

MILESTONE 3 (STAGE 1) – PRELIMINARY SOLID MODEL (MODELLING SUB-TEAM)

Team Number:

Tues-19

Complete this worksheet individually before coming to Design Studio 9.

1. Take multiple screenshots of your preliminary solid model
 - You are also required to submit an IPT file of each solid model (see Submission Details section above)
 - Be sure to label model with your Name and MacID
2. Insert your photo(s) as a Picture (Insert > Picture > This Device)
3. **Do not include more than two solid modelling screenshots per page**

At the beginning of Design Studio, we will be asking that you copy-and-paste the above list into **Milestone Three Team Worksheets**. It does seem redundant, but there are valid reasons for this:

- Each team member needs to submit their screenshots with the **Milestone Three Individual Worksheets** document so that it can be *graded*
- Compiling your individual work into this **Milestone Three Team Worksheets** document allows you to readily access your team member's work
 - This will be especially helpful when completing **Stage 3** of the milestone

Team Number:

Tues-19

Name:	MacID
<i>Insert screenshot(s) of your model below</i>	

*Limit screenshots to no more than 2 per page. For additional screenshots, please copy and paste the above on a new page

MILESTONE 3 (STAGE 2) – PRELIMINARY PROGRAM TASKS (COMPUTATION SUB-TEAM)

Team Number:

Tues-19

Complete this worksheet individually before coming to Design Studio 9.

1. Take multiple screenshots of your code
 - You are also required to submit a Python (*.PY) file of your code (see Submission Details section above)
 - Be sure to label your tasks with your Name and MacID
2. Insert your photo(s) as a Picture (Insert > Picture > This Device)
3. **Do not include more than one screenshot per page**

At the beginning of Design Studio, we will be asking that you copy-and-paste the above list into **Milestone Three Team Worksheets**. It does seem redundant, but there are valid reasons for this:

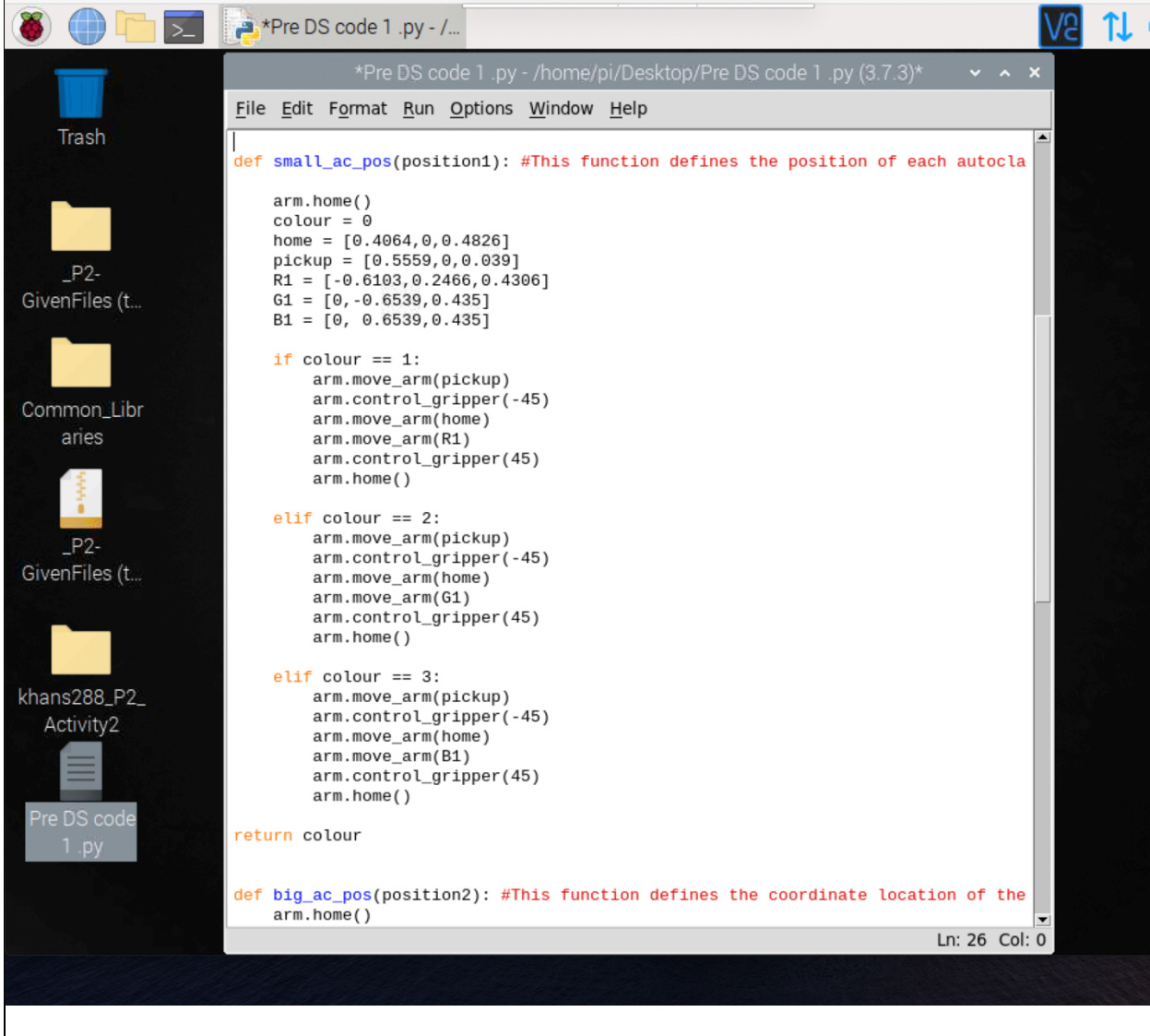
- Each team member needs to submit their screenshots with the **Milestone Three Individual Worksheets** document so that it can be *graded*
- Compiling your individual work into this **Milestone Three Team Worksheets** document allows you to readily access your team member's work
 - This will be especially helpful when completing **Stage 3** of the milestone

