1. What is the status of the CPU version? If you are using existing code for this part, cite the source of the code.

The CPU version is a single thread Floyd-Warshall algorithm with time complexity of O(|V|^3), where |V| is the number of vertices in a graph.

I wrote a simple version of this algorithm.

2. What is the status of the GPU version in terms of completeness? Which functionalities have been implemented and what is missing?

The GPU version using Global memory has been implemented and is correct respect to the CPU version.

The kernel function "min_plus" for three matrices is done with global memory but need be further optimized.

The main logic for recursive function is done. It will divide the input matrix to four smaller matrices recursively and call the kernel function.

A unroll function may be added to speed up the calculation when the matrix becomes small enough in the recursive process. (Now, the recursive function returns when the matrix become 1X1).

3. What is the status of the GPU version in terms of correctness? Is the, potentially unoptimized, GPU version correct? If not, what is your plan for achieving correctness?

GPU version that uses global memory gives the same results as CPU version now.

The next step will be optimizing the naive GPU version using shared memory, unrolling and so on.