**CS101: Homework #7**

This assignment is due by 11/13 for all sections.

For section 007/009, homework should send to ssv33@njit.edu

For section 011/101, homework should send to xw29@njit.edu

with a subject line read as: CS101/section HW#07

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**Quiz 3.1**

7. Plot the function \( r = 10 \cos(3 \theta) \) for \( 0 \leq \theta \leq 2\pi \) in steps of 0.01\( \pi \) using a polar plot.

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**3.7 Exercises.**

3.5 Create a polar plot of the function \( r(\theta) = \sin(2\theta) \cos(\theta) \) for \( 0 \leq \theta \leq 2\pi \).

3.14 The Spiral of Archimedes. The spiral of Archimedes is a curve described in polar coordinates by the equation

\[
r = k \theta
\]

where \( r \) is the distance of a point from the origin and \( \theta \) is the angle of that point in radians with respect to the origin. Plot the spiral of Archimedes for \( 0 \leq \theta \leq 6\pi \) when \( k = 0.5 \). Be sure to label your plot properly.