Amirhossein Roustaei week 7 19/11/2019

1.

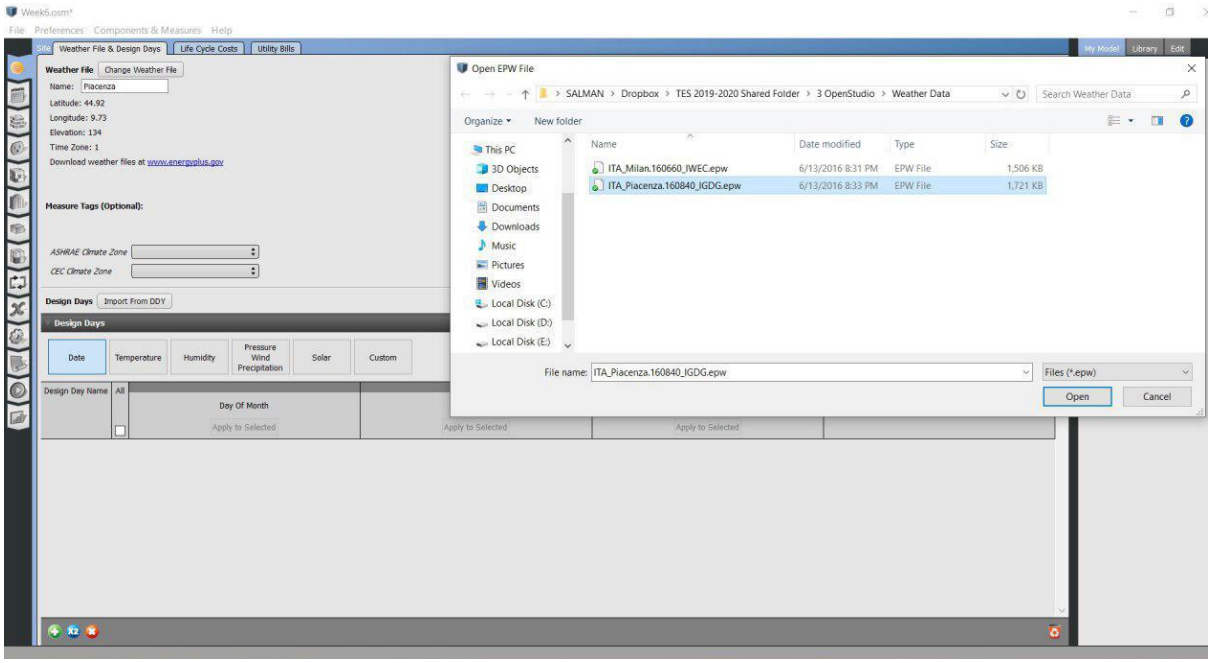
Solar radiation is a electromagnetic energy which emitted by the sun. About 50% of the radiation is in the visible part of the electromagnetic spectrum. The rest is mostly in the near-infrared part with some in the ultraviolet section.

When sunlight passes through the atmosphere, the earth absorbs some of the radiation directly which is called beam solar radiation. There is another type of radiation which is absorbed, scattered or reflected by different elements in the way to the earth. So it reaches the surface of earth indirectly, which is called diffuse solar radiation. diffuse and beam solar radiation comprise the global solar radiation.

