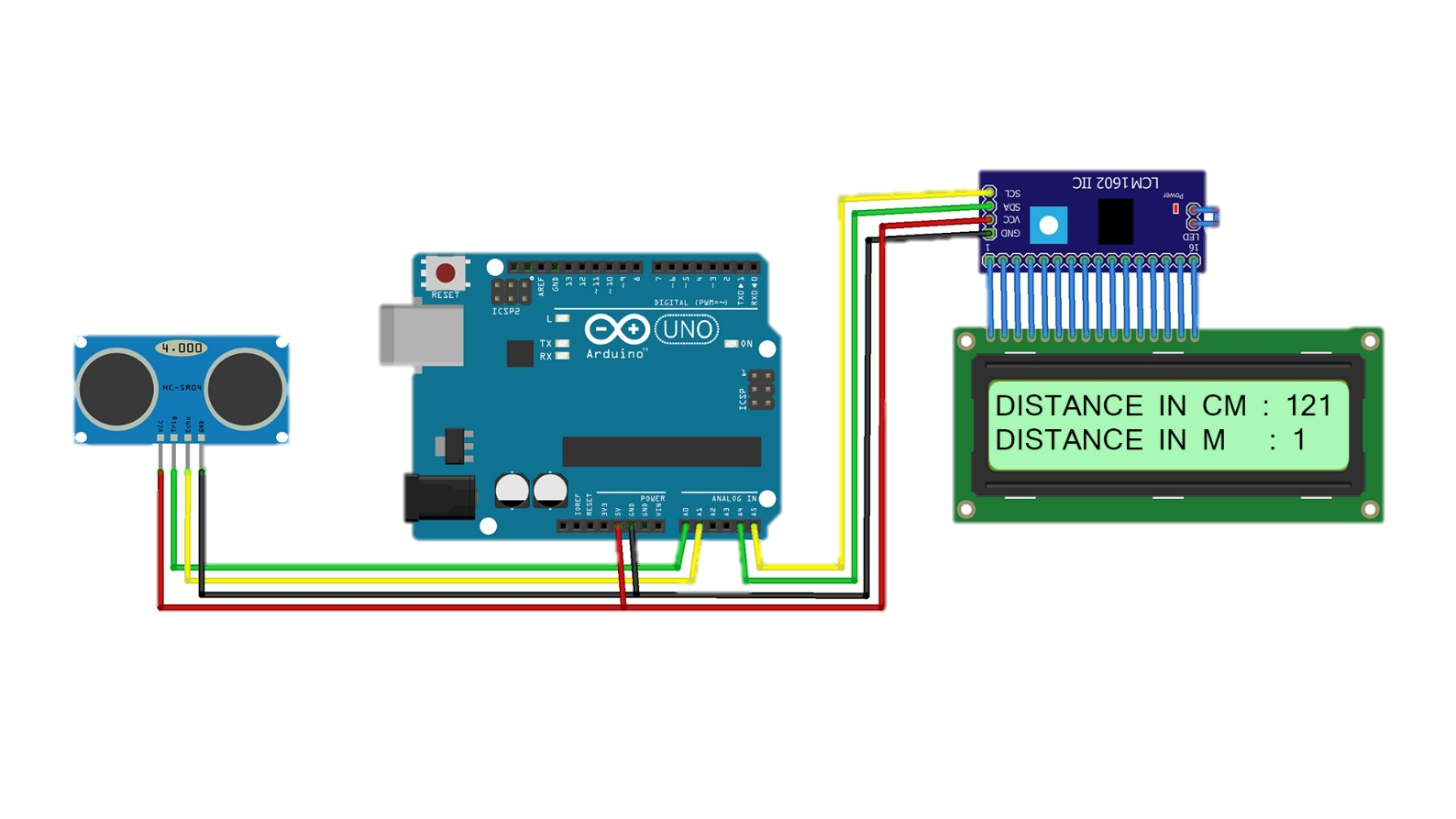
**Lónyay Menyhért Baptista Technikum és Szakképző Iskola, Vásárosnamény**

