

# Random Numbers

Time required: 15 minutes

Please read all the directions carefully before beginning the assignment.

1. Comment your code as shown in the tutorials and other code examples.
2. Follow all directions carefully and accurately.
3. Think of the directions as minimum requirements.

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## Understanding

Demonstrate understanding of:

**random numbers, serial monitor**

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## Requirements

Complete and successfully run the program as displayed.

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## Tutorial Assignment

We are going to generate some random numbers. This can be used to send the robot in random directions for random times or random LED light values. This sketch also shows how to use the Serial Monitor for debugging purposes.

1. Start the Arduino IDE. Save the sketch as **RandomNumbers**.
2. Complete and test the program as pictured with the requirements listed.
3. While running the sketch, go to **Tools → Serial Monitor** to display the random numbers. Please include this in your video.
4. Comment your code.

```

1 // File    RandomNumbers.ino
2 // Author  William A Loring
3 // Version V1.0.0
4 // Date revised 02/20/18   created: 12/17/16
5 // Description: Display pseudo - random numbers to the Serial Port
6 // Analog input pin 0 is unconnected, random analog
7 // noise will cause the call to randomSeed() to generate
8 // different seed numbers each time the sketch runs.
9 // randomSeed() will then shuffle the random function.
10
11 #include <MeMCore.h> // Include mBot library
12 int number;          // Variable to store random number
13
14 void setup() {
15     Serial.begin(9600); // Setup serial monitor
16     randomSeed(analogRead(A0)); // Seed random number from disconnected analog port
17 }
18
19 void loop() {
20     number = random(1, 7); // Generate random number inclusive between 1 & 6
21     Serial.println(number); // Print number to Serial Monitor
22     delay(500);
23 }

```

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## Assignment Submission

- **All students** → Attach finished programs to the assignment in Blackboard.
- **In class assignment submission** → Demonstrate in person.
- **Online submission** → A link to a YouTube video recording showing the assignment placed in the submission area in BlackBoard.