Fish Sensing

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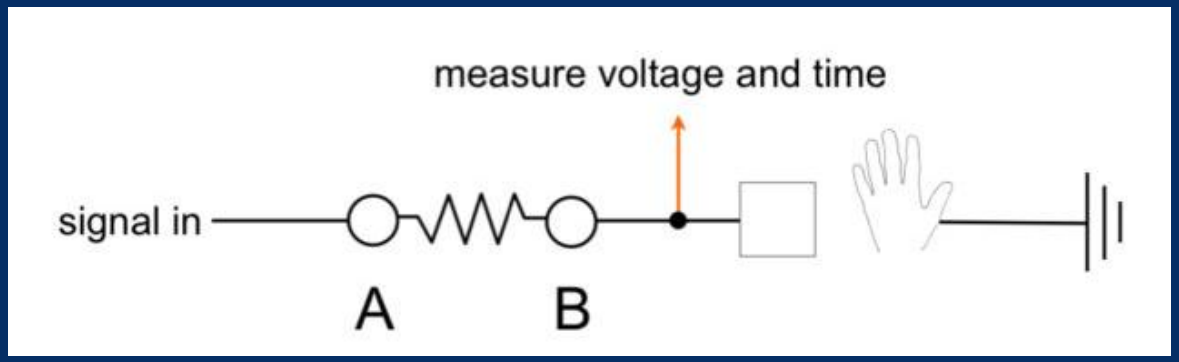
Capacitive Sensor

Actual circuit

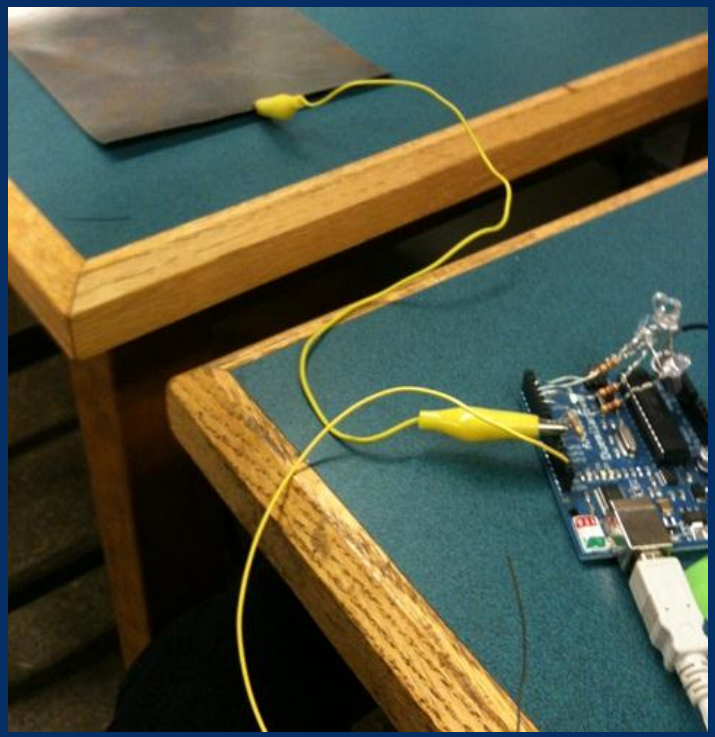


Circuit diagram

Modified with LEDs

Some changes had to be made to the circuit so that I could control LEDs

- Changed from Lilypad to Arduino because of pin headers
- Used flat metal sheet instead of wool
- Added four LEDs w/ resistors to four digital output pins



Code Details

```
{
Serial.begin(9600);
pinMode(2,OUTPUT);
pinMode(3,OUTPUT);
pinMode(4,OUTPUT);
pinMode(5,OUTPUT);
}
```

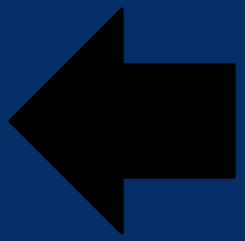
```
sensorValue =  mySensor.capSense(30);
if (sensorValue > 1275) {
  sensorValue = 1275; }
if(sensorValue < 100) {
  sensorValue = 0; }
```

```
if (sensorValue > 500) {
  digitalWrite(2, HIGH); }
else {
  digitalWrite(2, LOW); }
if (sensorValue > 200) {
  digitalWrite(3, HIGH); }
else {
  digitalWrite(3, LOW); }
if (sensorValue > 150) {
  digitalWrite(4, HIGH); }
else {
  digitalWrite(4, LOW); }
if (sensorValue > 100) {
  digitalWrite(5, HIGH); }
else {
  digitalWrite(5, LOW); }
```