Team Number: Tues-19

Name: Sana Khan

MacID khans288

Insert screenshot(s) of your code below



```
def small_ac_pos(position1): #This function defines the position of each autocla
    arm.home()
    colour = 0
    home = [0.4064,0,0.4826]
    pickup = [0.5559,0,0.039]
    R1 = [-0.6103,0.2466,0.4306]
    G1 = [0,-0.6539,0.435]
    B1 = [0, 0.6539,0.435]

    if colour == 1:
        arm.move_arm(pickup)
        arm.control_gripper(-45)
        arm.move_arm(home)
        arm.move_arm(R1)
        arm.control_gripper(45)
        arm.home()

    elif colour == 2:
        arm.move_arm(pickup)
        arm.control_gripper(-45)
        arm.move_arm(home)
        arm.move_arm(G1)
        arm.control_gripper(45)
        arm.home()

    elif colour == 3:
        arm.move_arm(pickup)
        arm.control_gripper(-45)
        arm.move_arm(home)
        arm.move_arm(B1)
        arm.control_gripper(45)
        arm.home()

    return colour

def big_ac_pos(position2): #This function defines the coordinate location of the
    arm.home()
```

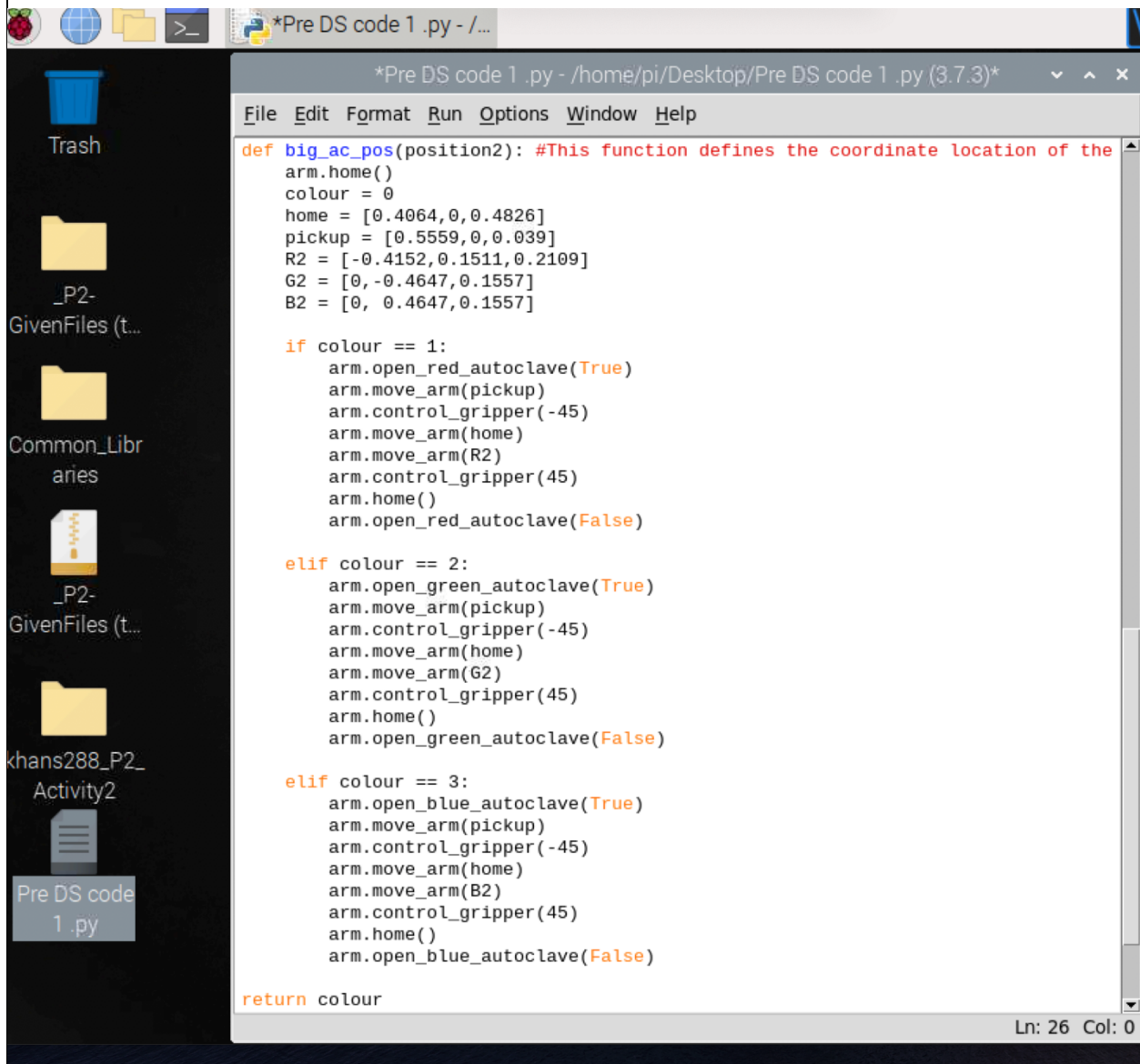
*Limit screenshots to no more than 1 per page. For additional screenshots, please copy and paste the above on a new page

