Part 1 @Write a Python function that computes the area of a circle (just take pi as 3.1415). Don't use input or print in this function!

@Test your function by running it in the Python interpreter

@Using the first function write a function which computes the volume of a cylinder with a given height and radius.

@Using these functions write a program which will prompt the user to enter the diameter and height of a barrel and which will print out the capacity of the barrel

def circle(r): pi=3.1415 return r\*r\*pi

def cylinder(r,h): return circle(r)\*h

def user\_input(): r=int(input("Enter a radius:")) h=int(input("Enter a height:")) print(cylinder(r,h)) user\_input()

Part 2 It is often useful to write a boolean function (that is, a function which returns a boolean value) in order to hide a complex test or condition. \*Write a Python function called "palindrome" which receives a string as an argument and returns true if the string is a proper palindrome. There is no need to be sophisticated in this (for example, no need to ignore punctuation or skip over spaces). You will need a loop and you will need to use Python string indexing to look at the individual letters in the string.

\*Now, write a function which string (which you can assume contains only one character). Have that function return true if the string contains an alphabetic character and false if it does not (a handy trick: you can use the greater-than and less-than operations on characters in Python. Which means you can write something like letter >= 'a' and have it make sense!)

\*Finally, write a program which can take any string and confirm that it's a palindrome (i.e. use the two functions together to solve the problem of showing the a string like "able was i ere i saw elba" is a palindrome despite the difference word breaks). You can still ignore uppercase/lowercase distinctions for this program