

Part 4

Lesson

3

**Memory Arithmetic
Game**

Summary: Through the practice and learning of memory algorithm game project, we can strengthen the understanding of the practical application of LCD1602 module, infrared remote controller and infrared receiver module, cultivate the programming ideas and feel the charm of Arduino.

Component Required:

- (1) X Elegoo UNO R3
- (1) X LCD 1602 module
- (1) X infrared remote
- (1) X infrared receiver module
- (1) X Passive Buzzer
- (1) X Memory Algorithms Game Extension



After entering the number, you need to press the confirmation key.

Backspace

Empty Number

First enter the game difficulty selection interface: There are three kinds of difficulty: 1/2/3.

Difficulty 1: A random number appears and will disappear in two seconds. You need to remember this number and input this number after it disappears from the LCD screen.

Difficulty 2: An addition problem appears randomly. Please work out the answer. The problem will disappear after two seconds and you need to input the correct answer.

Difficulty 3: A multiplication problem appears randomly. Please work out the answer. The problem will disappear after two seconds and you need to input the correct answer.

Answer correct interface

Answer wrong interface

Game over: display Scores

Rotating the potentiometer to Adjustment Screen contrast

Display green light when the answer is correct.

Display red light when the answer is wrong.

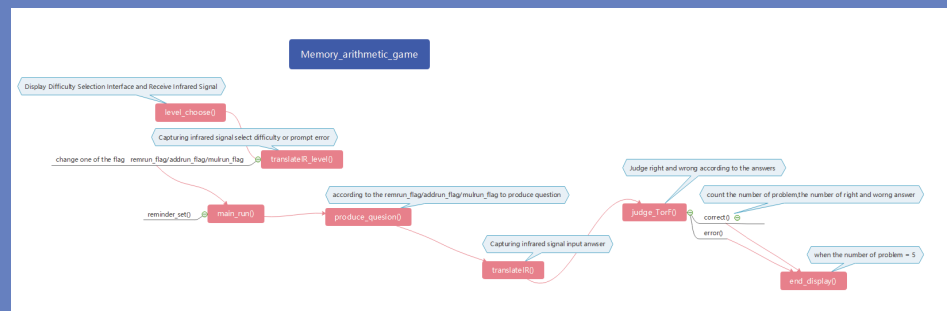
Full marks pink light

Principle:

Display Difficulty Selection Interface and Receive Infrared Signal

Capture key signal selection difficulty or prompt error

If you want to more details, please look over the comments in the code.



Connection Schematic:

