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CS 362 S 400

Random Testing Quiz

Compile:
$ make

Summary:
When designing the method of generating random characters and strings, I wanted to keep in mind the strict 5-minute execution requirement. Initially I had planned to simply pick random characters in the ASCII table to construct the string. However, this would quickly become an issue since there are so many permutations.

Given 127 ASCII characters and keeping the string at a strict length of 6 (the length of the target), that would lead to 127^6 permutations, or 4.199×10^{12}. To ensure that the program meets the 5-minute runtime requirement, I decided to strictly limit the possible character pool to only the target values.

inputChar()
- Creates an array of the possible target characters: {, (, {, ' ', a, x, },),].
- Selects a random number between 0 and 8 as an index.
- Returns the character in the array at the index.

inputString()
- Creates an array of the possible target characters: r, e, s, t, \0.
- Allocates memory for a new string of size 6 characters.
- Constructs the string:
  - Select a random number between 0 and 4 as an index.
  - Sets current string index to the character at the index of the possible character array as determined by the random number.