Structure passed to thread

```
struct FILEs {
    char *input_file;
    char *first_output;
    char *second_output;
    int status;
    //status 0 nothing done
    //status 1 input_file read
    //status 2 svd done
    //status 3 Sx.bin written
    //status 4 reconst file written
    int num_bytes_rd;
    int mem_allocated;



};
```

Thread: thread that reads and image and performs the Single Value Decomposition SVD. The singular values and the reconstructed image are written in files.

Structure used by thread for thread variables

```
struct th_var {
    float w[256], *pw;
    int m,n,i,j,p,q,result,len1,len2,len3,len4;
    //Several of the arrays use 2 pointers to allocate memory.
    //9 x 8 arrays
    float *pv, **ppv, **ppvfr;
    float *puds, **ppuds, **ppudsfr;
    float *pa,**ppa, **ppafr;
    float *pds, **ppds, **ppdsfr;
    //8 x 9 arrays
    float *pvt, **ppvt, **ppvtfr;
    //9 x 9 arrays
    float *pudsvt, **ppudsvt, **ppudsvtfr;

    int *ps, **pps, **ppsfr;
    int *inbuf, *inbuffr;

    FILE *inptr,*outptr;

};
```