**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**;**

**}**