**Project Specifications: Memory parameters, files, and related information**

• Physical memory is an integer array PM[524288]. It is divided into 1024 frames of 512 words each.

• The disk (when implementing demand paging) is an integer array D[1024][512]

• All VAs and PAs are integers

• The size of s, p, and w is 9 bits each.

• The VM manager initializes the PM from an initialization file consisting of 2 lines.

• Line 1 contains triples of integers, which define the contents of the ST

• Line 2 contains triples of integers, which define the contents of the PTs

• The initialization file is syntactically correct in that:

• Line 1 correctly specifies 1 or more segment table entries

• Line 2 correctly specifies 0 or more entries in PTs for the segments specified on line 1

• The VM manager then reads commands from an input file, and writes the results into an output file

• The basic version of the VM manager does not support demand paging and is worth 60% of the credit for the project

• The extended version of the VM manager must support demand paging and is worth 100% of the credit for the project

• For demand paging:

• The PM will always have a sufficient number of free frames available so that no page replacement algorithm is needed.

• When a free frame needs to be allocated, allocate the lowest numbered frame that is free.