# Game

- -int gameTime
- -int gameRounds -int currentRound
- -string pName
- -string welcomeMessage 1
- -bool gameRunning
- +Game(int agrc, char\* argc[])
- +void endGame()
- +void delayBy(float f, Timer\* t, bool b)
- +void clearScreen()
- +void checkArg(int argc, char\* argv[])
- +void presentWelcomeMessage()
- +void setGameTime(int i)
- +void incrementRoundCount()
- +void setGameRounds(int i)
- +void setPlayerName(string n)
- +int getGameTime()
- +int getGameRounds()
- +int getCurrentRound()
- +string getPlayerName()

### Vocabulary

- -currentVocabulary
- -currentQuestionIndex
- -string currentQuestion
- -string CurrentAnswer -string fName
- -vector questions
- -vector answers
- -vector fileNames
- -vector askedQuestions -bool vocabularyLoaded
- +Vocabulary() +vector getAskedQuestions()
- +void returnRandomQuestionFromVocabulary()
- +int randomInt(int start, int end)
- +int returnQuestionIndex()
- +string returnCurrentQuestion()
- +string returnCurrentAnswer()
- +string accessQuestionViaIndex(int i)
- +string accessAnswerViaIndex(int i)
- +bool isInVector(vector v, int i)
- +void addAskedQuestions(int i)
- +void loadVocabularyFile()

### QuestionAlgorithm

- -int lineCount
- -int lineNoPlayerName
- -int sizeOfCurrentBracket;
- -int currentQuestionIndex;
- -string cfgLine;
- const string fileName;
- -string playerName;
- string cfgElement;
- -vector tmpVector;
- -vector b1
- -vector b2
- -vector b3
- -vector b4
- -bool newPlayer
- vector \*b1pt
- -vector \*b2pt -vector \*b3pt
- -vector \*b4pt
- -bool isNewPlayer()
- -bool hasConfig()
- -int renturnRandomDelete(vector v)
- -void segmentCfg()
- -void splitCfg()
- -int returnConfigLine(ifstream& f)
- -void setCurrentQuestionIndex(int i)
- -void delete\_line(const char\* file\_name, int n)
- +QuestionAlgorithm(string n)
- +void loadCfg()
- +void addResultToCfgElement(int index, float performance)
- +int returnRandomQuestion()
- +int returnCurrentQuestionIndex()
- +void setPlayerName(string n)
- +void writeToConfig()
- +string returnCfg()
- +string returnCfgElement()

### Timer

- -bool timerRunning
- -timerStartTime -timerEndTime
- +void start()
- +void stop()
- -double elapsedMS()
- +double elapsedSecs()

- -string answer
- -string userInput
- -string \*answerptr
- -string \*userInputptr
- +int maxScore
- +Attribute3
- +Attribute4

- +int determineHealthPointsToLoose(float p)
- -string toLower(string str)
- +void setAnswer(string n)
- +void setInput(string n)

### InputCompare

- +float scorePercentage

## +float fuzzyComparison()

- -string removeWhitespace(string str)
- -void addSpaces(string \*original, string \*in)