

# MILESTONE 1 (STAGE 1) – PRE-PROJECT ASSIGNMENT

Team Number: Thurs-23

Complete this worksheet individually before coming to Design Studio 7.

1. List out objectives, constraints, and functions in the space below
  - Be sure include your Name and MacID
  - Each objective/constraint/function should be typed out as a separate bullet

Name: Vaisnavi Shanthamoorthy	MacID: shanthav
<p><i>Objectives</i></p> <ul style="list-style-type: none"><li>• Easily accessible</li><li>• Lightweight</li><li>• Portable</li><li>• Small</li></ul> <p><i>Constraints</i></p> <ul style="list-style-type: none"><li>• surgical tool should be held in place in a firm manner, not moving around</li><li>• mass of container should be less than the mass of the robotic arm</li><li>• all features must be greater than 4mm</li><li>• the base of the container must fit within the desired location of the autoclave</li><li>• mass cannot exceed 350g</li><li>• objects should be no larger in width of about 80mm</li><li>• able to hold objects with width of about 150mm (less securely)</li></ul> <p><i>Functions</i></p> <ul style="list-style-type: none"><li>• Hold objects (surgical tools) securely in place</li><li>• Grip objects</li><li>• Release objects</li><li>• Pick up objects</li><li>• Rotate</li><li>• Move forward</li><li>• Transfer objects into container</li><li>• Identify the correct target location (correct autoclave bin)</li><li>• Code should terminate or continue based upon the number of objects (containers) successfully placed in the correct container</li></ul>	

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

- Each team member needs to submit their list of objectives, constraints and functions with the **Milestone One Individual Worksheets** document so that it can be *graded*
- Compiling your individual work into this **Milestone One Team Worksheets** document allows you to readily access your team member's work
  - This will be especially helpful when completing **Stage 2** of the milestone

## MILESTONE 1 (STAGE 2) – LIST OF OBJECTIVES, CONSTRAINTS, AND FUNCTIONS

**Please complete this worksheet in your corresponding team document.**

## MILESTONE 1 (STAGE 3) – MORPHOLOGICAL ANALYSIS

**Please complete this worksheet in your corresponding team document.**

## MILESTONE 1 (STAGE 4) – CONCEPT SKETCHES

Team Number: 

Thurs-23
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Complete this worksheet after having done stage 3 as a team.

1. Complete your sketches on a separate sheet of paper
  - Be sure to clearly write your Team Number, Name and MacID on each sketch
  - Do **not** include concepts for the stabilization and sterilization of the tools
  - You can sketch only the container, and do not need to sketch the Q-arm itself unless it adds to the communication of your design
2. Take a photo of your sketch
3. Insert your photo as a Picture (Insert > Picture > This Device)
4. **Do not include more than one sketch per page**

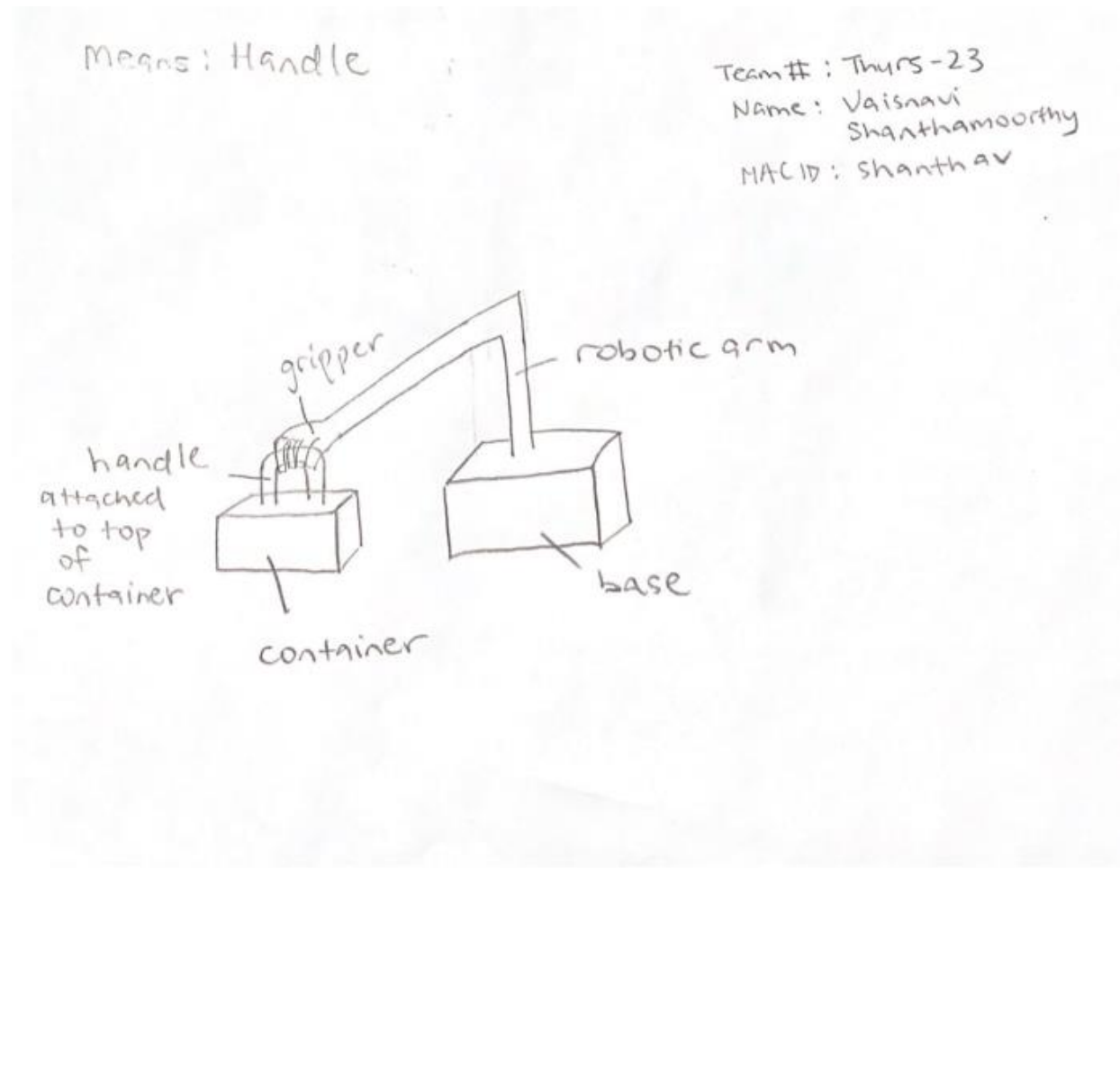
Team Number: **Thurs-23**

Name: Vaisnavi Shanthamoorthy

MacID: shanthav

*Insert screenshot(s) of your concept sketches below*

Means: Handle



\*For multiple sketches, please copy and paste the above on a new page

Name: Vaisnavi Shanthamoorthy

MacID: shanthav

Insert screenshot(s) of your concept sketches below

Means: Sensors

Means: Sensors

Team # : Thurs - 23

Name: VAISNAVI

SHANTHAMOORTHY

MACID: shanthav