**Távolságérzékelő, LCD**

Baranyi Réka

12.A

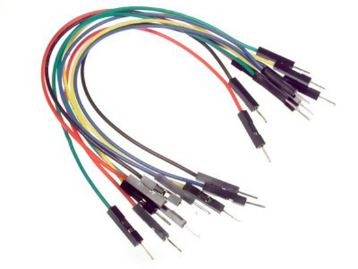
Ebben a projektben egy HY-SRF05-öt illetve egy LCD kijelzőt fogok bemutatni. A HY-SRF05-el fogom megnézni, hogy egy adott tárgy vagy bármi más mennyire van messze tőlem, amit cm-be illetve méterbe fog kiírni az LCD-re. A HY-SRF05 0 cm-től 4 méterig tud mérni. Vannak olyan eszközök, amelyek ilyenekhez vannak beprogramozva ,mint például tolató radar.

**A projekthez az alábbiak kellenek:**

anya-apa kábel

Arduino Uno

LCD kijelző 16x2-es

Jumper kábel

HY\_SRF05

**Kód:**

**#include <LiquidCrystal\_I2C.h> // Library for LCD**

**LiquidCrystal\_I2C lcd = LiquidCrystal\_I2C(0x27, 16, 2); // Change to (0x27,16,2) for 16x2 LCD.my address is (0x3F)**

**int trigPin = A0;**

**int echoPin = A1;**

**long distance;**

**long distanceInch;**

**long duration;**

**void setup(){**

**lcd.init();**

**lcd.backlight();**

**pinMode(trigPin, OUTPUT);**

**pinMode(echoPin, INPUT);**

**lcd.setCursor(0,0);**

**lcd.print(" WELCOME TO");**

**lcd.setCursor(0,1);**

**lcd.print(" MKINVENTIONS");**

**delay(2000);**

**}**

**void loop() {**

**ULTRASONIC();**

**lcd.clear();**

**lcd.setCursor(0,0);**

**lcd.print("DISTANCE CM:");**

**lcd.print(distance);**

**lcd.setCursor(0,1);**

**lcd.print("DISTANCE INCH:");**

**lcd.print(distanceInch);**

**// lcd.setCursor(0,1);**

**// lcd.print("DISTANCE MM:");**

**// lcd.print(distanceInch);**

**}**

**void ULTRASONIC(){**

**digitalWrite(trigPin, LOW);**

**delayMicroseconds(2);**

**digitalWrite(trigPin, HIGH);**

**delayMicroseconds(10);**

**digitalWrite(trigPin, LOW);**

**duration = pulseIn(echoPin, HIGH);**

**distance = duration\*0.034/2;**

**distanceInch = duration\*0.0133/2;**

**}**

**Forráskód:**

**kód:**

[**https://www.microcontroller.hu/blog/projektek/hc-sr04-tavolsag-mero-szenzor/**](https://www.microcontroller.hu/blog/projektek/hc-sr04-tavolsag-mero-szenzor/)

