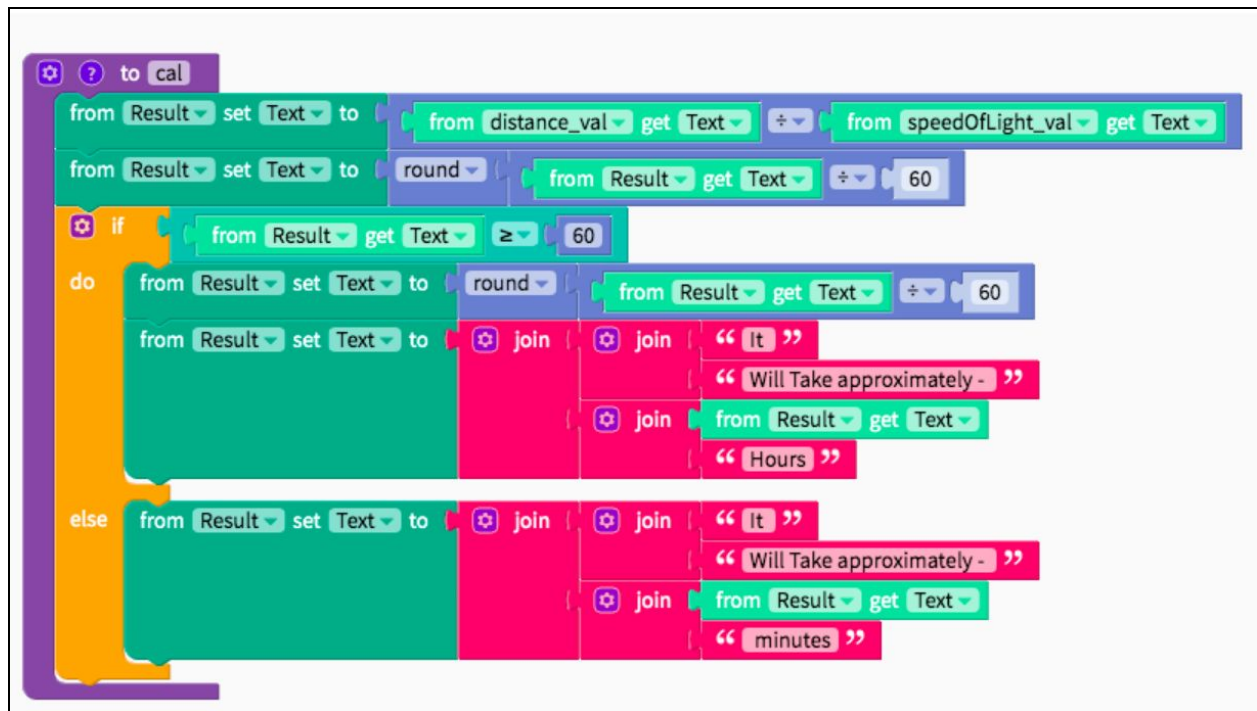


EXPLANATION OF CAL FUNCTION



To calculate the time taken by the light to reach from the sun to any planet, the formula is -

$$\text{time} = \text{distance} / \text{speed}$$

That means that the time taken by the light equals to the distance the light has to travel divided by its speed.

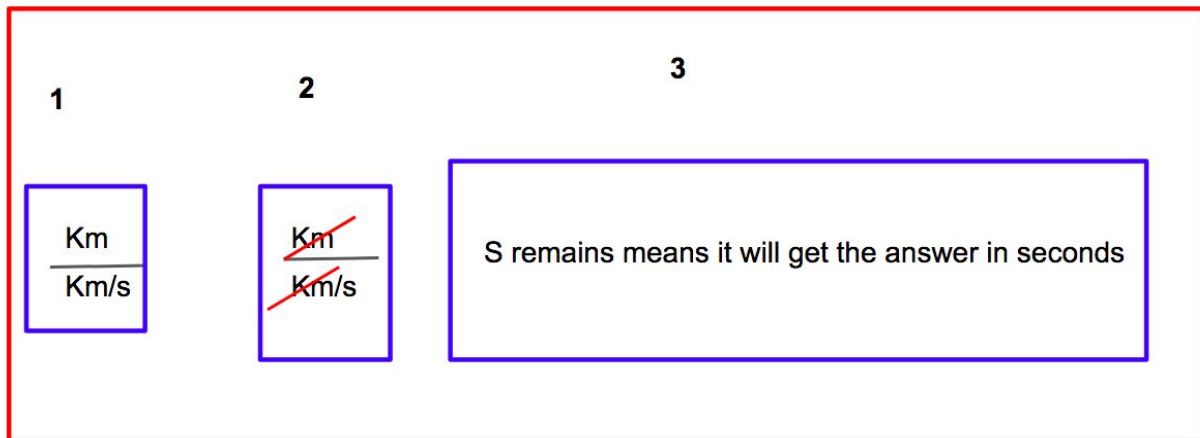
Let's understand this with an example.

