Robot Programming Study Questionnaire

* Required

1. **Participant number** *

_____

2. **Age** *

_____

3. **Gender** *

Mark only one oval.

- ◯ Female
- ◯ Male
- ◯ Prefer not to say
- ◯ Other: _____

4. **Main field of study** *

Mark only one oval.

- ◯ Business, Management, and Law
- ◯ Earth and Environmental Sciences
- ◯ Engineering
- ◯ Geography, Urban and Regional Planning
- ◯ Health Sciences, Life Sciences, and Chemistry
- ◯ Mathematics and Computer Science
- ◯ Physics and Materials Science
- ◯ Other: _____

5. **What is your level of familiarity with programming languages?** *

Mark only one oval.

- ◯ 1 - No experience
- ◯ 2 - Novice: you have experience with MS Word, Excel, PowerPoint, etc.
- ◯ 3 - Intermediate: you have taken a programming course before (<2 year experience)
- ◯ 4 - Advanced: you are currently pursuing a degree in Computer Science (>=2 years experience)
- ◯ 5 - Expert: you have completed a degree in Computer Science

6. **What is your level of familiarity with symbolic planning languages (e.g. STRIPS, PDDL)?** *

   Mark only one oval.

   - ◯ 1 - No experience
   - ◯ 2 - Novice: you have heard of them before but never used them.
   - ◯ 3 - Intermediate: you have taken a course before
   - ◯ 4 - Advanced: you have worked on a project before (<2 years experience)
   - ◯ 5 - Expert: you are actively working on a project (>=2 years experience)

7. **Have you previously programmed a robot?** *

   Mark only one oval.

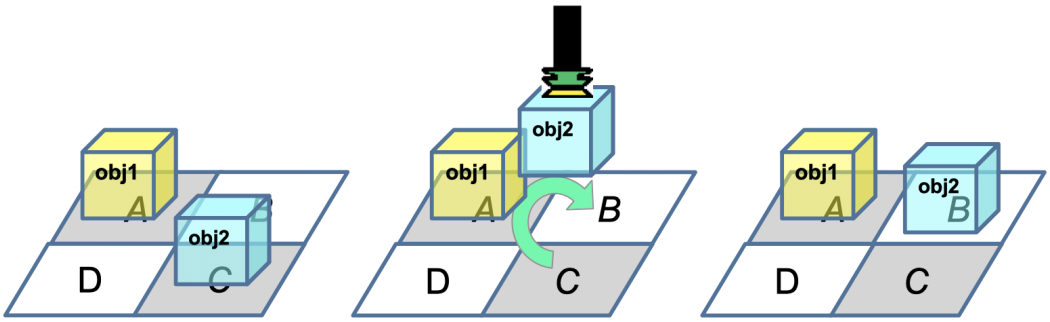
   - ◯ Yes
   - ◯ No

8. **If yes, what kind of robot and which platform/programming language did you use?**

Concepts and terminology

The following questions are to make sure you understood the concepts needed for the next tasks. Try to answer what seems correct.

Observe the image sequence below describing an action to move an object.

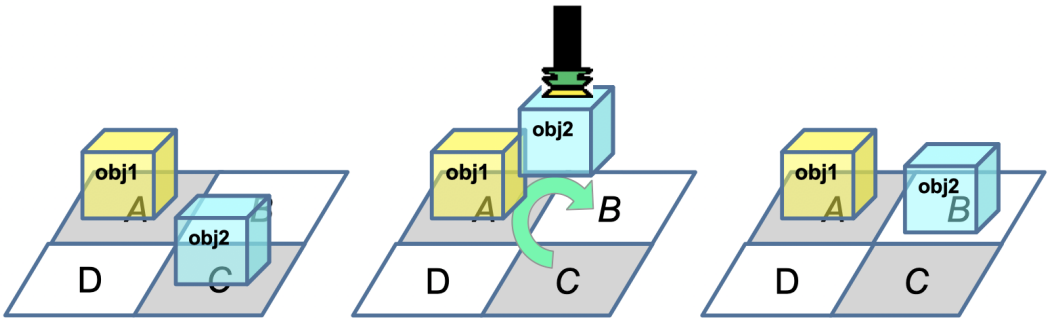


9. **Which action corresponds to the above described move action?**

   Mark only one oval.

