Task 1 Provide a summary of the main concepts that went through about solar radiation

1. mean radiant temperature:

The average radiant temperature is the average temperature at which the surface of the environment acts on human radiation. The radiant heat exchange between the human body and the inner surface of the enclosure depends on the temperature of each surface and the relative positional relationship between the person and the surface.

2. The solar radiation density

The maximum yearly average solar radiation density is the solar constant, which is the solar irradiance, its value is 1367 W/m2.

3. Solar Radiation

Solar radiation refers to the fact that the sun transmits energy in the form of electromagnetic waves. It refers to the electromagnetic waves and particle flows emitted by the sun into space.

4. Solar Radiation Characteristics

Due to the dispersion and absorption phenomena，solar radiation is attenuated both in the spectral distribution and in the total radiation.

5. Atmospheric Absorption

The absorption of solar radiation is due to the atmospheric components, in particular ozone, water and carbon dioxide, which absorb the incident radiation in absorption bands, consequently modifying its energy spectrum. The stratospheric ozone absorbs almost all the ultraviolet component of solar radiation.

6. Air Mass

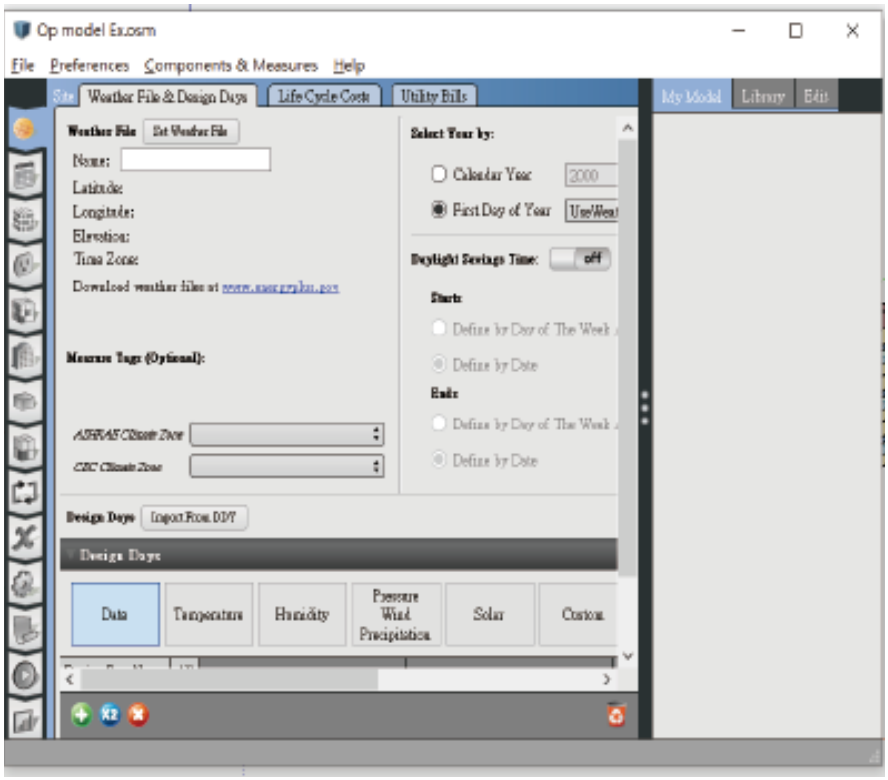
The sun to the zenith crosses the minimum thickness of the atmosphere, the sun with an elevated zenith angle crosses a large thickness of the atmosphere.

