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## How to create gestures for InMoov

There is a function, in MyRobotLab, with the InMoov service called "capture gesture" which lets you create any gestures you want.

This is how to do it:

- Set the servos at the positions you like using the cursors in MRL.
- Create a new python file on MRL.
- Say in your microphone "capture gesture".
- Confirm with "okay".
- This will create a text with all the positions of your servos in the new python file.

It should look like this:

```
inMoov.moveHead(79,100)
inMoov.moveArm("left",0,119,28,15)
inMoov.moveArm("right",0,111,28,15)
inMoov.moveHand("left",42,58,87,55,71,35)
inMoov.moveHand("right",81,20,82,60,105,113)
```

- Copy it and past it at the end of your InMoov full script.
- Give it a name.
- Add a ear command using the same name.

In this exemple, I called the gesture "hands flat":

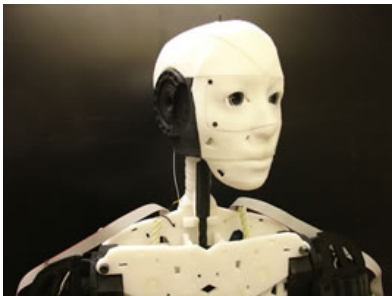
```
ear.addCommand("hand flat", "python", "handflat")
```

```
def handflat():
inMoov.setHandSpeed("left", 1.0, 1.0, 1.0, 1.0, 1.0, 1.0)
inMoov.setHandSpeed("right", 1.0, 1.0, 1.0, 1.0, 1.0, 1.0)
inMoov.setArmSpeed("right", 0.85, 0.85, 0.85, 0.85)
inMoov.setArmSpeed("left", 1.0, 1.0, 1.0, 1.0)
inMoov.setHeadSpeed(0.65, 0.65)
inMoov.moveHead(79,100)
inMoov.moveArm("left",0,119,28,15)
inMoov.moveArm("right",0,111,28,15)
inMoov.moveHand("left",10,10,10,10,10,35)
inMoov.moveHand("right",10,10,10,10,113)
```

You can capture any speeds and servos positions. "Capture gesture" doesn't create the speeds, you need to set them if you want to change the speeds in your gesture, if you don't, your gesture will use the last speeds called with the previous gesture invoked.

So, here is the inmoov.full script in which I have added the "hands flat" captured gesture.

```
#file : inmoov.py
# a basic script for starting the InMoov service
# and a function to move the right hand
# an Arduino Uno is required, additionally a computer
# with a microphone and speakers is needed for voice
```



### HELP ME EXPERIMENT



### SEARCH

### MEMBER ACTIVITIES



Dwayne Williams uploaded a new picture: opencv\_fd\_1.jpg  
18 hours, 6 minutes ago



Rob is standing proud as a test bot for Grog. He is very pleased to be a part of enhancing the Inmoov Nation.



Fred uploaded a new picture: Possible spring for...  
1 day, 16 hours ago



Maybe a possible spring for tendons?

# contr  h synthesis

# ADD SECOND STAGE CONFIRMATION

# instead of saying: you said... it would say: did you say...? and I would confirm with yes or give the voice command again

# face tracking in InMoov ... activated by voice ...

```
inMoov = Runtime.createAndStart("inMoov", "InMoov")
```

```
rightSerialPort = "COM8"
```

```
leftSerialPort = "COM7"
```

```
cameraIndex = 1
```

# attach an arduinos to InMoov

# possible board types include uno atmega168 atmega328p atmega2560 atmega1280 atmega32u4

# the MRLComm.ino sketch must be loaded into the Arduino for MyRobotLab control

```
inMoov.attachArduino("right","uno",rightSerialPort)
```

```
inMoov.attachHand("right")
```

```
inMoov.attachArm("right")
```

```
inMoov.attachArduino("left","atmega1280", leftSerialPort)
```

```
inMoov.attachHand("left")
```

```
inMoov.attachArm("left")
```

```
inMoov.attachHead("left")
```

