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Random Testing Quiz

char inputChar: Here we return a character determined by ASCII characters 32-126, because that domain is sufficient to cover all of the state changes in the code, and eliminates several values we are not interested in, such as null, escape, and so forth. The domain could be further narrowed, but not without really obfuscating the code, and also resulting in a negligible performance boost, since the bulk of the time is actually spent running iterations at state 9 for inputString

char* inputString: Borrowing somewhat from the process established in inputChar, we choose a character from a subset of ASCII characters and introduce them to our output string one at a time. Because the error state is 5 chars and a null term, we limit our domain to strings of 5 chars plus a null term, and we further limit the domain to lowercase alphabet characters. Because the error condition is when the inputString returns the string “reset” and that is a word in the dictionary, the speed of the program could vastly be improved by going in order through a dictionary and testing all of the words (even faster still if we only test words containing exactly 5 letters), though this would not actually be random testing, since we would be working with a fixed list of inputs to test.