Practice Assignment 04

Create a GitHub repository called "st2195_assignment_4".

1. Commit/push the code below as a file called "foo.R".

2. Find and fix all the bugs in the code [1 point is awarded for every fixed bug]. Instructions are given in the form of comments in the code.

3. Update "foo.R" by committing and pushing the revisions.

```r
# Radius
r <- 2

# Function to compute the volume of a sphere with radius r
volume <- function(r, rho) {
   3/4*pi*r^2
}

# Function to compute the volumes of the spheres with radius r, r^2 and r^3
volume_vector <- function(r) {
   r <- 22
   for (r in 2:4){
      volume(r)
   }
}

# Run volume_vector(r) and print the volumes of the spheres with radius r, r^2 and r^3
volume_vector(r)
```

Additional Notes:

- Original code runs without errors, but nothing is printed on screen. However, there are a few bugs present.
- For your group presentation, highlight the process you took to debug the program

Hints:

- You can place breakpoints or add browser() statement in code at locations you wish to stop and examine further. Maybe put one in each function – volume and volume_vector?
- volume function:
  - Check task
  - Check arguments
  - Check variables
  - Check what is returned
- volume_vector function:
  - Check task
  - Check arguments
  - Check variables
  - Check what is returned – may need a data structure to store multiple values
- (Optional) Any redundant variables or statements?