

Design Idea:

My idea is to use a bitmap to store the three states of a frame – Free, Used, Head of Sequence.

When a new thread pool is created, the pool gets appended to a static list, when is helpful for releasing any frame. New frames can be requested, and freed at any time, using the pool.

When requesting new frames, it is checked if contiguous space is available, otherwise an error is raised. If the space is available, its status is updated to accordingly, and the first frame number of the frame is returned.

When releasing a frame, first its pool is fetched. If not found, an error is raised. Otherwise, the bitmap state of the frame in the pool are freed starting from the first frame until the state of a frame does not match used. (This is because all the frames are allocated memory in a contiguous fashion.)

Documents changed:

I have only changed the `cont_frame_pool.h` and `cont_frame_pool.c` files, as mentioned in the instructions.