Week Assignment 7

Question 1

Provide a summary of the main concepts that went through about solar radiation (formulas are not needed)

Solution

Solar Radiation : It is defined as the radiant energy emitted by the sun from a nuclear fusion reaction that creates electromagnetic energy. The spectrum of solar radiation is close to that of a black body with a temperature of about 5800 K. About half of the radiation is in the visible short-wave part of the electromagnetic spectrum. The other half is mostly in the near-infrared part, with some in the ultraviolet part of the spectrum.
The units of measure are Watts per square meter.

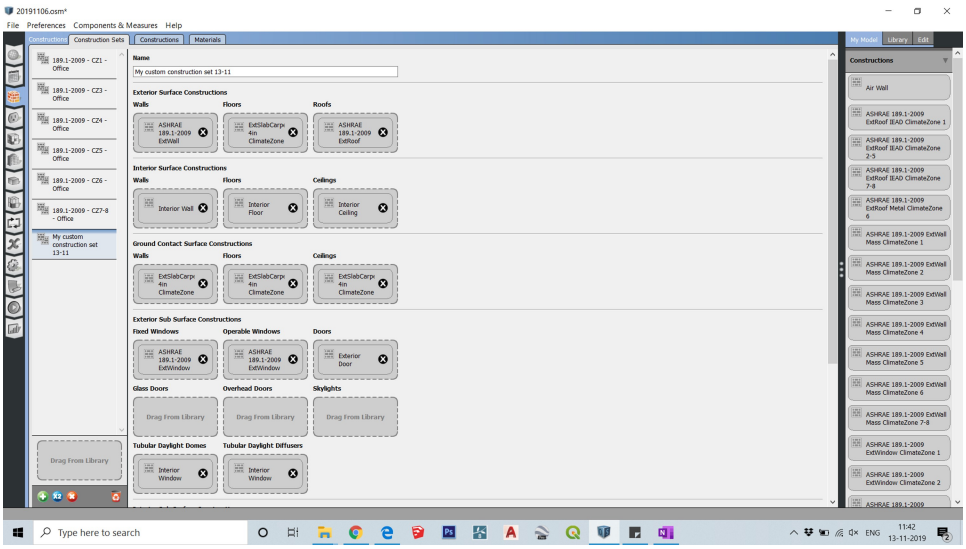
Solar Irradiance : It is defined as the amount of light energy from one thing hitting a square meter of another each second. Photons that carry this energy have wavelengths from energetic X-rays and gamma rays to visible light to the infrared and radio.

Question 2

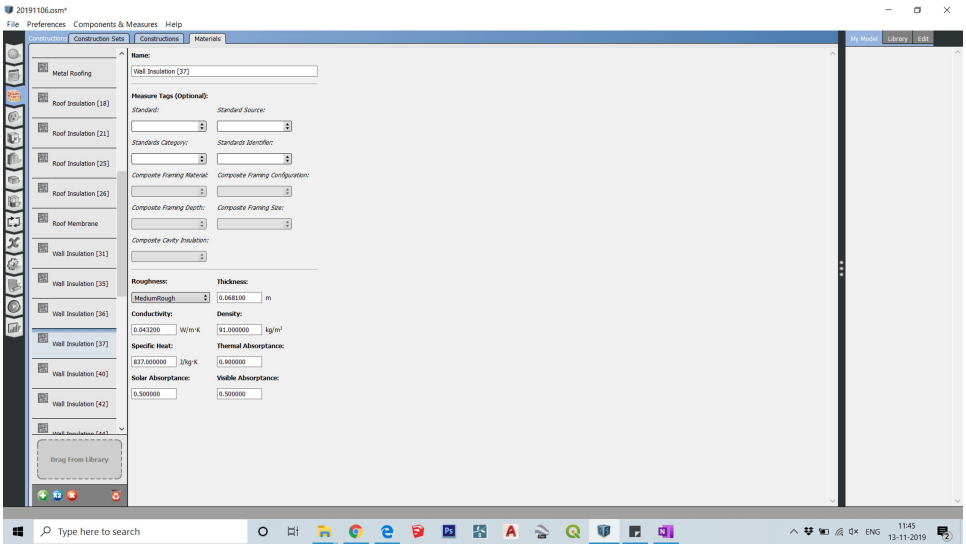
create a pdf file with screenshots of all of the steps we went through in the second lesson on open Studio and explain briefly the reason behind the use of each step (in your own words!)

