

# DEATH GUESS

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*Death Guess* is an analog version of the word game: Hang-man. Simplified from the classic time-waster played on paper, this electronic version is merely a series of guesses that can result in death.

# CODE

```
#include<Servo.h>
#define BUTTON 7 //7

int buttonval = 0;
int oldbuttonval = 0;

Servo dot; // servo that shows letters and letter picking status
int dotangle = 2; //starts the dotangle at the left?
int olddotangle = 2;

char guess;
Servo gallow; // servo that shows the players winning/mode
status
int gallowangle = 149; //starts the gallow angle at the smiley
face

int potpin = A3; // analog pin used to connect the potentiometer
int potval; // variable to read the value from the analog pin

int words = 2;
String woord;
char* dictionary[100] =
{"abbey", "abbot", "abhor", "abide", "ached", "amass", "amble",
"amped", "appal", "armor", "ascot", "babel", "bacon", "badge",
"baker", "beams", "birch", "bison", "blaze", "blimp", "blind", "boa
rd", "books", "broke", "built", "bumpy", "buyer", "cadet", "catch",
"cheat", "chimp", "choir", "coder", "combo", "crazy", "cream",
"rush", "curse", "cycle", "dandy", "dazed", "dealt", "death",
"decay", "demon", "digit", "dodge", "dogma", "drugs",
"dusty", "eagle", "eaten", "entry", "erode", "extra", "facet",
"favor", "felon", "finch", "fleet", "fluff", "force", "fuzzy",
"gauze", "ghost", "gnome", "going", "golem", "graze", "great",
"guess", "haiku", "haste", "heavy", "hello", "horns", "hyper",
"image", "infer", "ivory", "jewel", "juice", "kabob", "kitty",
"kneel", "lapel", "layer", "light", "loath", "looms", "lunge",
"macho", "maker", "maple", "media", "metal", "minor",
"moral", "movie", "musty"}; //My dictionary as of now

int currentword; //variable that knows which word from the
dictionary is in use
boolean character[5] = {false, false, false, false, false};
String date;
String guessletter;
String guessedletters = String("");
int guessmode = 0;
int dots = 0;
int twos;
int twosy;

int stat = 0;
boolean death = false;
```

```
void setup()
{
  Serial.begin(9600);
  dot.attach(A1);
  gallow.attach(A0);

  currentword =
  int(random(0, map(analogRead(A2), 100, 300, 3, 100)));
  woord = dictionary[currentword];
  pinMode(BUTTON, INPUT);

  Serial.println(woord);

}

void loop()
{
  if(death == true){
    for(int x = 0; x < 5; x++){
      char last = woord.charAt(x);
      dotangle = map(last, 97, 122, 2, 177);
      dot.write(dotangle);
      delay(500);
    }
    Serial.println("hey!");
    dotangle = 2; //starts the dotangle at the left?
    olddotangle = 2;
    gallowangle = 149;
    for(int x = 0; x < 5; x++){
      character[x] = false;
    }

    guessedletters = String("");
    guessmode = 0;
    dots = 0;
    twos = 0;
    stat = 0;
    currentword =
    int(random(0, map(analogRead(A2), 100, 300, 3, 100)));
    woord = dictionary[currentword];
    death = false;
    delay(1000);
  }else{
    buttonval = digitalRead(BUTTON);

    if(buttonval == HIGH) && (oldbuttonval ==
    LOW)){//checks to see if button is pressed

      if(guessmode == 1){//checks to see if button had already
      been pressed and so all the stuff here is after the button is
      pressed once
        guess = map(dotangle, 2, 177, 97, 122); //grabs the letter
        from the servo gauge
        guessletter = guess;
        Serial.println(guessletter);
        Serial.println(guess);
        Serial.println("guessletter");//just using as a marker
        if(guessedletters.indexOf(guessletter) >= 0){ //if the letter
        is in the guessed letter string
          gallowangle = 2; //moving the gallow reader to show
          that you have guessed the letter
        }
      }
    }
  }
}

int dotsy = 0;
for(int x = 0; x < 5; x++){//moving the dot meter to show
where the letter you guessed was at
  if(guessletter == woord.charAt(x)){
    twosy = 1;
    for(int y = 1; y < x+1; y++){
      twosy *= 2;
    }
  }
  dotsy += twosy;
}
}
}
dotangle = map(twosy, 0, 32, 2, 177);
gallow.write(gallowangle);
dot.write(dotangle);

delay(500); //add pause for the already guessed sign to show
up
}else
  if(guessedletters.indexOf(guessletter) == -1){ //if it is not
already guessed
    if(woord.indexOf(guessletter) >= 0){ //if the letter is correct
      for(int x = 0; x < 5; x++){
        if(guessletter == woord.charAt(x)){
          character[x] = true;
        }
      }
      Serial.println("***letter is in word***");
    }else
      if(woord.indexOf(guessletter) == -1){ //guess is wrong
        stat++;
        Serial.println("one step closer to death");
        Serial.println(stat);
        Serial.println(guessedletters);
      }
      guessedletters += guess; //adds a guessed letter to the guess
      string
    }
    gallowangle = map(stat, 0, 4, 149, 30);
    guessletter = "";
  }
  guessmode = 1-guessmode;
  delay(30);
}

oldbuttonval = buttonval;

if(guessmode == 1){
  gallowangle = 178;
  potval = analogRead(potpin);
  dotangle = map(potval, 0, 1023, 2, 177);
  Serial.println("Guess Mode");
  Serial.println(potval);
  char guessprint = map(dotangle, 2, 177, 97, 122);

}else{
  dots = 0; //reset the dot int
}
```

