Toxi Band

Band which will detect toxicity level

Problems faced by Sewage Divers

- The smell of sewage is unbearable.

- Long term health problems due to Hydrogen Sulphide.

- While having food their hands smells of sewage.

- 100 sewer workers die every year and many die before the age of 60.

- They come across dead bodies of Humans, Dogs, cats and many cockroaches and rats are present in the sewage drain.

- They suffer form headaches, diarrhea, illness, smell ability decrease, smell ability decreases, slight fever, abdominal pain and some deadly disease.

My Product

- This product is used to detect the level of toxicity in the air.

- We can detect the amount of toxicity through the colour of light the detector has

- This band can be tied anywhere on the hand and it has light weight.

- We have used a Gas sensor(MQ6) to detect the gas, Neopixel Ring 12, programmed it with Arduino Pro Mini and a 9V Battery.

- The cost of this project is about Rs.900.

MQ6 Gas Sensor

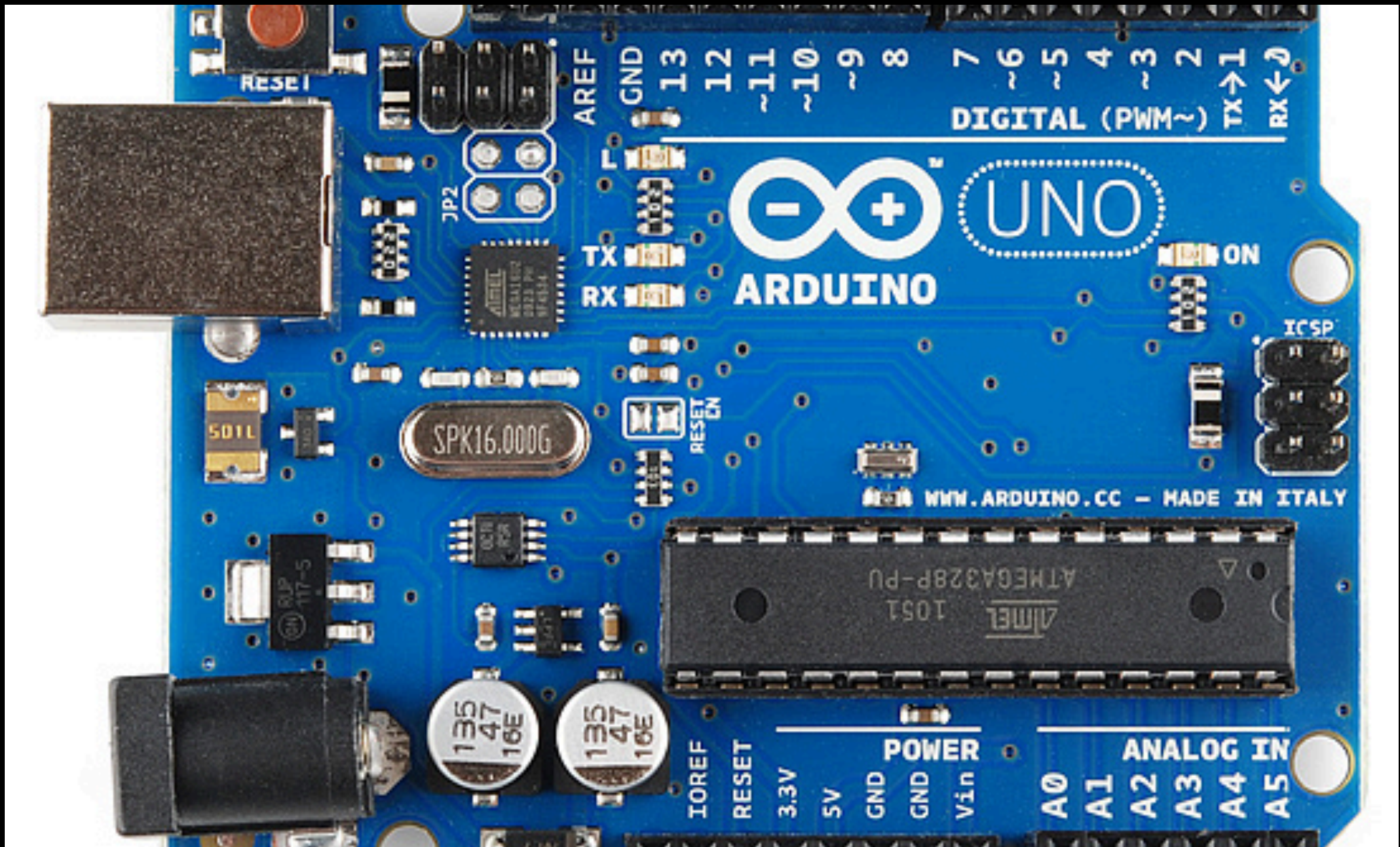Here this sensor is used to detect the level of Toxicity in the Sewer Gas

- It's features include High Sensitivity to gas, stable for long time, simple drive circuit, fast response and many other.

- It is mainly used for gas detection.

- In this project MQ6 is used as an input device to measure the amount of gas present in the air.

- There are series of MQ sensors which are used for the detection of different gases.

- It's cost is about Rs.160 and is easily available at any electronics store.

Neopixel

This is used as an output device to show the amount of toxic gas in the air

- Here 12 Ultra Bright Smart LED NeoPixels are arranged in a circle and it is from Adafruit Industry.

- It can be used as bangles and is famous for its colour changing patterns.

- In this project it is as an Output device which displays the light according to the content ration of toxicity in the air.

- It is a bit costly nearly about Rs.550 but working with it is fun.

Arduino Uno

This is a micro-controller based on ATmega328 .

- Here it is used to control the command given to MQ gas sensor and Neopixel Led.

- It is the most used and documented board of whole Arduino Family. It has 14 digital i/o pins of which 6 can be used as PWM inputs, 6 analog inputs, power jack, reset button and more.

- It is based on Atmel'

- It's cost is about Rs.150 which is same as Arduino Uno.