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\* main.c for the MIPSfpga core running on a Nexys4 DDR FPGA board.

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\* Writes a sequence of increasing numbers to the 8 7-segment displays.

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#include "mfp\_io.h"

#include "fdc.h"

void delay();

//------------------

// main()

//------------------

int main() {

volatile unsigned int i, cnt = 0;

volatile unsigned int allDigits = 0;

fdc\_init();

fdc\_printf("Starting program.");

MFP\_7SEGEN = 0; // enable all 7-segment displays

while(1) {

// write increasing values to each 7-segment display digit

for (i=0; i<8; i++) {

allDigits |= (cnt&0xF)<<(i\*4);

cnt++;

}

MFP\_7SEGDIGITS = allDigits;

fdc\_printf("Value of digits: 0x%x\n", allDigits);

allDigits = 0;

delay();

}

return 0;

}

void delay() {

volatile unsigned int j;

for (j = 0; j < (9000000); j++) ; // delay

}

void \_mips\_handle\_exception(void\* ctx, int reason) {

MFP\_LEDS = 0x8001; // Display 0x8001 on LEDs to indicate error state

while (1) ;

}