

IDENTIFICATION

Positive Random Integer Generator, MU RAN6
704 FORTRAN Program
G. A. Westlund - July 15, 1960
Midwestern Universities Research Association, Madison, Wisconsin

PURPOSE

To provide a positive random integer, modulo a given 2^x , where x is an integer in the range $0 < x \leq 15$.

METHOD

The MQ part of the product resulting from a previous entry is multiplied by DEC 305175 78125. The resulting MQ is saved for a later entry. The most significant bits of the MQ are matched with the argument minus one by an AND to accumulator.

USAGE

MU RAN6 is available on the SAP-FORTRAN or FORTRAN system tape at this installation. It is obtained by means of the expression

XRANF(I)

in a FORTRAN statement. $I = 2^x$, $0 < I \leq 32768$, $0 < x \leq 15$,
 x must be an integer.

CODING INFORMATION

MURAN6 requires 12 words program space. Execution time is 432 microseconds.

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