# system check

```
inMoov.systemCheck()
```

```
inMoov.rest()
```

```
inMoov.setCameraIndex(cameraIndex)
```

# new process for verbal commands

```
ear = inMoov.getEar()
```

```
ear.addCommand("rest", inMoov.getName(), "rest")
```

```
ear.addCommand("open hand", inMoov.getName(), "handOpen", "both")
```

```
ear.addCommand("close hand", inMoov.getName(), "handClose", "both")
```

```
ear.addCommand("camera on", inMoov.getName(), "cameraOn")
```

```
# ear.addCommand("off camera", inMoov.getName(), "cameraOff") - needs fixing
```

```
ear.addCommand("capture gesture", inMoov.getName(), "captureGesture")
```

```
ear.addCommand("track", inMoov.getName(), "track")
```

```
ear.addCommand("freeze track", inMoov.getName(), "clearTrackingPoints")
```

```
ear.addCommand("hello", inMoov.getName(), "hello")
```

```
ear.addCommand("giving", inMoov.getName(), "giving")
```

```
ear.addCommand("fighter", inMoov.getName(), "fighter")
```

```
ear.addCommand("fist hips", inMoov.getName(), "fistHips")
```

```
ear.addCommand("look at this", inMoov.getName(), "lookAtThis")
```

```
ear.addCommand("victory", inMoov.getName(), "victory")
```

```
ear.addCommand("arms up", inMoov.getName(), "armsUp")
```

```
ear.addCommand("arms front", inMoov.getName(), "armsFront")
```

```
ear.addCommand("da vinci", inMoov.getName(), "daVinci")
```

```
ear.addCommand("manual", ear.getName(), "lockOutAllGrammarExcept", "voice control")
```

```
ear.addCommand("voice control", ear.getName(), "clearLock")
```

```
ear.addCommand("stop listening", ear.getName(), "stopListening")
```

```
ear.addCommand("ok", "python", "ok")
```

```
ear.addCommand("hand flat", "python", "handflat")
```

```
ear.addComfirmations("yes","correct","yeah","ya")
```

```
ear.addNegations("no","wrong","nope","nah")
```

```
ear.startListening()
```

```
def ok():
```

```
inMoov.setHandSpeed("left", 0.30, 0.30, 1.0, 1.0, 1.0, 1.0)
```

```
inMoov.setHandSpeed("right", 1.0, 1.0, 1.0, 1.0, 1.0, 1.0)
```

```
inMoov.setArmSpeed("left", 0.75, 0.75, 0.75, 0.95)
```

```
inMoov.setArmSpeed("right", 1.0, 1.0, 1.0, 1.0)
```

```
inMoov.setHeadSpeed(0.65, 0.75)
```

```
inMoov.moveHead(88,79)
```

```
inMoov.moveArm("left",89,75,93,11)
```

```
inMoov.moveArm("right",0,91,28,17)
```



Jack Phillips posted an update **2 days, 11 hours ago**

Head Connect to Torso. Using EZ Robot for programing interface for now. Printing arms and hands next. Not sure how to post video so here is the link.

<https://www.youtube.com/watch?v=czMIEDz9804&feature=c4-overview&list=UUNwIfeOZcu4UbOx3bcqJHQ>



Gael Langevin posted an update **2 days, 17 hours ago**

To Fred and others:

<https://groups.google.com/group/inmoov/attach/151d3d256a4108f0/spring%20tensioner1.jpg?part=4&authuser=0>

This is how I see a spring added to the retraction tendon. In this set up we avoid forcing on the servo either way of rotation and it also avoid losing tension in the tendons.



Fred uploaded a new picture: 69.jpg **3 days, 17 hours ago**



Fred uploaded a new picture: 71.jpg **3 days, 17 hours ago**



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```
inMoov.moveHand("left",92,106,4,0,0,34)
inMoov.moveHand("right",86,51,133,162,153,180)
```

```
def handflat():
    inMoov.setHandSpeed("left", 1.0, 1.0, 1.0, 1.0, 1.0, 1.0)
    inMoov.setHandSpeed("right", 1.0, 1.0, 1.0, 1.0, 1.0, 1.0)
    inMoov.setArmSpeed("right", 0.85, 0.85, 0.85, 0.85)
    inMoov.setArmSpeed("left", 1.0, 1.0, 1.0, 1.0)
    inMoov.setHeadSpeed(0.65, 0.65)
    inMoov.moveHead(79,100)
    inMoov.moveArm("left",0,119,28,15)
    inMoov.moveArm("right",0,111,28,15)
    inMoov.moveHand("left",10,10,10,10,10,35)
    inMoov.moveHand("right",10,10,10,10,10,113)
```

Look out for indentation, python is very strict about that.  
Hope this helps

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