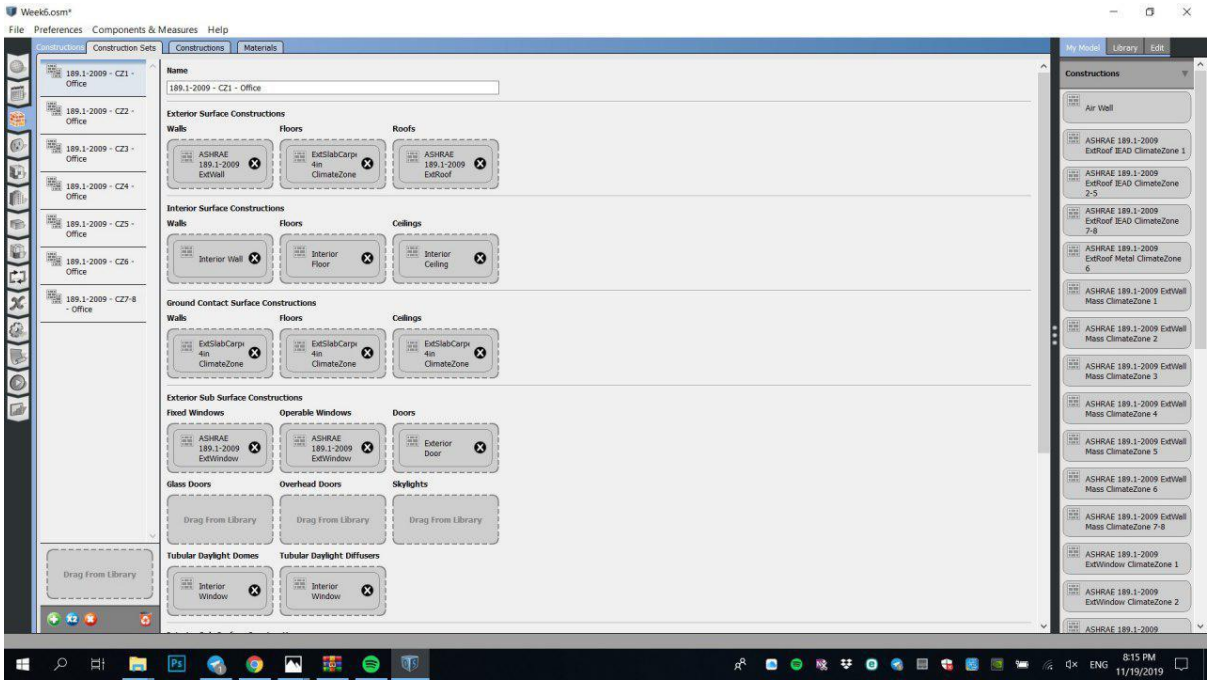
Stratospheric ozone absorbs almost all the ultraviolet component of the solar radiation. water vapor almost absorbs infrared parts of the radiation. Over 2.5 micron the atmosphere becomes opaque because of strong absorption by water and carbon dioxide.

The maximum yearly average solar radiation density is the solar constant which is the solar irradiance, it's value is 1367 w/m2

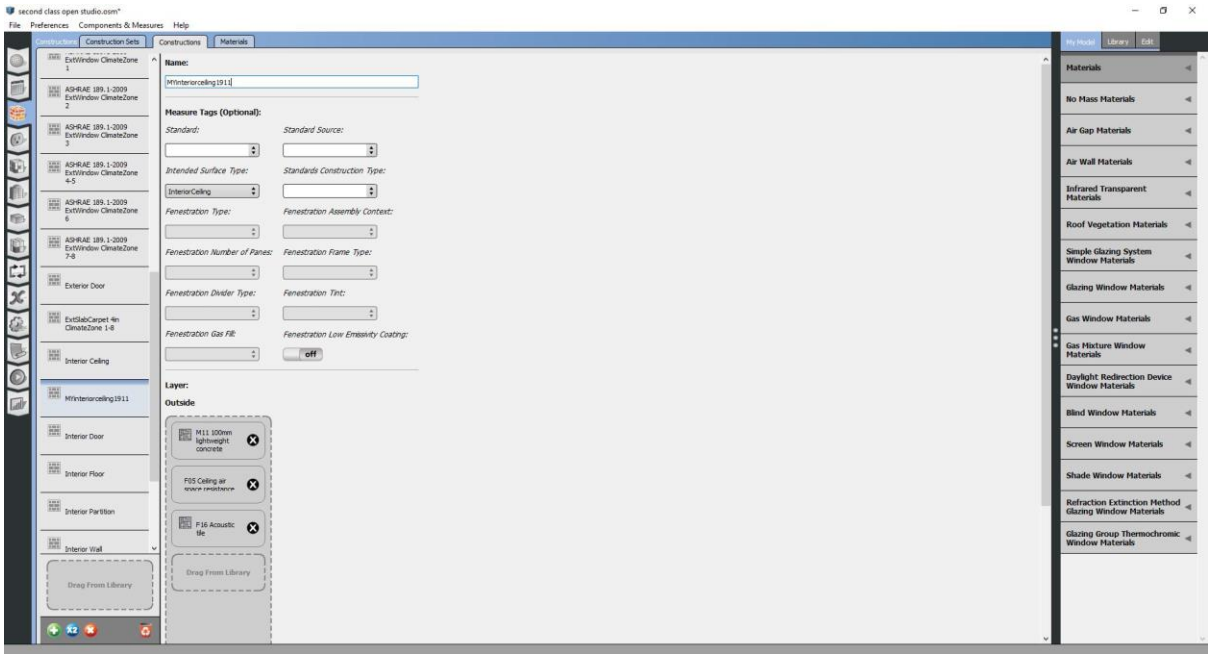
2.



