**Listing 1. Źródło przykładowego programu**

#include <stdio.h>

#include "sleep.h"

#include "xgpiops.h"

int main**()**

**{**

 XGpioPs psGpioInstancePtr**;**

 XGpioPs\_Config **\***GpioConfigPtr**;**

 int xStatus**;**

 int emioLed **=** 73**;** // LD0 is connected to EMIO pin 19 (GPIO 73 (54 + 19))

 int mioLed **=** 7**;** // Led LD9 is connected to MIO pin 7

 int emioButton **=** 54**;** // Button center connected to pin 0 EMIO (GPIO 54)

 u32 outputPinDirection **=** 0x1**;**

 u32 inputPinDirection **=** 0x0**;**

 //GPIO Intialization

 GpioConfigPtr **=** XGpioPs\_LookupConfig**(**XPAR\_PS7\_GPIO\_0\_DEVICE\_ID**);**

 **if** **(**GpioConfigPtr **==** **NULL)**

 **return** XST\_FAILURE**;**

 xStatus **=** XGpioPs\_CfgInitialize**(&**psGpioInstancePtr**,** GpioConfigPtr**,**

 GpioConfigPtr**->**BaseAddr**);**

 **if** **(**xStatus **!=** XST\_SUCCESS**)**

 print**(**" GPIO INIT FAILED \n\r"**);**

 //PS GPIO LED pin setting to Output

 XGpioPs\_SetDirectionPin**(&**psGpioInstancePtr**,** mioLed**,** outputPinDirection**);**

 XGpioPs\_SetOutputEnablePin**(&**psGpioInstancePtr**,** mioLed**,** 1**);**

 //EMIO LED Setting to Output

 XGpioPs\_SetDirectionPin**(&**psGpioInstancePtr**,** emioLed**,** outputPinDirection**);**

 XGpioPs\_SetOutputEnablePin**(&**psGpioInstancePtr**,** emioLed**,** 1**);**

 //EMIO Button set to input

 XGpioPs\_SetDirectionPin**(&**psGpioInstancePtr**,** emioButton**,** inputPinDirection**);**

 //Main Loop

 **while** **(**1**)** **{**

 XGpioPs\_WritePin**(&**psGpioInstancePtr**,** mioLed**,** 1**);**

 XGpioPs\_WritePin**(&**psGpioInstancePtr**,** emioLed**,** 1**);**

 usleep**(**300000**);**

 XGpioPs\_WritePin**(&**psGpioInstancePtr**,** mioLed**,** 0**);**

 XGpioPs\_WritePin**(&**psGpioInstancePtr**,** emioLed**,** 0**);**

 usleep**(**300000**);**

 **if** **(**XGpioPs\_ReadPin**(&**psGpioInstancePtr**,** emioButton**)** **==** 1**)**

 **{**

 **break;**

 **}**

 **}**

 **return** 0**;**

**}**