Solution

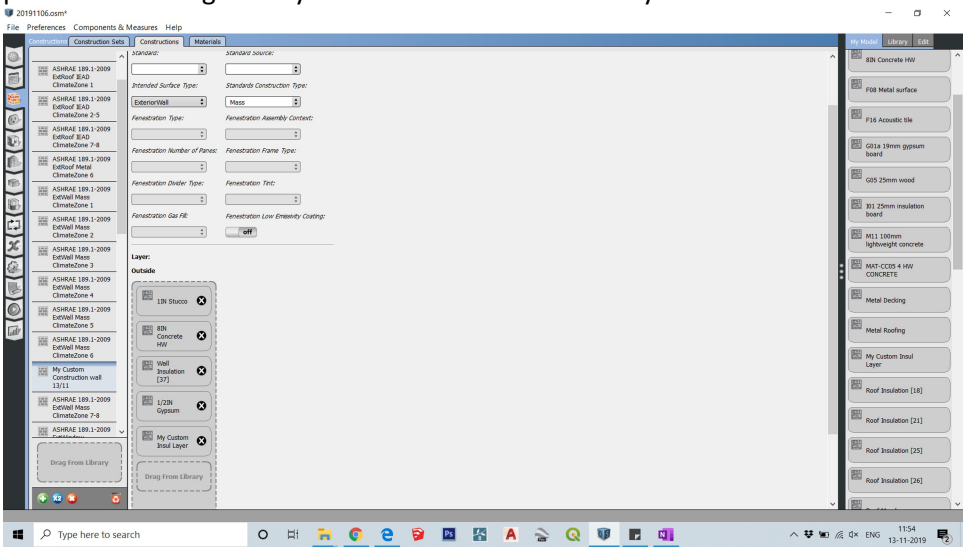
To define personalized construction set of materials with respect to the building components, duplicate already existing construction set, name it accordingly and add the materials from the library as present in the right side of the page.



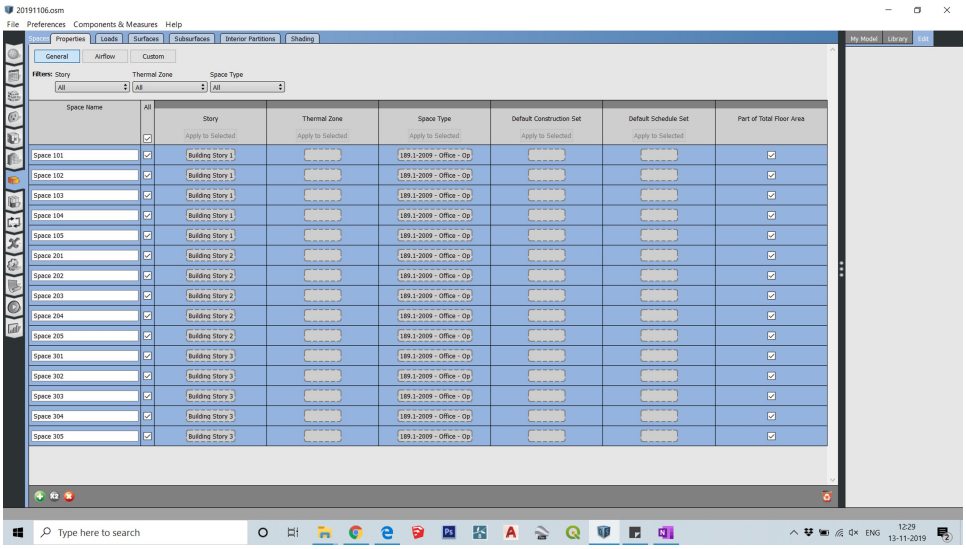
After defining the construction set, to personalize the properties of the materials, go to the materials tab as below. Duplicate one of the material, rename it and change the properties according to the need. Once it is done, you can go to the construction set and replace with the defined material wherever needed.



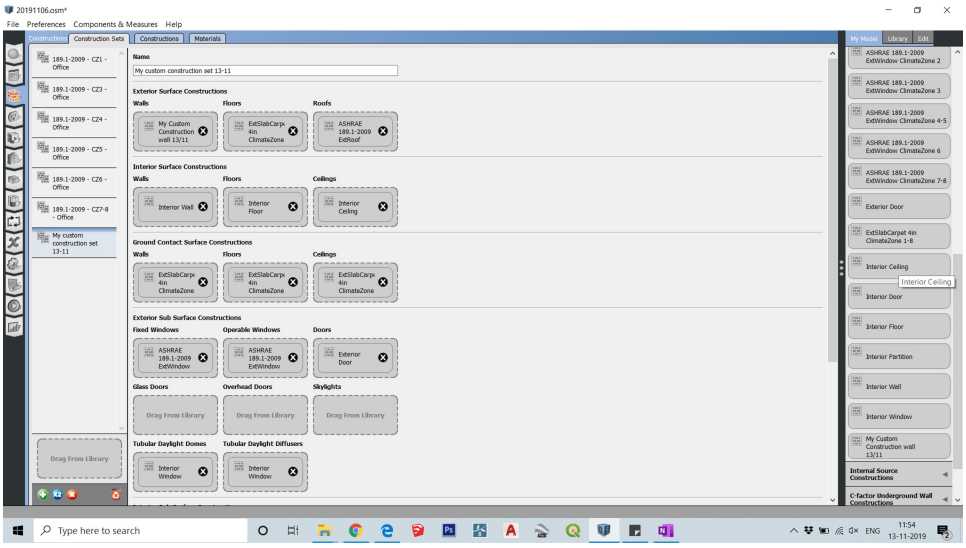
To define any further properties with respect to construction typology and materials, from the library of the construction tab, you can choose the particular material from the left tab and from the library present on the right tab you can add or remove the layers in the middle tab.



After doing the necessary, you can go to the space tab to set the properties of materials with respect to the space.



After doing all the required changes, you can go back to the construction set, to check it finally and load it to the open studio model.



You can even go to the schedule set to define the people with respect to the working hours in the space.