**Homework 3** (**Max Points:100) Due Date: February 4 by 11:59 pm EST**

**Instructions: Each response should be in a .py file. Submit all your code to** [**https://submitty.cs.rpi.edu**](https://submitty.cs.rpi.edu)

**Answer the following questions (You have a choice in question number 2):**

1. **Write a Python function that checks whether a passed string is palindrome or not.**

Note: A palindrome is word, phrase, or sequence that reads the same backward as forward, e.g., madam or nurses run. Hint: Remove the spaces between words first. (50 points)

1. Write a Python function to check whether a string is pangram or not.

Note : Pangrams are words or sentences containing every letter of the alphabet at least once.

For example : "The quick brown fox jumps over the lazy dog". Hint: Look at the string module (50 points)

OR

Write a Python function that calculates the total surface area of a cylinder with inputs as radius and height of the cylinder. This function must call another function that calculates the area of the base (circle). Hint: Create a function that calculates area of a circle first (with input as radius).