**Main method**

Purpose: Run the overall program, and do all user output

Algorithm:

1. Announce the purpose of the program by calling the announce method
2. Create a Scanner for use with all user input

**Single Room Cost method**

Purpose: Performs all user input and calculation for a single room’s cost

Parameters: Scanner

Return: cost for this room

Algorithm:

1. Ask the user to input the first dimension of the room by calling the dimension method, and storing the returned value in a variable named width
2. Ask the user to input the second dimension of the room by calling the dimension method, and storing the returned value in a variable named length
3. Ask the user to input the flooring choice by calling the floor choice method, and storing the returned value in a variable named cost\_per\_sqft
4. Calculate the cost for this room as width \* length \* cost\_per\_sqft
5. Return cost for this room

**Announce method**

Purpose: Announce the purpose of the program

Parameters: none

Return: none

Algorithm:

1. Tell the user that the purpose of the program is to calculate the total cost for re-flooring all rooms in the house in the chosen flooring option.

**Room Dimension Input**

Purpose: Read in a dimension of the room while protecting it from bad user input

Parameters: Scanner

Return: dimension

Algorithm:

1. Ask the user to input a dimension of the room
2. While they have not entered a double value
   1. Read in their input as a String
   2. Ask the user to input the dimension again, as a numerical value
3. Read in their input as a double
4. Return the value read in

**Floor choice**

Purpose: Read in the floor choice while protecting from bad user input

Parameters: Scanner

Return: the cost per square foot for that floor choice

Algorithm: