

# ECE2810 Digital Systems Design Laboratory

## Laboratory Report #5

Name:

Student ID:

Date:

2025-11-14

The Chinese University of Hong Kong, Shenzhen

- Experiment A: 4-Channel Word Generator
- Experiment B: Counter Shown in 7-Segment Display
- Experiment C: Responder

## 1. Experiment A 4-Channel Word Generator

### 1.1 Design

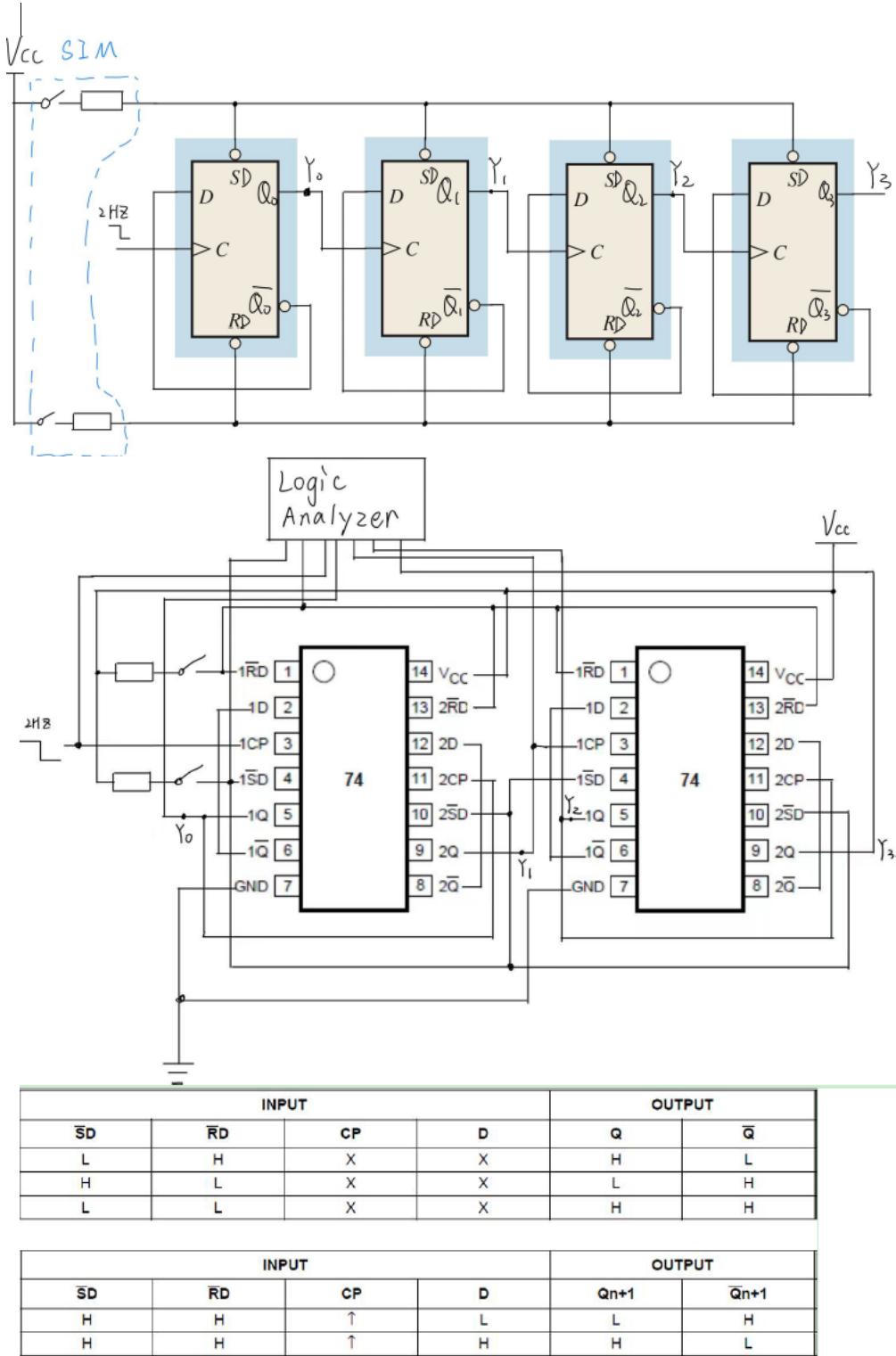


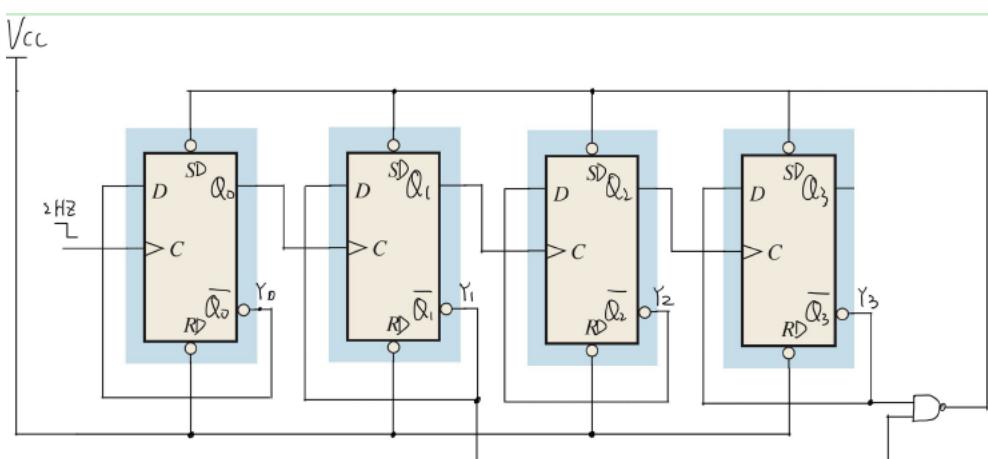
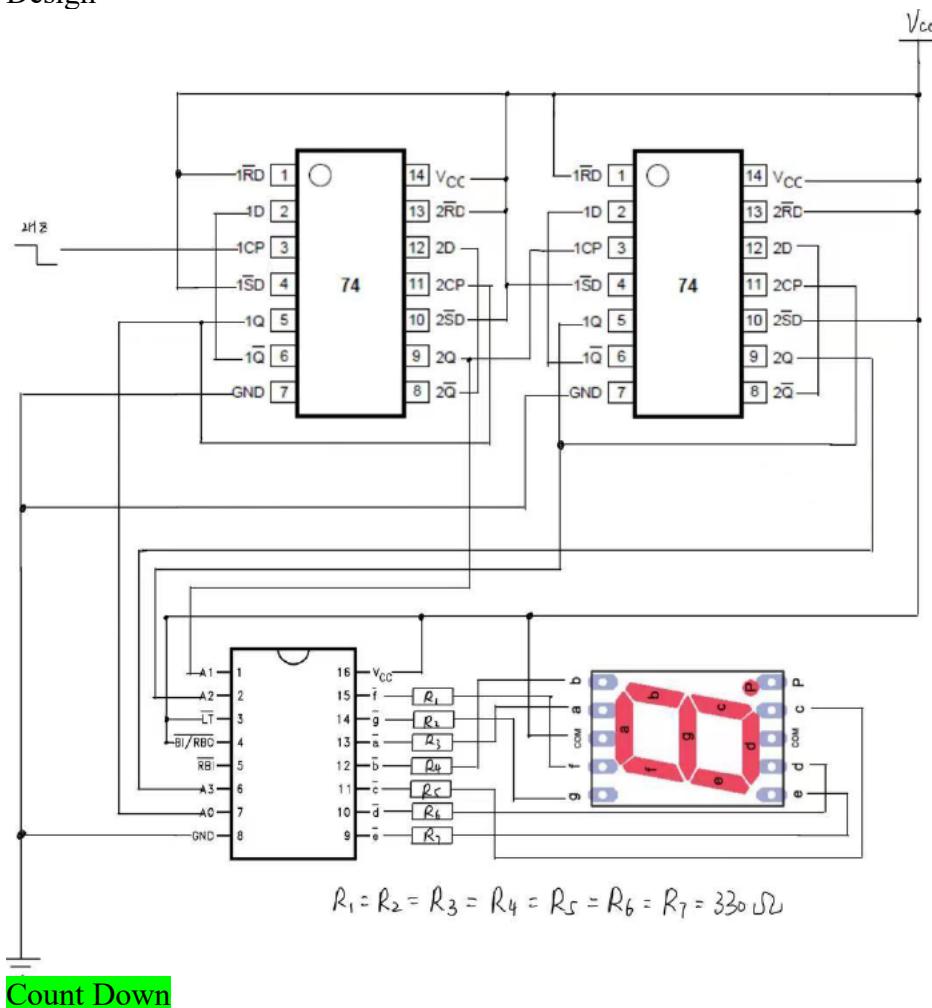
Table 1. Function tables of D flip-flop

