Lecture 4: State Machines

Object Manipulation and Task Planning

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1 FlexBE

- Available and actively developped in ROS2.
- Has a graphical user interface.
- Allows us to pause the execution for operator involvement.
- Need both the execution engine (behaviour engine) and the FlexBE app (GUI).
- One folder that stores the behaviours, and one folder that stores the states.
- It will initialize a git repository in this folder, remove the .git folder.
- If we only run the app, we can only program the states, we cannot execute them.
- We can use failed messages from e.g. moveit to do behaviour design based on it.

2 Behaviour design

FlexBE works on top of the motion primitives, which is typicaly given through the topics and messages. This abstracts further away from the hardware, and makes it easier for the operator to work with.
We need a coordinated set of actions. Can also be done with behaviour trees or flowcharts.

- States are referred to as blobs.
- Some values might change at runtime, this needs to be taken into account.
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