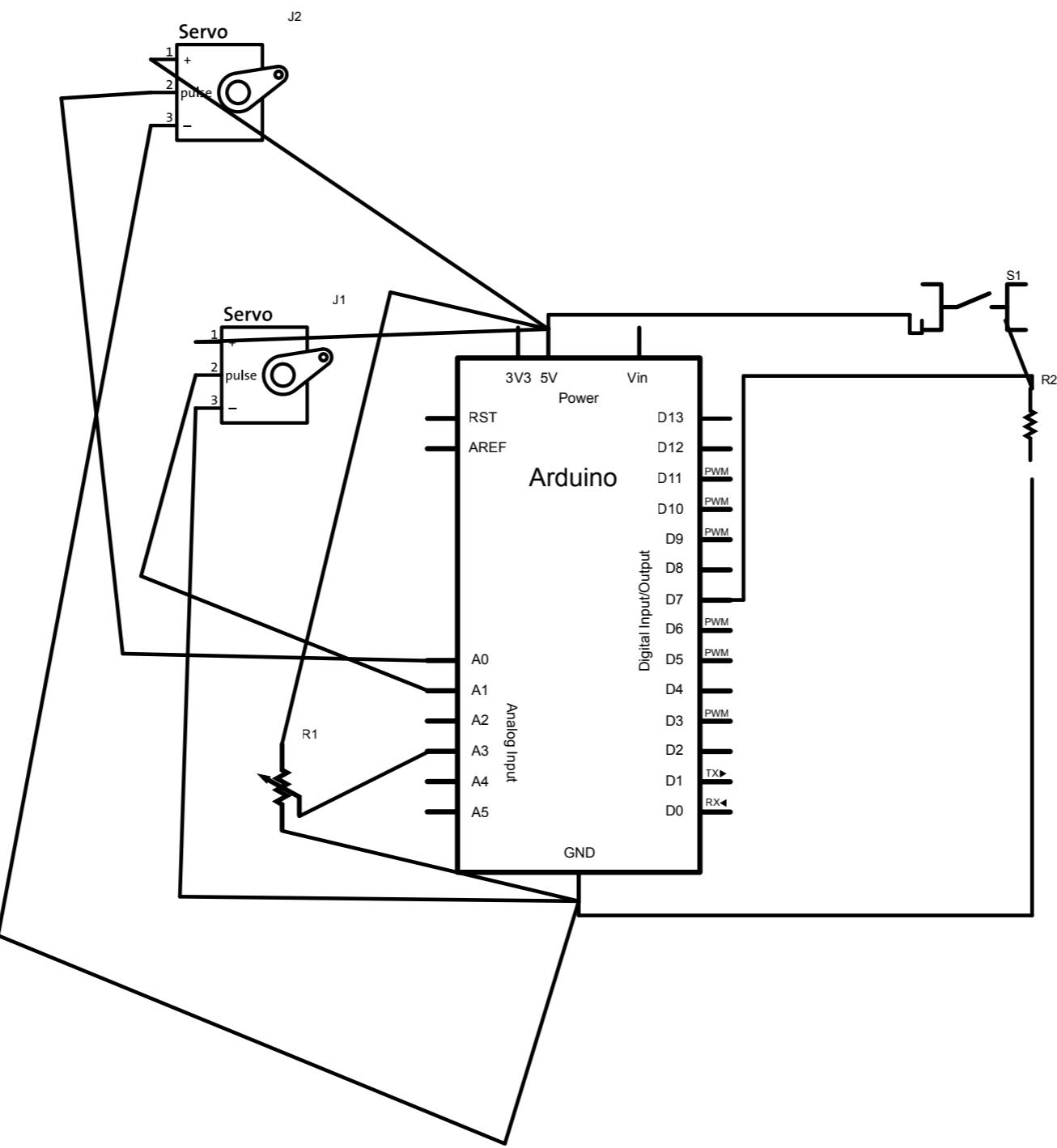
```
for(int x = 0; x < 5; x++){
  if(character[x] == true){
    twos = 1;
    for(int y = 1; y < x+1; y++){
      twos *= 2;
    }
    dots += twos;
  }
}
dotangle = map(dots, 0, 32, 2, 177);
date = ""; //reset the dot array

Serial.println(dots);

