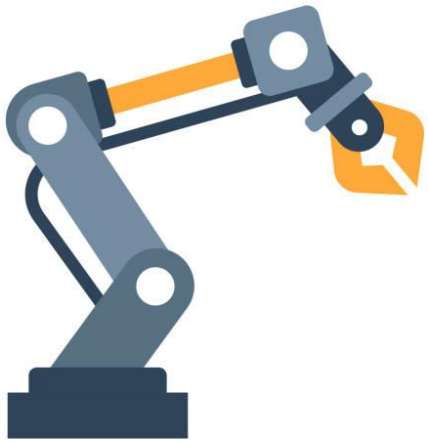
ROBOT ARM ASSEMBLY GUIDE



Team: Mechanical Team
Name: Mohammed Saad AlQarni
E-mail: mohaqarni21@gmail.com
Phone Number: 0966503702289

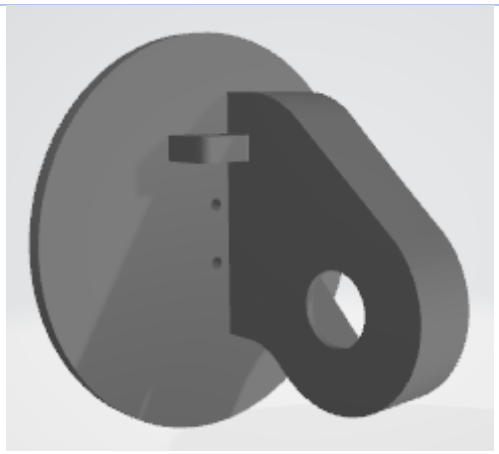
Introduction

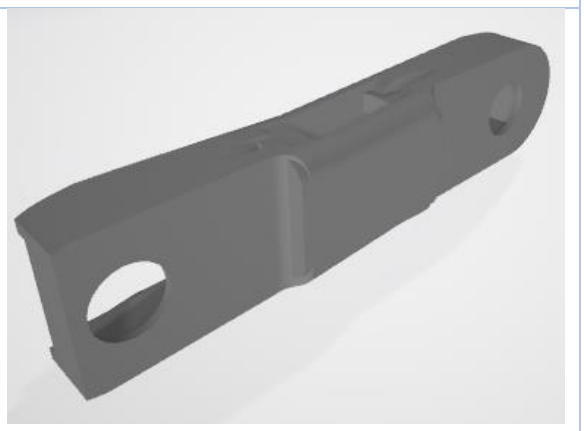
Technology has seen remarkable growth in recent years, and nowadays robot arms have been essential in many factories. Furthermore, in Smart Methods we design a robot arm for a variety of uses such as manufacturing process, robotics, educational, Sumo robot and more. In this report we will provide you with an assembly guide for the robot arm from scratch.

Design Parts

In order to design the robot arm, we use 3D drawing tools as professional programs to skitch our project parts. The program provides all tools to create a basic 3D model for each part. The table below explains and numbers each component.

Table 1: Skitch project parts

#	Part Name	Quantity	Drawing
1	Base	1	
2	Waist	1	

3	Arm 01	1	
4	Arm 02	1	
5	Gripper	1	

Assembly Plan

Every project must have an assembly plan to facilitate assembling the parts together correctly. In addition, the assembly plan means the procedures or the steps that help us to assemble the parts in our project.

Assembly Steps:

1- Make the Base fixed on the ground with the circular hole vertically.
2- Put the Waist on top of the Base vertically with the out shape to the top.
3- Set Arm 01 vertically above the Waist and make sure the circular holes are concentric.
4- Set Arm 02 vertically above Arm 01 and make sure the circular holes are concentric.
5- Set the Gripper vertically above Arm 02 and make sure the circular holes are concentric and make 90 degrees to be straight in an initial position.
6- Make sure that you end up with a robot arm like the Figure down below.

Figure 1: Robot arm in initial position

Conclusion

Reaching to the end of this report, this report enhanced our engineering skills in using effective methods. To being the designing process, we have followed certain approaches that we have learned from college. The whole report was written using technical methods that support the process of designing the project. we demonstrated the artifact components in the drawings using Cinema 4D. Therefore, all presented work is considered accurate and reliable based on these efficient methods. Next to this work, we hope this work will be supportive to those who concern about it.

References

[1] https://s-m.com.sa/index.html [Accessed 20 June 2021].

[2] https://github.com/smart-methods [Accessed 20 June 2021].