**HY-SRF05:**

[**https://www.google.com/search?sca\_esv=2ed3e680b7b247df&rlz=1C1CHBD\_huHU969HU969&q=hy-srf05&udm=2&fbs=ABzOT\_BIPLrq5rToiH7zLWNhnqL\_RnV5Loj2NAuXjCG6Eyl8H4PsMciDvpamZGo0z9LgfuQ5\_PimSgklpNf6X5s-YJ\_MZoHs5WZX7C1Bnl8boI0WZSuDly181ZvtX2mSye4uJJr8KssaN\_xhZP7oE09sVsK7PJYYvdtdBd\_\_hpg7iHNQAp4cDEffnSrBBYuD51NnSA4s-aQ\_3wNDxZaFKvw\_YcMpHeSSaQ&sa=X&ved=2ahUKEwjWqOzD4pCMAxULgP0HHedCFc4QtKgLegQIFBAB&biw=1440&bih=783&dpr=1#vhid=ZbY83uOMXivlzM&vssid=mosaic**](https://www.google.com/search?sca_esv=2ed3e680b7b247df&rlz=1C1CHBD_huHU969HU969&q=hy-srf05&udm=2&fbs=ABzOT_BIPLrq5rToiH7zLWNhnqL_RnV5Loj2NAuXjCG6Eyl8H4PsMciDvpamZGo0z9LgfuQ5_PimSgklpNf6X5s-YJ_MZoHs5WZX7C1Bnl8boI0WZSuDly181ZvtX2mSye4uJJr8KssaN_xhZP7oE09sVsK7PJYYvdtdBd__hpg7iHNQAp4cDEffnSrBBYuD51NnSA4s-aQ_3wNDxZaFKvw_YcMpHeSSaQ&sa=X&ved=2ahUKEwjWqOzD4pCMAxULgP0HHedCFc4QtKgLegQIFBAB&biw=1440&bih=783&dpr=1#vhid=ZbY83uOMXivlzM&vssid=mosaic)

**Arduino Uno:**

[**https://www.google.com/search?q=ARDUINO+UNO&sca\_esv=2ed3e680b7b247df&udm=2&biw=1440&bih=783&ei=Pe3XZ\_WfMLeB9u8P4dOkwQU&ved=0ahUKEwi1spC-6JCMAxW3gP0HHeEpKVgQ4dUDCBE&uact=5&oq=ARDUINO+UNO&gs\_lp=EgNpbWciC0FSRFVJTk8gVU5PMgUQABiABDIFEAAYgAQyBRAAGIAEMgUQABiABDIFEAAYgAQyBRAAGIAEMgUQABiABDIFEAAYgAQyBRAAGIAEMgUQABiABEiUFlAAWPQTcAF4AJABAJgBbaAB\_QaqAQQxMC4xuAEDyAEA-AEBmAILoAK1B6gCAMICChAAGIAEGEMYigXCAgsQABiABBixAxiDAcICCBAAGIAEGLEDwgIOEAAYgAQYsQMYgwEYigWYAwGSBwQxMC4xoAeQNA&sclient=img**](https://www.google.com/search?q=ARDUINO+UNO&sca_esv=2ed3e680b7b247df&udm=2&biw=1440&bih=783&ei=Pe3XZ_WfMLeB9u8P4dOkwQU&ved=0ahUKEwi1spC-6JCMAxW3gP0HHeEpKVgQ4dUDCBE&uact=5&oq=ARDUINO+UNO&gs_lp=EgNpbWciC0FSRFVJTk8gVU5PMgUQABiABDIFEAAYgAQyBRAAGIAEMgUQABiABDIFEAAYgAQyBRAAGIAEMgUQABiABDIFEAAYgAQyBRAAGIAEMgUQABiABEiUFlAAWPQTcAF4AJABAJgBbaAB_QaqAQQxMC4xuAEDyAEA-AEBmAILoAK1B6gCAMICChAAGIAEGEMYigXCAgsQABiABBixAxiDAcICCBAAGIAEGLEDwgIOEAAYgAQYsQMYgwEYigWYAwGSBwQxMC4xoAeQNA&sclient=img)

