src\main.c

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// Practice Assignment 6, exercise 1


#include <stdio.h>
#include <avr/io.h>
#include <util/delay.h>

#include "usart.h"

int main(void) {

  int i,minC,maxC,sumC,avgC; // create variables

  int temp_celsius[7]; // create array
  maxC=-100;minC=100;sumC=0; // assign numbers to variables. -100 and 100 are enough because 32767 would be hotter than the surface of the sun

  uart_init(); // open the communication to the microcontroller
  io_redirect(); // redirect input and output to the communication


  while(1) { // start program loop

      for(i=0;i<=6;i++) //first for loop, for getting numbers and setting minimum/maximum/sum
    {
      printf("Type in temperature for day %d\n",i+1); //Print message for user

      scanf("%d", &temp_celsius[i]); //scan for input

      if(temp_celsius[i]>maxC)
        maxC=temp_celsius[i]; // set maximum temperature

      if(temp_celsius[i]<minC)
        minC=temp_celsius[i]; // set minimum temperature

      sumC+=temp_celsius[i]; // calculate sum of temperatures, for average
    }
    avgC=sumC/7; // calculate average

    for(i=0;i<=6;i++) // second loop, for printing
    {
      printf("The temperature for day %d was %d\n",i+1,temp_celsius[i]); // display temperature for every day
    }
    printf("The maximum temperature was %d\n",maxC); // display maximum temp

    printf("The minimum temperature was %d\n",minC); // display minimum temp

```

```c
    printf("The average temperature was %d\n",avgC); // display average temp

  }

  return 0;
}

```