differences between them and if I was to abstract away their logic, I would need to pass parameters to them. I didn’t figure out how to do that.