1. Using *identifying_heatwaves.py*, identify periods of heatwaves (>6 days) (Fischer and Schär, 2010)
    a. Isolate the max daily temperatures from the existing dataset
    b. Identify 90th percentile from these max daily temps
    c. Subset data into summer months only
    d. Find periods of time exceeding 90th percentile for more than 6 days
    e. Return statement of the periods of heatwaves
2. Remove the years with heatwaves in data using *remove_heatwaves.py*
    a. Change variables for 'exclude_years' and 'heatwave_periods' to reflect heatwave periods found from Step 1
    b. Subset data into summer months
    c. Calculate the median temperature for each hour of the summer period
    d. Get a median temperature profile
    e. Identify the best median summer day to replace forcing data for heatwave periods using mean squared error analysis
    f. Hold onto variable for best day
    g. Replace heatwave days in original dataset with the median temperature profile
    h. Replace forcing datasets with forcing data of identified best day
    i. Return new dataset with no heatwaves
3. Run *temp_anomaly.py* to get a dataset of temperature anomalies of heatwaves
    a. Change 'heatwave_periods' variable to match heatwave periods from Step 1
    b. Subset data into summer months
    c. Find median temperature for each hour of the summer period
    d. Filter data for heatwaves period you want to use for synthetic heatwaves
        i. 'start_date'
        ii. 'end_date'
    e. Create a mask for this time
    f. Filter out temperatures from this time and calculate the temperature anomaly for the heatwave period
    g. Return csv file containing heatwave temperature anomalies
4. Play around with synthetic heatwaves using *synthetic_heatwaves.py*
    a. Choose your desired synthetic heatwave period and change the variable 'heatwave_period' to match it
        i. You can change the duration of the desired synthetic heatwave here too
            1. Synthetic heatwave duration must be:
            $0 < x < original\ heatwave\ duration$
    b. Use the original real heatwave period you used in Step 3d to modify the 'original_heatwave_period' variable
    c. Calculate offset between original and new heatwave period
    d. Create mask for new heatwave period in dataset
    e. Extract subset of data for new heatwave
    f. Adjust temperature anomalies to new heatwave period
    g. Set desired magnitude (1 = original temperature anomaly) of synthetic heatwave
    h. Add temperature anomalies to the subset data at chosen new heatwave period
    i. Update dataset with modified values
    j. Return modified data set as .nc file