   - ◯ move(obj1, posC, posB)
   - ◯ move(obj2, posC, posB)
   - ◯ move(obj1, obj2, posC, posB)
   - ◯ move(obj1, obj2, posC, posB, posA, posD)

(same action as above)

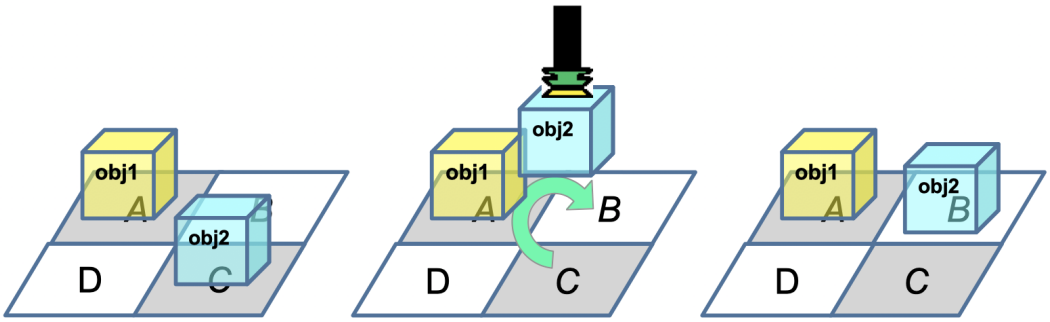


10. **Tick all predicates that are required as preconditions for the given move action. Hint: tick only those that are necessary for the given action** *

Check all that apply.

- [ ] obj1 is clear
- [ ] obj2 is clear
- [ ] obj1 is on posA
- [ ] obj2 is on posC
- [ ] posA is not clear
- [ ] posB is clear
- [ ] posC is not clear
- [ ] obj1 is stackable on posA
- [ ] obj1 is stackable on posB
- [ ] obj2 is stackable on posB
- [ ] obj2 is stackable on posC

(same action as above)

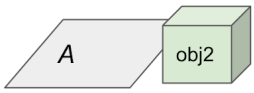


11. **Tick all predicates that are required as effects for the given move action** *

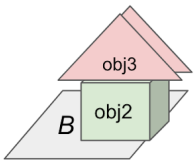
Check all that apply.

- [ ] obj1 is on posA
- [ ] obj2 is on posB
- [ ] obj1 is clear
- [ ] obj2 is clear
- [ ] posA is not clear
- [ ] posB is not clear
- [ ] posC is clear
- [ ] obj1 is not on posA
- [ ] obj2 is not on posB
- [ ] obj2 is not on posC

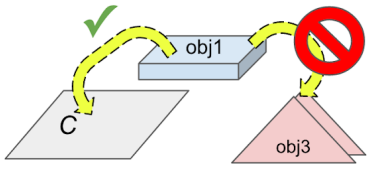
Remember the 3 predicates to describe a state. Examples are shown below.



is clear
posA **is clear**
obj2 **is clear**



is on
obj2 **is on** posB
obj3 **is on** obj2



is stackable
obj1 **is stackable on** posC
obj1 **is not stackable on** obj3

12. **For any given state, which two conditions can never be true at the same time?** *

Mark only one oval.

- ◯ (obj1 is on posA) and (posA is clear)
- ◯ (obj1 is on posA) and (posA is NOT clear)
- ◯ (obj1 is NOT on posA) and (posA is clear)
- ◯ (obj1 is NOT on posA) and (posA is NOT clear)

13. **For any given state, which two conditions can never be true at the same time?** *

Mark only one oval.

- ◯ (obj1 is stackable on posA) and (obj1 is on posA)
- ◯ (obj1 is stackable on posA) and (obj1 is NOT on posA)
- ◯ (obj1 is NOT stackable on posA) and (obj1 is on posA)
- ◯ (obj1 is NOT stackable on posA) and (obj1 is NOT on posA)

14. **If move(CUBE) describes a move action of a CUBE, tick all statements that are true.** *

Check all that apply.

- [ ] the move action is only possible for CUBE objects
- [ ] the move action is possible for CUBE and BASE objects
- [ ] the move action is possible for CUBE but not for BASE or ROOF objects
- [ ] the move action is possible for any object

15. **If move(OBJECT) describes a move action of an OBJECT, tick all statements that are true.** *

Check all that apply.

- [ ] the move action is only possible for CUBE objects
- [ ] the move action is possible for CUBE and BASE objects
- [ ] the move action is possible for CUBE but not for BASE or ROOF objects
- [ ] the move action is possible for any object