/\*---------------------------------------------------\*/

/\* Sam Lee \*/

/\* Lab 2b \*/

/\* \*/

/\* This program prints the system limitations. \*/

#include <stdio.h>

#include <stdlib.h>

#include <limits.h>

#include <float.h>

int main(void)

{

printf("\nSam Lee, Lab 2b.\n\n");

/\* Print integer type limits. \*/

printf("SIGNED INTEGERS: \n");

printf(" short minimum: %i \n", SHRT\_MIN);

printf(" short maximum: %i \n\n",SHRT\_MAX);

printf(" int minimum: %i \n", INT\_MIN);

printf(" int maximum: %i \n\n",INT\_MAX);

printf(" long minimum: %li \n", LONG\_MIN);

printf(" long maximum: %li \n\n",LONG\_MAX);

printf("UNSIGNED INTEGERS: \n");

printf(" The lower limit for all unsigned integer is zero.\n");

printf(" unsigned short maximum: %u \n",USHRT\_MAX);

printf(" unsigned int maximum: %u \n",UINT\_MAX);

printf(" unsigned long maximum: %lu \n",ULONG\_MAX);

/\* Print float precision, range, maximum. \*/

printf("\n\nFLOAT PRECISION: \n");

printf(" float precision digits: %i \n",FLT\_DIG);

printf(" float maximum exponent: %i \n",FLT\_MAX\_10\_EXP);

printf(" float maximum: %e \n\n",FLT\_MAX);

/\* Print double precision, range, maximum. \*/

printf(" double precision digits: %i \n",DBL\_DIG);

printf(" double maximum exponent: %i \n",DBL\_MAX\_10\_EXP);

printf(" double maximum: %e \n\n",DBL\_MAX);

/\* Print long precision, range, maximum. \*/

printf(" long double precision: %i \n",LDBL\_DIG);

printf(" long double maximum exponent: %i \n",LDBL\_MAX\_10\_EXP);

printf(" long double maximum: %Le \n\n\n",LDBL\_MAX);

/\* Exit program. \*/

return EXIT\_SUCCESS;

}

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