7. Solar Energy: Availability

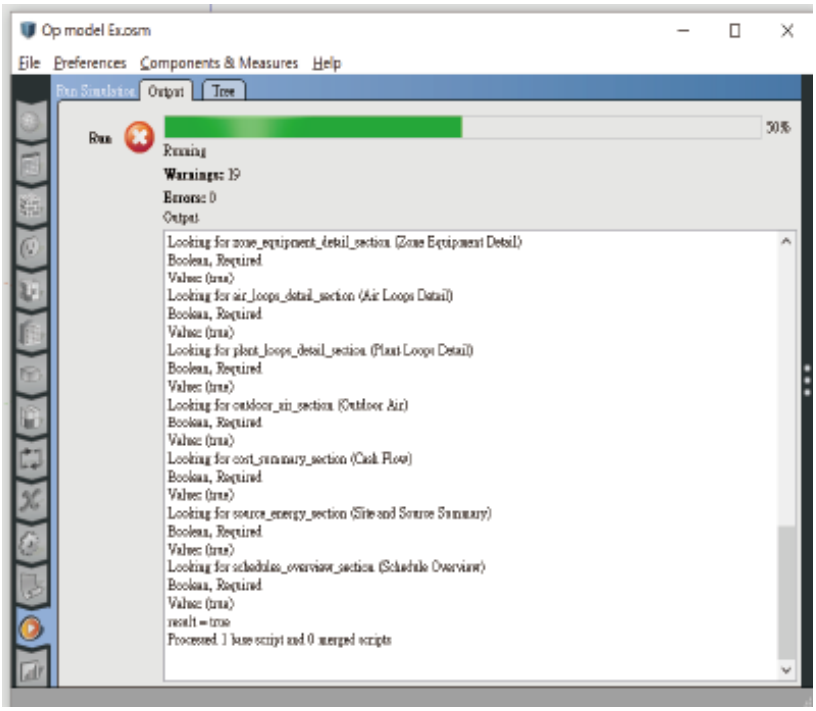
1. the sun position in the sky (altitude and azimuth angles)
2. the weather condition
3. the site altitude over the sea level
4. sunshine hours

Task 2.create a pdf file with screenshots of all of the steps we went through in the second lesson on openStudio and explain briefly the reason behind the use of each step