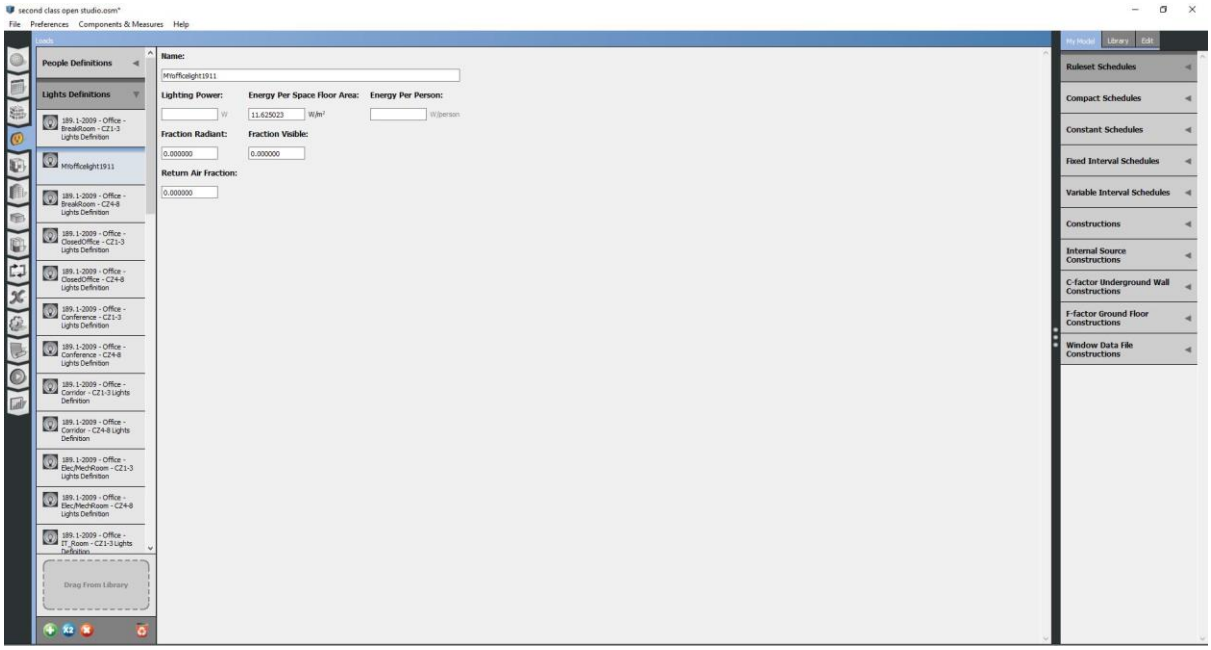
1. Adding weather data



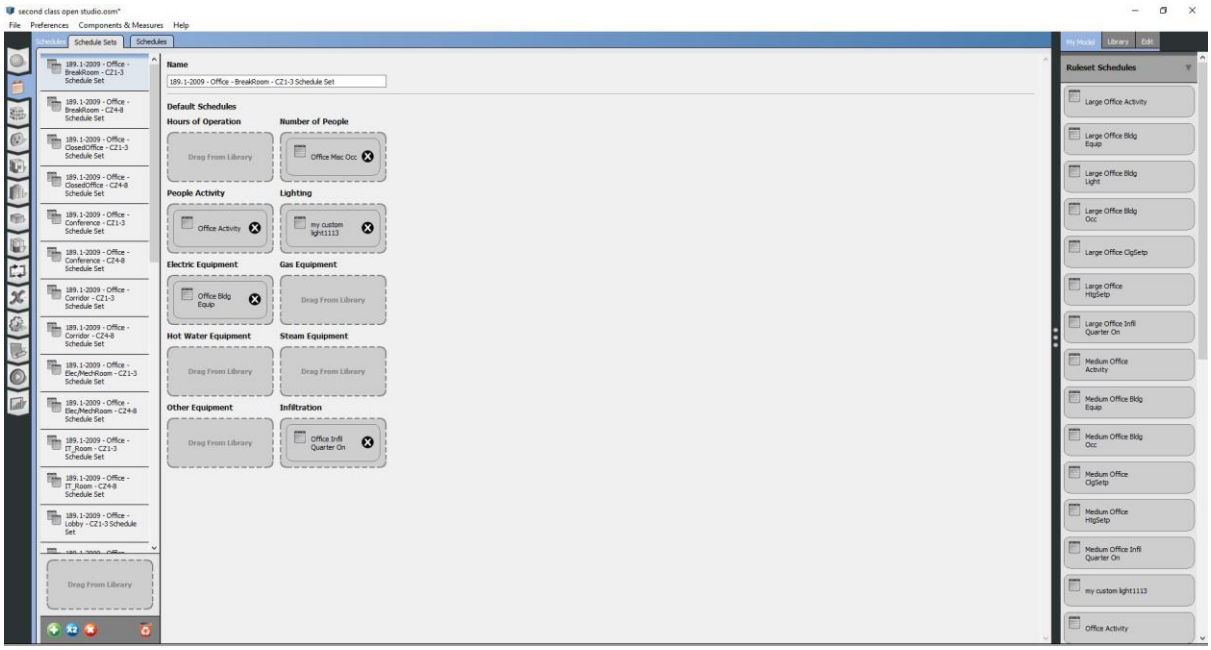
2. I choose construction tab from left bar. It contains 3 different parts.Construction set is a set of different elements of a building