Distance from the sun to Earth is 149.6 million km (149000000 km)

Distance from the sun to neptune is 4.496 billion km (4000000000 km)

Speed of light is 300000 km/s

Distance is calculated in km and speed is calculated in km/s So if we divide km with km/s, the answer will be in seconds.



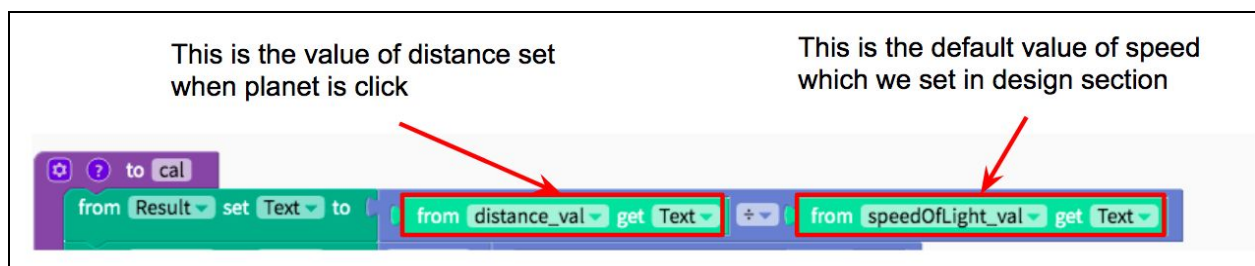
- Eg earth -

time = 149000000 / 300000
time = 496.666667

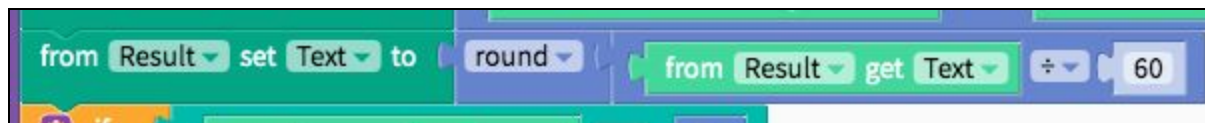
- Eg neptune -

time = 4000000000 / 300000
time = 13333.3333

Here we are setting the result text to the calculation of distance/time.



- We are rounding off means it will remove the decimal and decrease the complexity.
- Result contains the division value which is getting rounded off.



- Now we have time = 496 for earth and time = 13333 for neptune and these values are in seconds so to convert these to minutes divide the seconds by 60.

Eg earth -

time = time/60
time = 496/60
time = 8.26666667

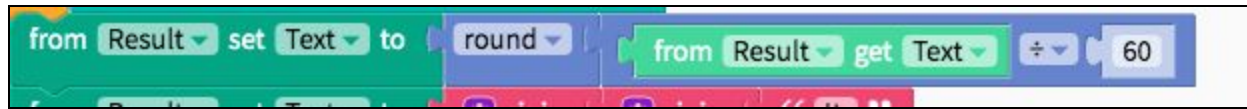
Eg neptune -

time = time/60
time = 13333/60
time = 222.216666667

again will round off
time = 8

again will round off
time = 222

This means from sun to earth the time taken by light is 8 minutes and from sun to neptune the time taken by light is 222 min.



- To go further, we use if loop. It checks if the time is more than 60. Then it converts minutes to hours by using the formula min/60.

Eg neptune
time = 222 //means 222 mins
time = 222/60
time = 3.7
again will round off
time = 4

This means from sun to neptune the time taken by light is 4 hours.



So if the time is more the 60mins it will again divide the time by 60 and round it off to get time in hours. There will also be some text added saying that the time calculated is

approximately x number of hours. Else it will only add text saying that the time calculated is approximately x number of minutes.