Arduino Code

New Code

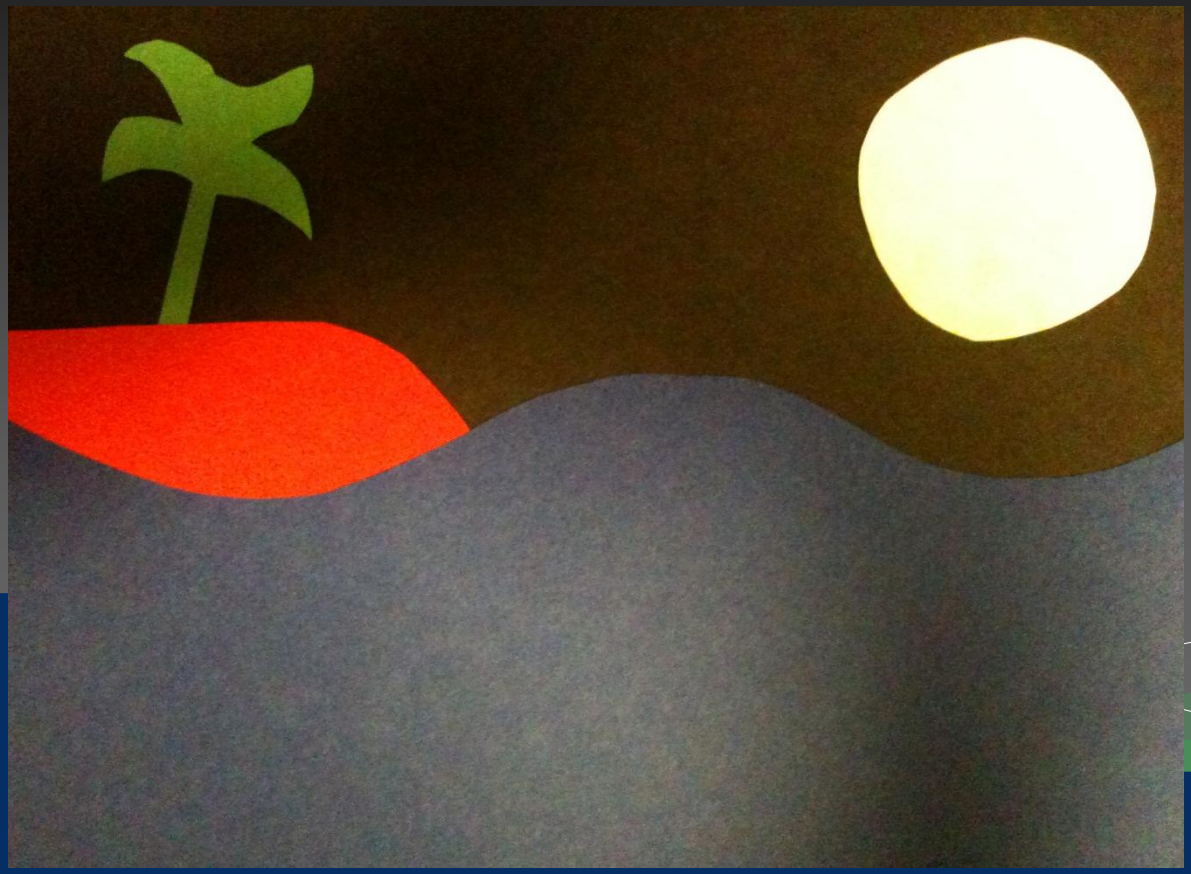
```
#include <CapSense.h>
CapSense   mySensor = CapSense(11,10);
long start;
long sensorValue;
void setup()
{
Serial.begin(9600);
pinMode(2,OUTPUT);
pinMode(3,OUTPUT);
pinMode(4,OUTPUT);
pinMode(5,OUTPUT);
}
void loop()
{
  start = millis();
  sensorValue =  mySensor.capSense(30);
  if (sensorValue > 1275) {
    sensorValue = 1275; }
  if(sensorValue < 100) {
    sensorValue = 0; }
  if (sensorValue > 500) {
    digitalWrite(2, HIGH); }
  else {
    digitalWrite(2, LOW); }
  if (sensorValue > 200) {
    digitalWrite(3, HIGH); }
  else {
    digitalWrite(3, LOW); }
  if (sensorValue > 150) {
    digitalWrite(4, HIGH); }
  else {
    digitalWrite(4, LOW); }
  if (sensorValue > 100) {
    digitalWrite(5, HIGH); }
  else {
    digitalWrite(5, LOW); }
```



Sample Code

```
#include <CapSense.h>

CapSense   mySensor = CapSense(11,10);
long start;
long sensorValue;

void setup()
{
Serial.begin(9600);
}

void loop()
{
start = millis();
sensorValue =  mySensor.capSense(30);

Serial.println(sensorValue);
delay(10);                              //
}
```

Fishing Game



There is only one fish left in the whole ocean; find it!

Thank You

Any Questions?