**PA4**

After declaring the variables in the usage interface the program reads in the trace file found in the arguments. I then check if there are the correct arguments, the proper write policy is stated, and the write file exists. It is then passed through the hextoBin method which converts the hexadecimal number into the address in memory as an unsigned int. The index and tag are found through the use of the address.

The main has an array of lines made to represent the cache. The structs are all part of the cache containing characters for both valid, dirty bits, and an unsigned int for the tag. These fields work for both write though and write back. Instructions and flags are used to write/red back and through. A miss occurs when the valid bit is ‘0’ at the index of the tag or if there is a tag with a different value in the index.