

Running simulations and sweeping metrics

Suppose you have the following functions:

- `make_system` takes a parameter named `param` and returns a `System` object with several variables including `param`.
 - `run_simulation` takes a `System` object of the type created by `make_system` and adds to it a new `TimeFrame` called `results`.
 - `compute_metric` takes a `TimeFrame` object of the type produced by `run_simulation` and computes a metric that we would like to maximize.
1. Write a function called `run_and_measure` that takes a value for the parameter `param`. This function should use these functions to make a `System` object, run a simulation, and compute and return a metric.
 2. Write a function called `sweep_param` that takes an array of parameter values called `param_array`. It should make a `SweepSeries` object, call `run_and_measure` for each value in the array, store the results in the `SweepSeries` object, and return it.
 3. Write a function called `optimize_param` that takes an array of parameter values called `param_array`. It should use `sweep_param` to make a `SweepSeries` object and then return the value of `param` that yields the highest metric and the value of the highest metric at that value of `param`. Hint: use `idxmax`.