

Aug 10, 18 12:54	randomised-simple.c	Page 1/2
<pre> /* Copyleft Bromley brom@physics.uq.edu.au August 2018 * Implementing a couple of the simplest random methods in c * * basic compile eg. with: * gcc -Wall -Wextra randomised-simple.c -o randomised-simple.exe -lm * then test usage eg.: * ./randomised-simple.exe 12345 10 * * older gnu compilers might need -std=gnu99 for drand48 support * * *****80 char length page width best for a2ps ***** */ #include <stdlib.h> #include <stdio.h> #include <math.h> int main(int argc, char *argv[]) { unsigned int iseed; /* input 1 random number seed */ int nloops; /* input 2 number of loops */ int jloops; int irandcur; double drandcur; if (argc != 3) { fprintf(stderr, "Usage: %s <iseed> <nloops>\n", argv[0]); exit(EXIT_FAILURE); } iseed = atoi(argv[1]); nloops = atoi(argv[2]); printf("Running %s with iseed=%u and nloops=%d\n", argv[0], iseed, nloops); /* method 1 rand() generation.... see ** man rand ** * RAND_MAX is defined in stdlib.h * First generate the seed and then run off nloops*/ printf("method1 using rand() with RAND_MAX=%d\n", RAND_MAX); srand(iseed); for (jloops = 0; jloops < nloops; jloops++) { irandcur = rand(); drandcur = (double)rand() / ((double)RAND_MAX+1.0); printf("method1 int=%d, dble=%f,\n", irandcur, drandcur); } printf("\n"); /* method 2 drand48() generation (uses long int seed) * ** man drand48 ** * for more information about (lack of) thread safety */ double drandcurl, drandcur2; long int iseedlong; printf("method2 using drand48()"); iseedlong = (long int) iseed; srand48(iseedlong); for (jloops = 0; jloops < nloops; jloops++) { drandcurl = drand48(); // random number between 0,1 drandcur2 = drand48(); // random number between 0,1 printf("method2 drandcurl=%g, drandcur2=%g,\n", drandcurl, drandcur2); </pre>		

Aug 10, 18 12:54	randomised-simple.c	Page 2/2
<pre> } exit(EXIT_SUCCESS); } </pre>		