Team Number: Tues-19

Name: Sana Khan

MacID khans288

Insert screenshot(s) of your code below



The screenshot shows a Raspberry Pi desktop with a dark theme. On the left is a sidebar with icons for Trash, a folder named _P2-GivenFiles (t..., Common_Libr aries, another _P2-GivenFiles (t..., a folder named khans288_P2_ Activity2, and a file named Pre DS code 1 .py. The main window is a code editor titled '*Pre DS code 1 .py - /home/pi/Desktop/Pre DS code 1 .py (3.7.3)*'. The editor has a menu bar with File, Edit, Format, Run, Options, Window, and Help. The code is a Python function named big_ac_pos that takes position2 as an argument. It defines several variables: arm.home(), colour = 0, home = [0.4064, 0, 0.4826], pickup = [0.5559, 0, 0.039], R2 = [-0.4152, 0.1511, 0.2109], G2 = [0, -0.4647, 0.1557], and B2 = [0, 0.4647, 0.1557]. The function has three conditional branches based on the value of colour (1, 2, or 3). Each branch calls arm.open_*, arm.move_arm(), arm.control_gripper(), and arm.home(). The function returns the value of colour. The status bar at the bottom right shows 'Ln: 26 Col: 0'.

```
def big_ac_pos(position2): #This function defines the coordinate location of the
    arm.home()
    colour = 0
    home = [0.4064, 0, 0.4826]
    pickup = [0.5559, 0, 0.039]
    R2 = [-0.4152, 0.1511, 0.2109]
    G2 = [0, -0.4647, 0.1557]
    B2 = [0, 0.4647, 0.1557]

    if colour == 1:
        arm.open_red_autoclave(True)
        arm.move_arm(pickup)
        arm.control_gripper(-45)
        arm.move_arm(home)
        arm.move_arm(R2)
        arm.control_gripper(45)
        arm.home()
        arm.open_red_autoclave(False)

    elif colour == 2:
        arm.open_green_autoclave(True)
        arm.move_arm(pickup)
        arm.control_gripper(-45)
        arm.move_arm(home)
        arm.move_arm(G2)
        arm.control_gripper(45)
        arm.home()
        arm.open_green_autoclave(False)

    elif colour == 3:
        arm.open_blue_autoclave(True)
        arm.move_arm(pickup)
        arm.control_gripper(-45)
        arm.move_arm(home)
        arm.move_arm(B2)
        arm.control_gripper(45)
        arm.home()
        arm.open_blue_autoclave(False)

    return colour
```

MILESTONE 3 (STAGE 3) – PUGH MATRIX (MODELLING SUB-TEAM)

Please complete this worksheet in your corresponding team document.

MILESTONE 3 (STAGE 4A) – CODE PEER-REVIEW (COMPUTATION SUB-TEAM)

Please complete this worksheet in your corresponding team document.

MILESTONE 3 (STAGE 4B) – PROGRAM TASK PSEUDOCODE (COMPUTATION SUB-TEAM)

Please complete this worksheet in your corresponding team document.