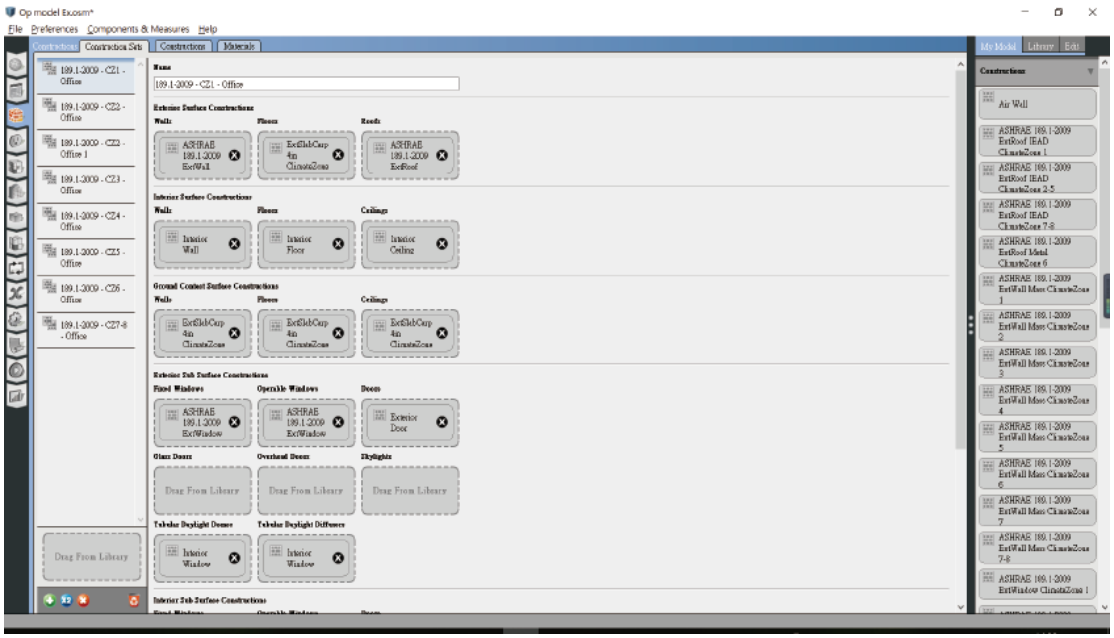
1.adding the weather data file



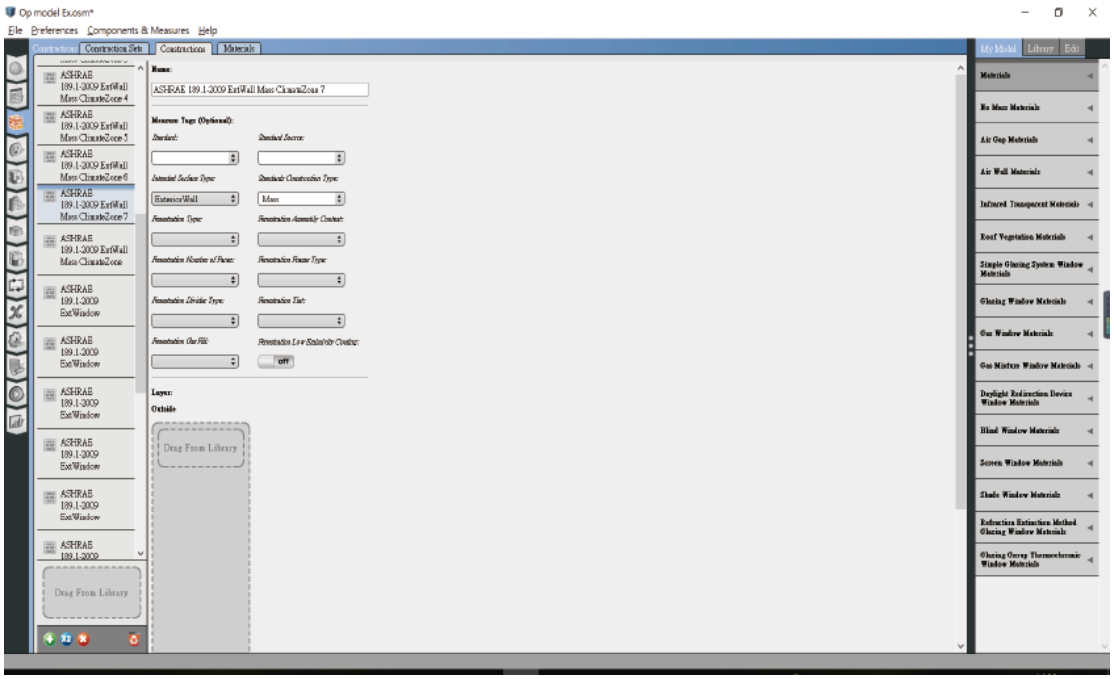
2.run the analysis



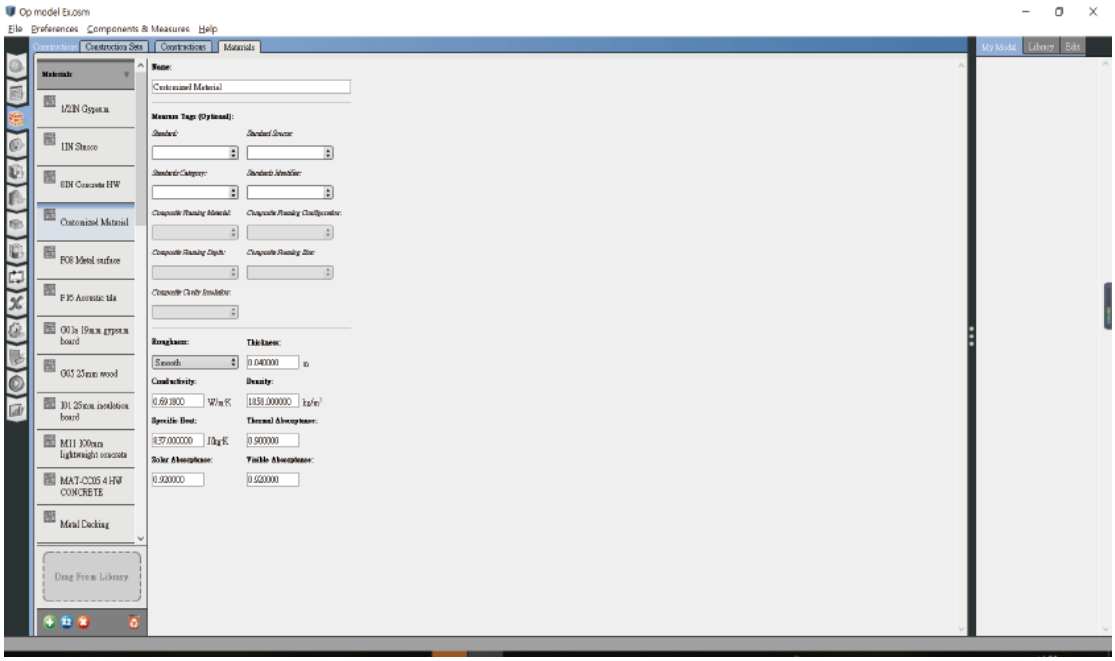
3. Go to the "construction" set and start customize the building



4.customizing the walls



5. Customizing materials



6. Applying the customized walls to construction