

Random Quiz

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inputChar()

This function is a random char between ascii 32 and 127. The program that is being tested will only need to handle printable chars, so It was decided that an appropriate testing domain was 32-127. Any other data type cannot be returned by the function, so this represents all possible values.

InputString()

This function is designed to return a random 6 character string. The string will only be composed up letter the characters r,e,s,e,t and \0. The decision to limit the possible range of values was made due to the relative simplicity of the target function being tested, and the resulting “over-complexity” that is caused by permuting all possible combinations of printable characters. No additional information can be obtained by the testing function with any values other than the ones that produce unique results. A string of question marks returns the exact same data as a string consisting of VWXYZ. So because of this, a failing state can only be achieved by a “correct” arrangement of the “correct” values, and this failing state is unique among all other states. Which in the case of the target function, is a very long loop.

The inputString() function declares a local static buffer of length 6 and defines an array of chars containing RESET\0. It then chooses a random character from the char array and copies the value to the local static buffer. Once full, the address of the buffer is returned.