

Progress - Week 1

1. Argument Parser
 - a. General library used by the evaluator
2. Functionalities of the evaluator
 - a. Run another program through fork-exec-wait
 - b. Record the memory usage
 - c. Record the running time
 - i. User time
 - ii. System time
 - iii. Real time
 - d. Record the exit code if any
 - e. Record the signal if any
 - f. Enforce the time limit
 - i. Terminate the target process if it takes too long to run
 - g. Enforce the memory limit
 - i. Terminate the target process if it uses too much memory
 - h. Redirection
 - i. Redirect the child's stdin
 - ii. Redirect the child's stdout
 - iii. Redirect the child's stderr
3. Stringify the result
 - a. Verbose (Human-Friendly)
 - b. Plain-text (Coder-Friendly)
 - c. JSON
4. Testing Programs
 - a. Mem
 - i. Usage mem n
 - ii. Allocates n megabytes of data in a sequence of 1 MB each step
 - b. Forever
 - i. A program that runs forever (infinite loop)
5. Unit Tests
 - a. Make sure the parser parses the arguments correctly
 - b. Make sure the evaluator records the correct data against the testing programs