

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

Team Number: Mon-30

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: Gurleen Dhillon	MacID: dhillg25
<p><i>Objectives (attributes/behaviour design should have)</i></p> <ul style="list-style-type: none"><li>Should be easy for arm to pick up container and place is autoclave</li><li>Should be connected to muscle sensor</li><li>Should work efficiently</li><li>Should not break easily</li></ul> <p><i>Constraints (constraints)</i></p> <ul style="list-style-type: none"><li>Size of container should be small enough for arm to pick up (max width is about 80 mm)</li><li>Each tool/bin should be placed according to colour</li><li>Code must be in python</li><li>Mass must be less than 350 grams</li></ul> <p><i>Functions (functionality of design)</i></p> <ul style="list-style-type: none"><li>Arm should be able to pick up tool</li><li>Arm should securely hold surgical tool in place</li><li>Arm should be able to move container to location</li><li>Arm should be able to place container in the correct spot/autoclave bin (on top for small tools, and inside for big tools)</li><li>Should be able to open and close autoclave bin</li><li>Should be able to identify correct bin based on colour and size</li><li>Program should end when all items in place</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: 

Mon-30
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Complete this worksheet after having done stage 3 as a team.

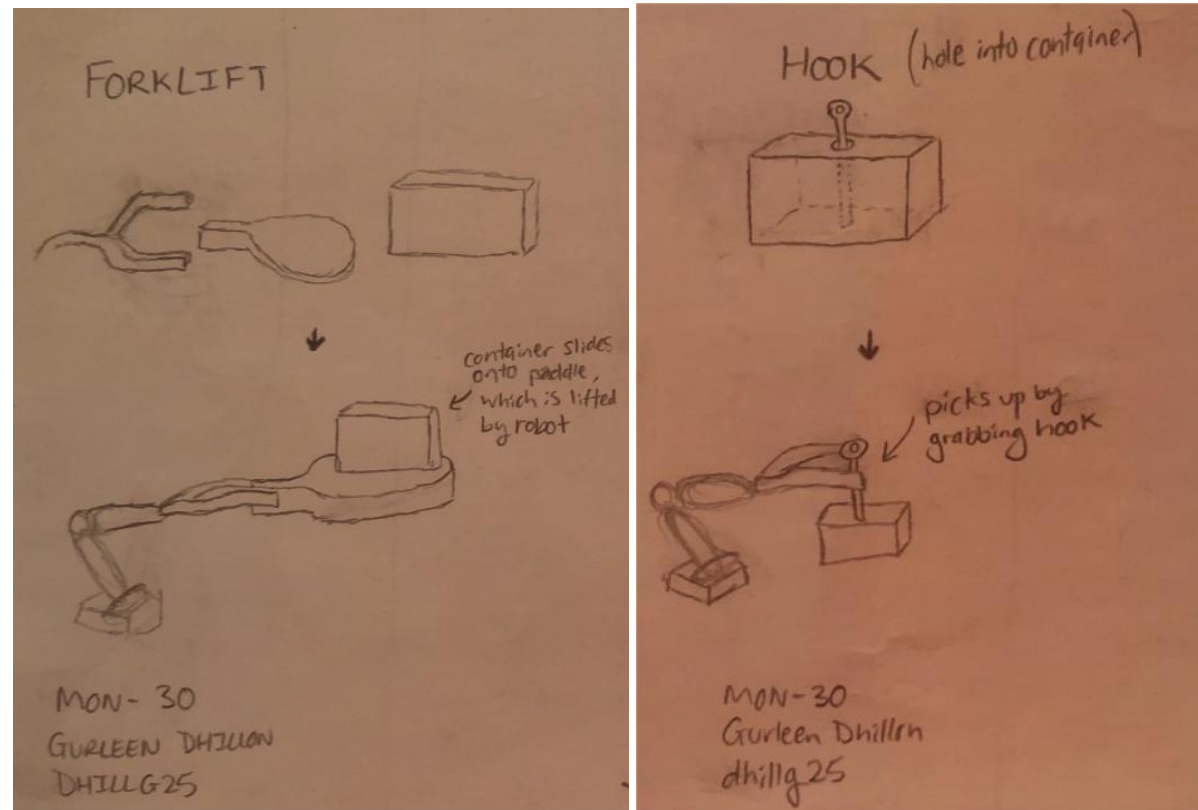
1. Complete your sketches on a separate sheet of paper
  - Be sure to clearly write your Team Number, Name and MacID on each sketch
  - Do **not** include concepts for the stabilization and sterilization of the tools
  - You can sketch only the container, and do not need to sketch the Q-arm itself unless 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: Mon-30

Name: Gurleen Dhillon

MacID: dhillg25

Insert screenshot(s) of your concept sketches below



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