rCSE244 System Programming
Final Project

In this project you are expected to implement "Mine" and "Miner". They should have parameters as follows:

> --mine -<directory1> -<directory2>...... -<directoryN>,
> --miner -<n> ,where n is the number of entities that miner wants to take.

- Each directory is composed of entities which are directories or files. Mine forms a list composed of known entities inside the current directories.

- Miner should take n entities from the mine (the list becomes smaller) and create a thread for each entity that is the type of file. Otherwise if the selected entity is a directory miner informs the newly found resource to the mine. The mine constructs a new list for this new resource.

- Miner should collect the words and # of occurrences, then go back to the mine and exchange for goods. He gets 10 gold coins for new words and 1 gold coin for words the mine already has got.

- Miner should maintain a log file for the following data :

> --time of start,
> -- system (word) 5 times (# of occurences) 5 coin (# of coin exchanged for the word),
> -- class (word) 5 times (# of occurences) 5 coin (# of coin exchanged for the word),
> --time of stop,
> -- number of files that the miner worked on,
> --number of pending files.

- And the mine should maintain a log file for the following data :

  -- # of served miners,

  -- # of gold coins given to each served miner,

  -- # of pending miners,

  -- # of currently working miners,

  --start times of served, pending and currrently working miners,

  --stop time of served miners,

  --words and # of occurences.

- If the mine is killed, mine also should log the time of collapse.   Good Luck!