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#### CALCULATING GRAVITY Assigned



In Class 131, We Found The Relationship Between The Mass, Radius, And Gravity Of Exoplanets. Now We Have Data Of Stars Such As Mass, Radius, And Distance From Earth. In This Project, We Want To Calculate The Gravity Of The Star Using A Gravitational Formula, Which You Have Also Used In The Class.



Goal of the Project:



In Class 131, we found the relationship between the mass, radius, and gravity of exoplanets. Now we have data of stars such as mass, radius, and distance from earth. In this project, we want to calculate the gravity of the star using a gravitational formula, which you have also used in the class.



Story:



Our Sun is dying! The world is in an emergency as we are about to lose our star. All groups of scientists around the world have gathered together and created a technology to shift our Earth into another solar system, but which one exactly? Which star out there is safe and welcoming to our Earth? You have been assigned the task to research about stars so that we can choose the best one for us!



\*\* This is a continuation of the project we did for Classes 127, 128, 129, and 130. Please complete those projects before attempting this project. \*\*

# Calculation of 'g' using the formula:

$$g = G \frac{M}{r^2}$$

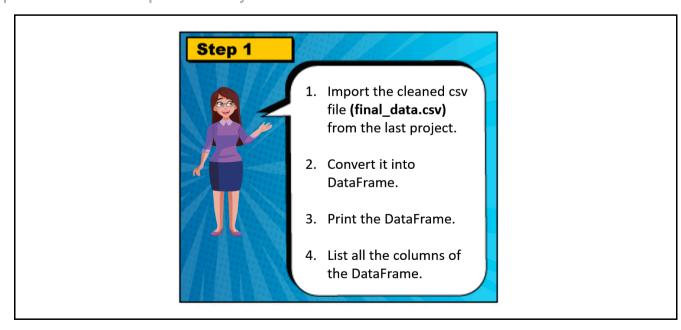
(G=  $6.67 \times 10^{-11} \text{ N m}^2 \text{ kg}^{-2}$ )

© John Moylan 201

### **Getting Started:**

1. Open Google Colab and import the **final\_data.csv** that is created in project C130.

# Specific Tasks to complete the Project:



### **Start Your Project**

Read all the instructions carefully to understand the project

Click on "Start Project" to go to the project playground and start your project

**Start Project** 

### **Submit Your Project**

Learn how to submit your project •

Paste your project URL

**Submit Project** 

#### **Class Summary**

This project is based on your last class

**View Class Summary** 

Ask a doubt to your tear HELP

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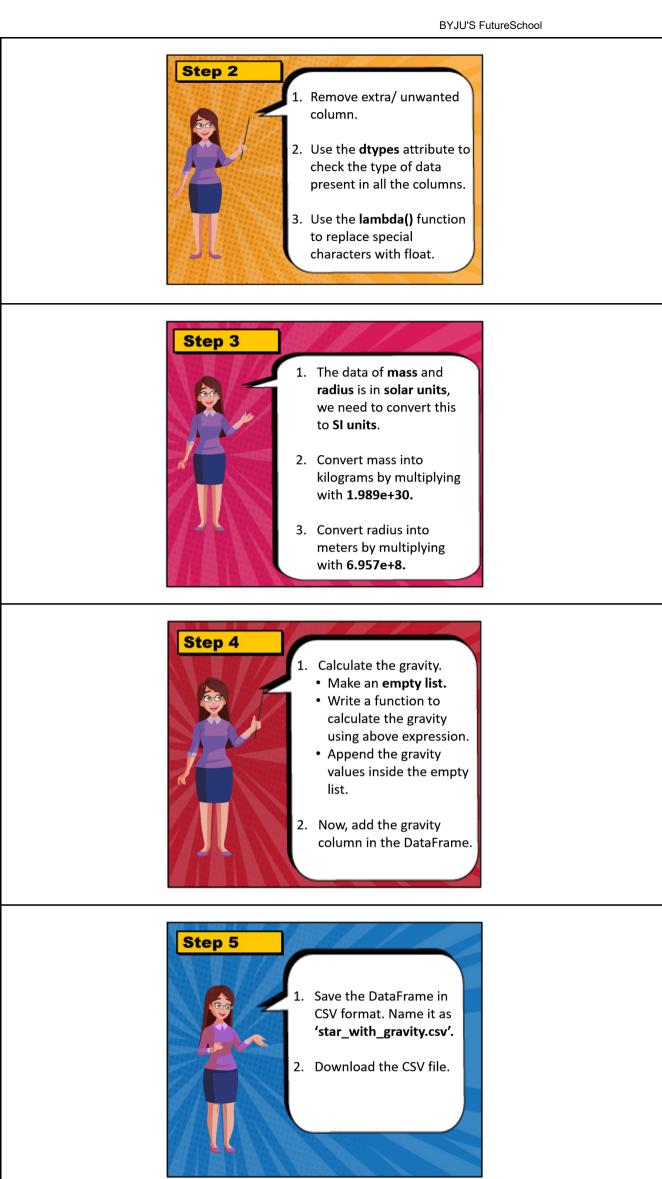












# **Submitting the Project:**

- 1. **SAVE** all the changes made to the project.
- 2. Click on "Run" once to check if it is working.
- 3. Rename the project to **Project 131**.
- 4. Click **Share**.



- 5. Click **Change** and choose the **'anyone with the link'** option.
- 6. Copy the link and submit it in the Student Dashboard Projects panel against the correct class number.

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Hints:

1. In **step 3**, use the **to\_list()** method to convert the column into the list for unit conversion.