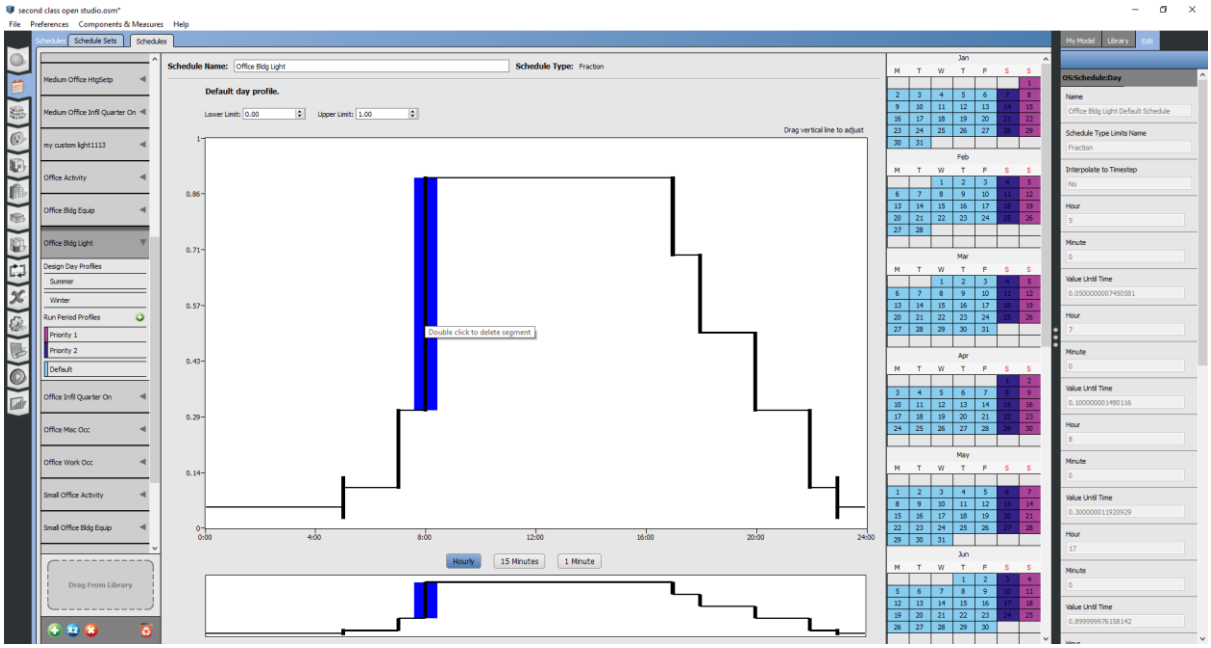
3. We can customize each elements of building in construction tab. For example I'm editing interior ceiling after duplicating it.



4. I choose loads tab from the left side bar, to define characters, for example I'm editing the features of light here.



5. After that, I choose schedule set tab from left side bar where I can define different schedule for the building, for example I can define the schedule for working hours, number of people, lighting, … .



6. Here in schedule tab, I can customize the lighting schedule after duplicating that.