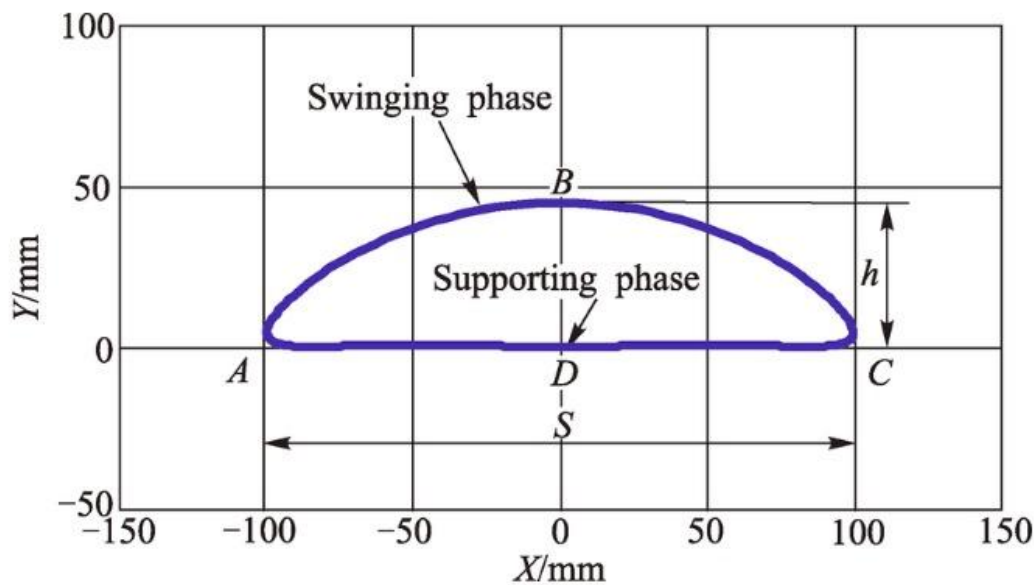


## ROBOTIC ARM TASK 2

**Note: YOU ARE FREE TO USE ANY PROGRAMMING LANGUAGE OF YOUR CHOICE.** (The most common ones are python, MATLAB)

**Q1) Consider a RR robotic arm. Make the end effector follow the blue trajectory given, such that the swing phase takes 80%, and the supporting phase (stance) takes 20% of the total time  $T$ .**

**Take suitable values of  $h$ ,  $S$ , base joint height, and  $T$  to generate the given end-effector trajectory. Also, maintain a smooth change in acceleration at any point of the trajectory. Show the final answer in the form of an animation using matplotlib or matlab.**



### Resources

#### Chapter 5 - Path and Trajectory Planning

<https://drive.google.com/file/d/1FsHJeJ7ABOO8Y7PuM90YGqpEtWyX-9WB/view?usp=sharing>

<http://people.ciirc.cvut.cz/~hlavac/TeachPresEn/55AutonomRobotics/090RobotTrajectoryGenerationEn.pdf>

#### Python-

<https://www.geeksforgeeks.org/python-programming-language/>

<https://www.w3schools.com/python/>

#### MATLAB-

<https://in.mathworks.com/learn/tutorials/matlab-onramp.html>