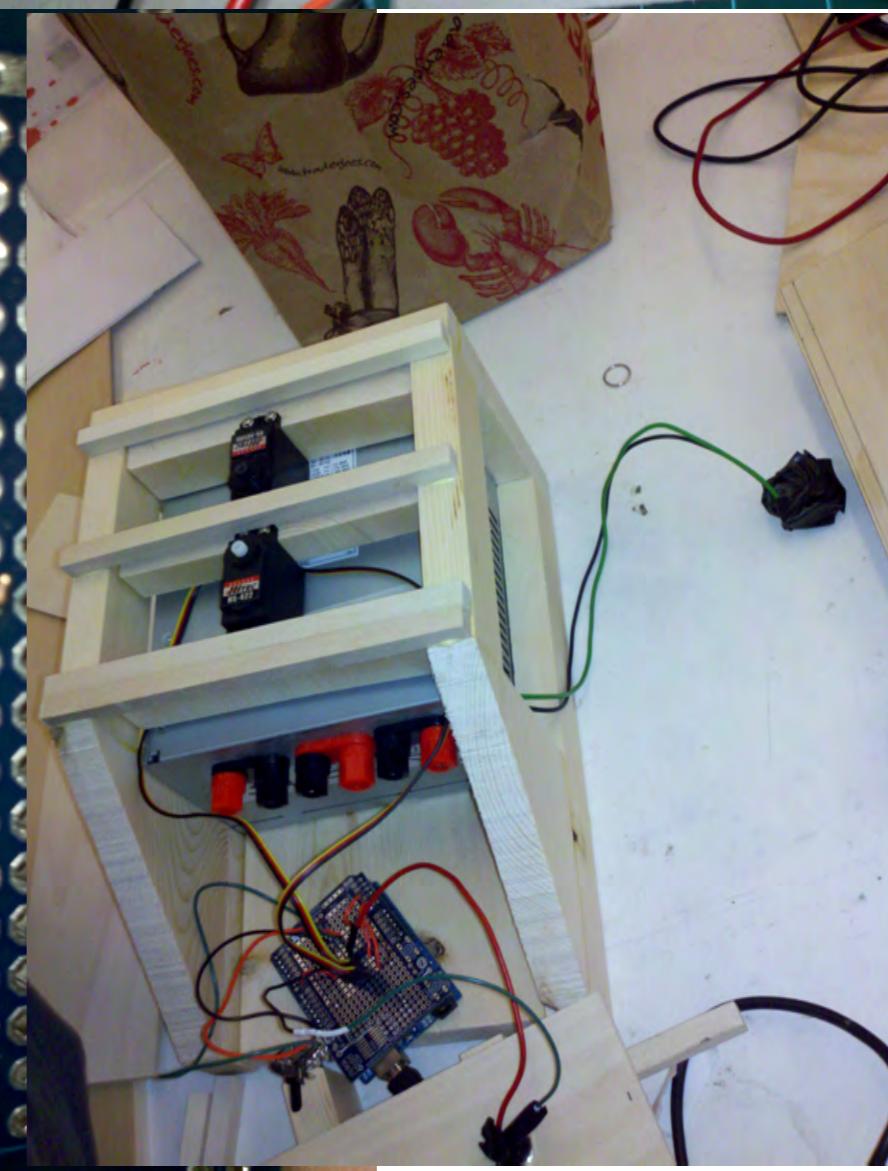
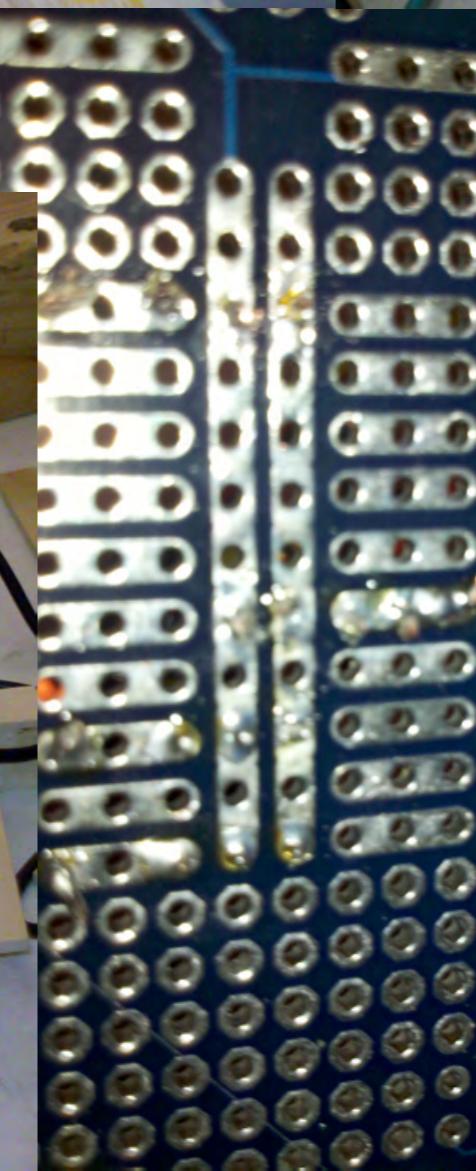
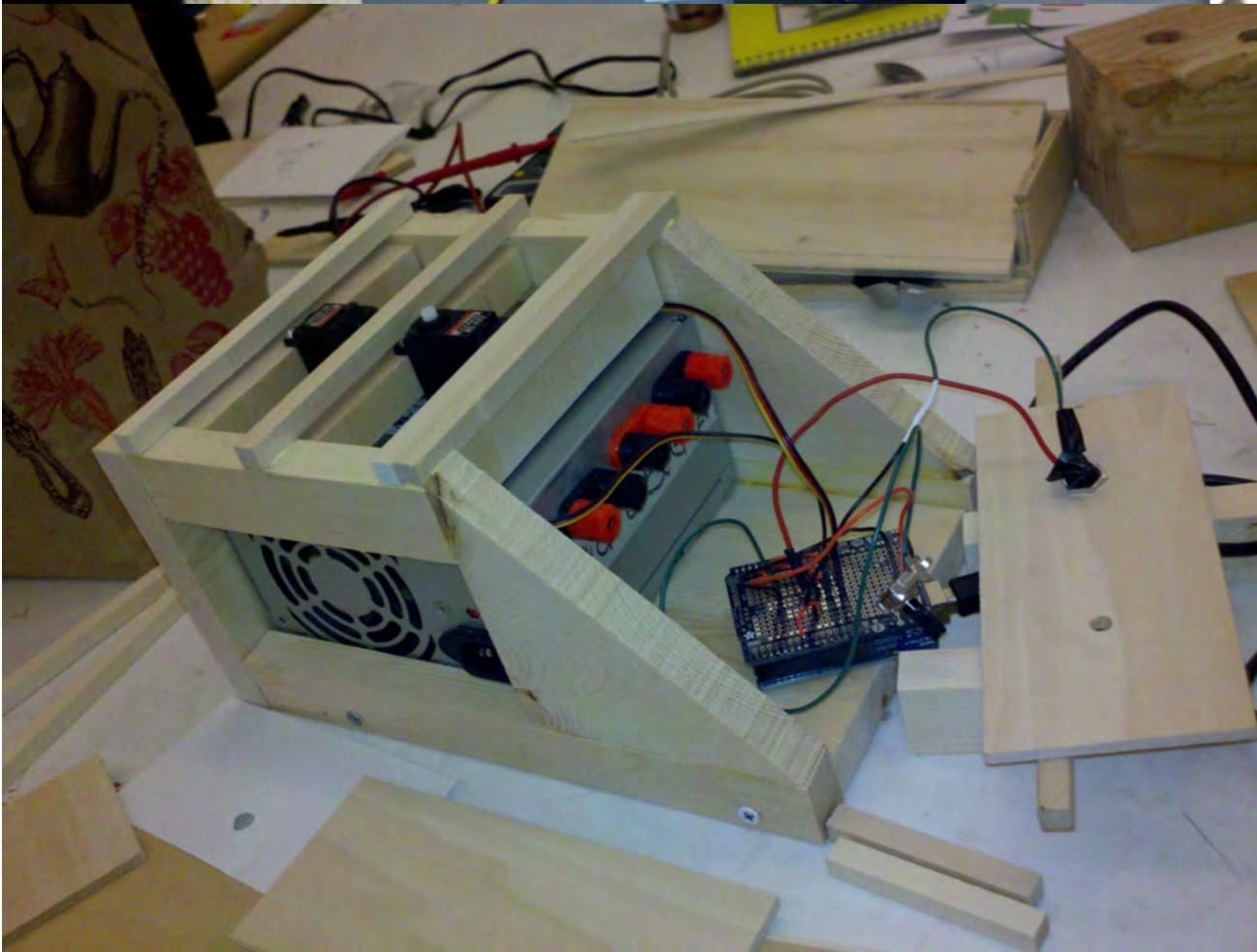
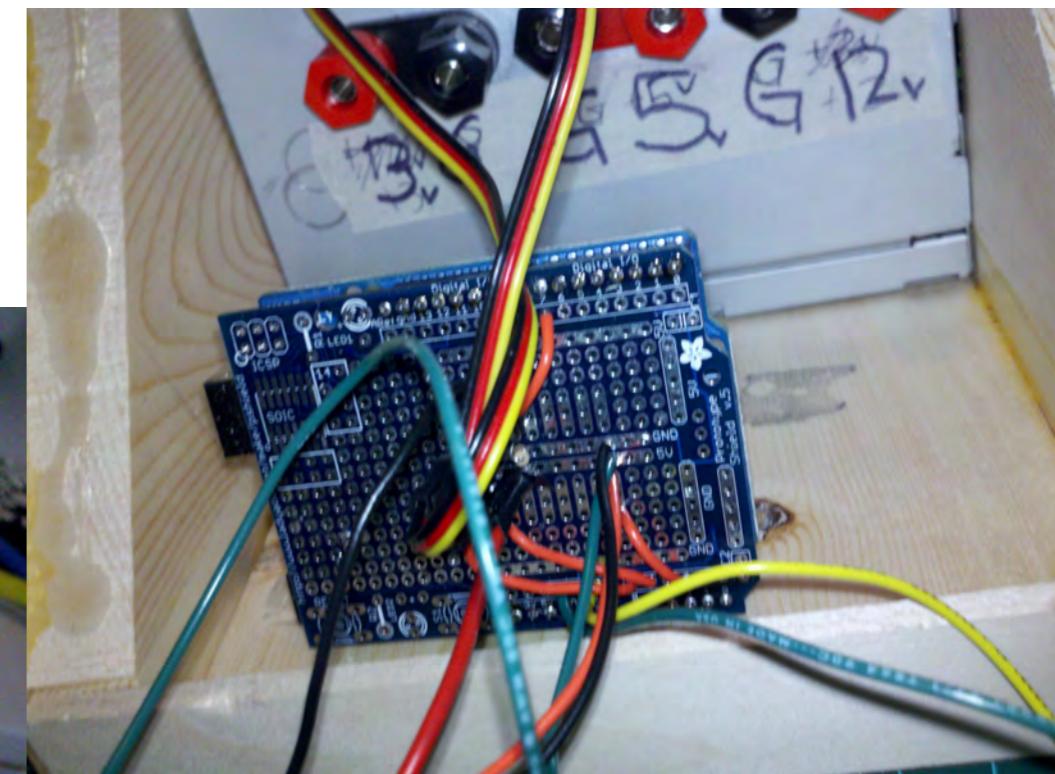
gallow.write(gallowangle);
dot.write(dotangle);
delay(20);
if(stat == 4){
  death = true;
  delay(500);
}
if(dots == 31){
  for(int w = 0; w < 4; w++){
    for(int x = 0; x < 5; x++){
      char last = woord.charAt(x);
      dotangle = map(last, 97, 122, 2, 177);
      dot.write(dotangle);
      delay(500);
    }
  }
  death = true;
}
}
```

# CIRCUIT DIAGRAM

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# THE GUTS



# PRICE MATERIALS

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Probably around \$80 for all the electronic equipment as well as the materials used for fabrication. This is a rough estimation.

Button  
Potentiometer  
Wire  
Arduino Budget Pack  
Proto Shield  
2 x Servos  
Switch  
Wood

# PHOTOS

