Designs

1. Source image enlargement:

* The source image pixels need to be sampled at the center. While this can be solved in many ways, I chose to enlarge the source image and add paddings around its boundary so that the indexing will be a little more straightforward.
  + This adds the computation of O( width of image \*height of image).
* Performance analysis between different design choices.

(Because I assume the size of source image would normally be smaller.)

1. Thread management:

* Std::thread – I used STL library thread.
* I implemented asynchronous join of threads myself.
  + Because STL thread lacks asynchronous join of threads, I coded it in ThreadManager class myself.
    - You may notice one global variable for that. I almost never use it especially in a threaded environment. However, implementing asynchronous joining may involve communication between threads. One global might not matter for this scope of projects. So I went with that.