

This zip contains 6 files, including lab1_1(which will be called when we run Lab3), lab3, voice.flac, voice.sh, kinematics.py and meArm.py.

Instructions:

This program aims at making a voice controlled robotic arm.

Run **lab3** program (you only need to run lab3), the LCD display will show “Press Select button...”, press the select button, the screen will show “Recording Start”, and the user should speak movement instructions in the chart below:

“Move forward”	Move forward
“Move backward”	Move backward
“Move up”	Move up
“Move down”	Move down
“Turn left”	Turn left
“Turn right”	Turn right
“Open gripper/jaw”	Open gripper/jaw
“Close gripper/jaw”	Close gripper/jaw

and then the terminal will show “Sending request to Google TTS”, after several seconds, google will send back what you said on screen. If what you said fully match the instructions above and meanwhile the x,y,z position does not go beyond range $-195 \leq x \leq 195$, $-219 \leq y \leq 219$ and $-156 \leq z \leq 156$, then the robotic arm will follow the instructions to move. If what you said does not match the instructions or your order will make robotics arm go beyond range, then word “wrong” will be shown on Led screen.