Name Jack Sweeney   02.03 The Math Module

This assignment has three parts.

Part One: Write an interactive program to calculate the volume and surface area of a three-dimensional object. Use the following guidelines to write your program:

1. **Create a word problem that involves calculating the volume and surface area of a three-dimensional object. Choose one of the following:**
   - **Cube: surface area 6 s^2, volume s^3**
2. **Print the description of the word problem for the user to read.**
3. **Ask the user to enter the information necessary to perform the calculations. For instance, the value for the radius.**

4. **Print the results of each calculation.**
5. **Write the pseudocode for this program. Be sure to include the needed input, calculations, and output.**

Insert your pseudocode here:

Input:

Asking for the length of one edge on the cube which then gets used to calculate the surface area and volume.

Output:

Tell user about Jimmy's cube box and how he needs the surface area and volume to know how much wrapping paper he needs and how much space he has.

Respond back with how much surface area and volume of Jimmy's box.

Part Two: Code the program

Insert a copy of your code from IDLE here:

#Jack Sweeney 6/24/18
#Math word problem- Calculates the volume and surface area of a cube

def main():

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    print ("Jimmy has a box to put his gifts in, and he wants to know how much volume he has for the
items.  He also wants to know the surface area of the box to wrap the box. His box is a cube.")
        edge = float(input("Whats the length of one of the sides on Jimmy's Box?"))


#Calculations
        volume = pow(edge, 3)
        sa = (pow(edge, 2)) * 6
#Output
        print ("The volume of Jimmy's Box is ") + str(volume)
        print ("The surface area of the outside of Jimmy's Box is ") + str(sa)


main()
```

Part Three: Complete the Post Mortem Review (PMR). Write thoughtful two to three sentence responses to all the questions in the PMR chart.

Review Question	Response
What was the purpose of your program?	The purpose of my program was to tell the user about Jimmy's box. Then the user is supposed to tell the length to help get the box's surface area and volume for Jimmy.
How could your program be useful in the real world?	This program can be used in the real world by using other cubed objected and finding their volume and surface area. If someone wanted to paint a building that is a cube they can use this to calculate how much paint they need.
What is a problem you ran into, and how did you fix it?	A problem I ran into was when I finished it and executed the program my input section did not work. To fix it I had to add a parenthesis that I forgot to add on the end of the string.
Describe one thing you would do differently the next time you write a program.	The next time I write a program I would like to make it more usable. So, if I was to redo this program I'd also make it work with a rectangular prism.