GoldSTEM_Lesson_8_Morse_Code_LED (SOS) Save Our Ship

For this experiment we will use the same hardware setup as lesson 5 External LED Blink

Input history of Morse code

Loading the code
Load GoldSTEM_Lesson_8_Morse_Code_LED

```
/*
  GoldSTEM_Lesson_8_Morse_Code_LED GoldSTEM tm 2-26-2016
*/


int ledPin =  13;    // LED connected to digital pin 13

// The setup() method runs once, when the sketch starts

void setup()  {

  pinMode(ledPin, OUTPUT);
}
// SOS ... _ _ _  ...
void loop()
{
  delay(3000);              // 3 second delay which acts 1: before loop to make sure you're ready and 2: act
as a delay for when it starts all over again :)
  digitalWrite(ledPin, HIGH);  //"S" signal starts after the one second delay
  delay(1000);
  digitalWrite(ledPin, LOW);   // .
  delay(500);
  digitalWrite(ledPin, HIGH);  // .
  delay(1000);
  digitalWrite(ledPin, LOW);
  delay(500);
  digitalWrite(ledPin, HIGH);  // .
  delay(1000);
  digitalWrite(ledPin, LOW);
  delay(3000);              //3 second delay for the second letter (first of 2)
  digitalWrite(ledPin, HIGH);
  delay(3000);              //  -     First dash of 3 which represents the O
  digitalWrite(ledPin, LOW);
  delay(500);
  digitalWrite(ledPin, HIGH); // -
```

```
 delay(3000);
 digitalWrite(ledPin, LOW);
 delay(500);
 digitalWrite(ledPin, HIGH); // -
 delay(3000);
 digitalWrite(ledPin, LOW);
 delay(3000);              //second 3 second delay for the third letter
 digitalWrite(ledPin, HIGH);  // .
 delay(1000);
 digitalWrite(ledPin, LOW);
 delay(500);
 digitalWrite(ledPin, HIGH);  // .
 delay(1000);
 digitalWrite(ledPin, LOW);
 delay(500);
 digitalWrite(ledPin, HIGH); //.
 delay(1000);
 digitalWrite(ledPin, LOW);
 delay(500);

}
```

This code is very basic and easy to understand we are going to go through the code and make some modifications.

Step 1

Draw a flow chart of the existing code.

Step 2

Modify the code as we did in the lesson to make the delays easier to change.

Step 3

Modify the code to make the time between letters and words multiples of the time between dots and dashes.