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Modeling Project Part 1
Computer Model Documentation

This specific computer program calculates the solar irradiance on a PV array at a particular date, time, location, and tilt. In order to display the correct output components, the program prompts the user to enter values in the command line chronologically as follows:

Location latitude, (positive: Norther hemisphere):

- Input as degree value by user

Location longitude, (positive: East of Prime Meridian):

- Input as degree value by user

PV array tilt:

- Input as degree value by user, if PV is horizontal, input as 0

Day of the year:

- User is asked if day of year is known, integer value between 1-365. If not, user will be prompted to enter month in lowercase form. Then prompted to enter day of the month. Program will calculate day of year from input provided.

Civil time of day, in hours:

- User inputs value based on civil time which is a 24-hour format.

Time zone in reference to UTC:

- Input as integer value referenced to Coordinated Universal Time