# Computer Science 1

# Program 3, Functions

# 40 Points

**Hobo Day**

A “Special Reserve” Hobo Day mug holds your favorite beverage in the shape of a hemi-sphere. Write a program to read the diameter of the hemisphere from the user and calculate the mug’s volume. Use separate functions to:

* Print directions / an intro message to the user.
* Read the mug’s diameter from the user.
* Calculate the volume in ounces.

1 in3 = 0.554113 ounces

* Convert volume to ounces
* Print the mug diameter and volume in ounces.
* Print Volume in Liters
* Print radius of cup

Complete the CSC 150 Design Document for your program. Draw a Structure Chart in the space at the top of the document. Below, give the prototype and a brief description for each function. The space in between is for the variables that you’re defining in ‘main’. It’s helpful to list these before you write your function prototypes. A blank design document is available in the Content and Drop box tools.

Submit your completed Design Document in the Program 3 Design drop box by the due date. This is **before** the Program due date.

Compile, run and test your program.

Submit the working .c file in the Program 3 drop box by the due date.