**Jumper kábel/kábelek**

[**https://www.google.com/search?q=ardino+cable&sca\_esv=2ed3e680b7b247df&udm=2&biw=1440&bih=783&ei=Au\_XZ-WpB7n87\_UP3YrQ6Q4&ved=0ahUKEwjlsuiV6pCMAxU5\_rsIHV0FNO0Q4dUDCBE&uact=5&oq=ardino+cable&gs\_lp=EgNpbWciDGFyZGlubyBjYWJsZTIJEAAYgAQYExgKSLDlAVDkvgFY-eMBcAF4AJABAJgBggGgAdMIqgEEMTIuMbgBA8gBAPgBAZgCDaACjAmoAgDCAgoQABiABBhDGIoFwgIGEAAYBxgewgIFEAAYgATCAgsQABiABBixAxiDAcICCBAAGIAEGLEDwgIOEAAYgAQYsQMYgwEYigXCAg0QABiABBixAxhDGIoFwgIKEAAYgAQYsQMYCsICBxAAGIAEGArCAggQABgTGAoYHsICBhAAGBMYHpgDAogGAZIHBDEyLjGgB-Q\_&sclient=img**](https://www.google.com/search?q=ardino+cable&sca_esv=2ed3e680b7b247df&udm=2&biw=1440&bih=783&ei=Au_XZ-WpB7n87_UP3YrQ6Q4&ved=0ahUKEwjlsuiV6pCMAxU5_rsIHV0FNO0Q4dUDCBE&uact=5&oq=ardino+cable&gs_lp=EgNpbWciDGFyZGlubyBjYWJsZTIJEAAYgAQYExgKSLDlAVDkvgFY-eMBcAF4AJABAJgBggGgAdMIqgEEMTIuMbgBA8gBAPgBAZgCDaACjAmoAgDCAgoQABiABBhDGIoFwgIGEAAYBxgewgIFEAAYgATCAgsQABiABBixAxiDAcICCBAAGIAEGLEDwgIOEAAYgAQYsQMYgwEYigXCAg0QABiABBixAxhDGIoFwgIKEAAYgAQYsQMYCsICBxAAGIAEGArCAggQABgTGAoYHsICBhAAGBMYHpgDAogGAZIHBDEyLjGgB-Q_&sclient=img)

**LCD:**

[**https://www.google.com/search?sca\_esv=8d8d37d839baca63&rlz=1C1CHBD\_huHU969HU969&q=lcd&udm=2&fbs=ABzOT\_BIPLrq5rToiH7zLWNhnqL\_RnV5Loj2NAuXjCG6Eyl8H4PsMciDvpamZGo0z9LgfuQHLrTWFSWTUj4V5mT7xnvVmMORSbapRkY3eTWylf7VMkHfkZnFEZ9am1mq65QzvdKHg7qmJhJR8XigPAHVk-CspCIT1p4FuH5Za81-hq4r5GEIPJ8tJ778lNrnJglSmdjzb4meBGmd\_ixCI14binfU80\_4BA&sa=X&ved=2ahUKEwjqz\_bRg76MAxUO\_7sIHVRlBvsQtKgLegQIFBAB&biw=1440&bih=783&dpr=1#vhid=QYMeYhCdC01FMM&vssid=mosaic**](https://www.google.com/search?sca_esv=8d8d37d839baca63&rlz=1C1CHBD_huHU969HU969&q=lcd&udm=2&fbs=ABzOT_BIPLrq5rToiH7zLWNhnqL_RnV5Loj2NAuXjCG6Eyl8H4PsMciDvpamZGo0z9LgfuQHLrTWFSWTUj4V5mT7xnvVmMORSbapRkY3eTWylf7VMkHfkZnFEZ9am1mq65QzvdKHg7qmJhJR8XigPAHVk-CspCIT1p4FuH5Za81-hq4r5GEIPJ8tJ778lNrnJglSmdjzb4meBGmd_ixCI14binfU80_4BA&sa=X&ved=2ahUKEwjqz_bRg76MAxUO_7sIHVRlBvsQtKgLegQIFBAB&biw=1440&bih=783&dpr=1#vhid=QYMeYhCdC01FMM&vssid=mosaic)

**Videó:**

[**https://mkinventions.blogspot.com/2020/07/distance-measuring-device-with.html#include%20%3CWire.h%3E%20//%20Library%20for%20I2C%20communication**](https://mkinventions.blogspot.com/2020/07/distance-measuring-device-with.html#include%20%3CWire.h%3E%20//%20Library%20for%20I2C%20communication)