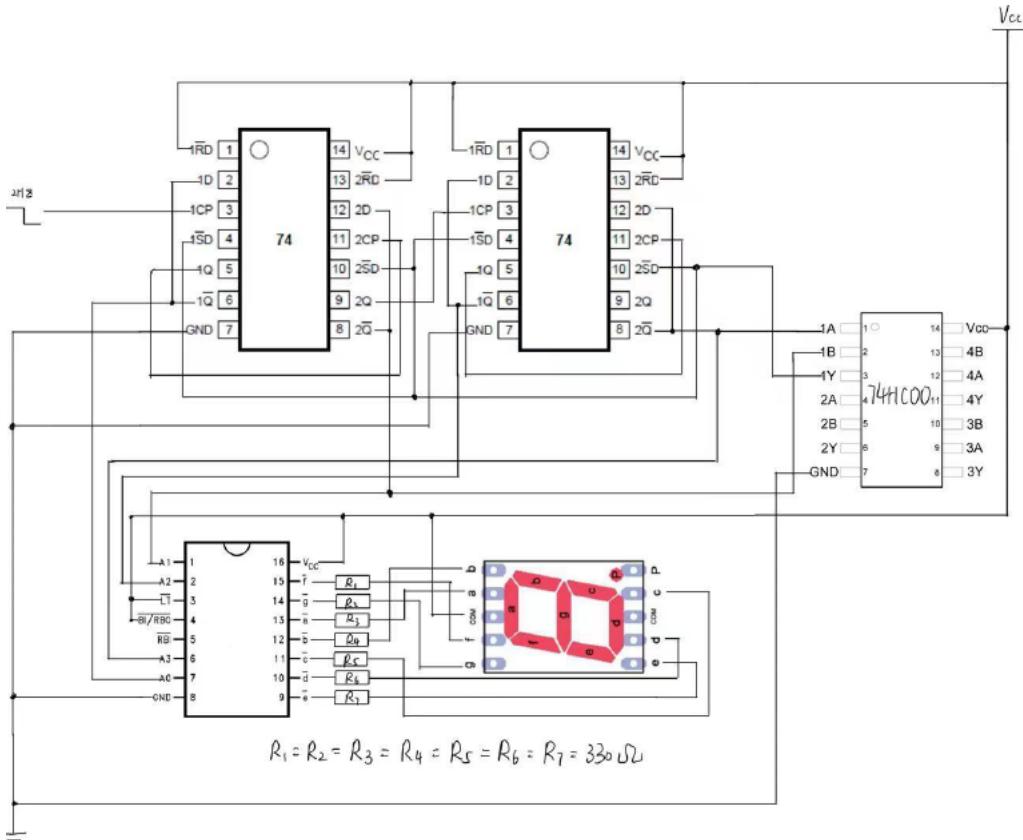
## 1.2 Result



## 2. Experiment B Counter Shown in 7-Segment Display

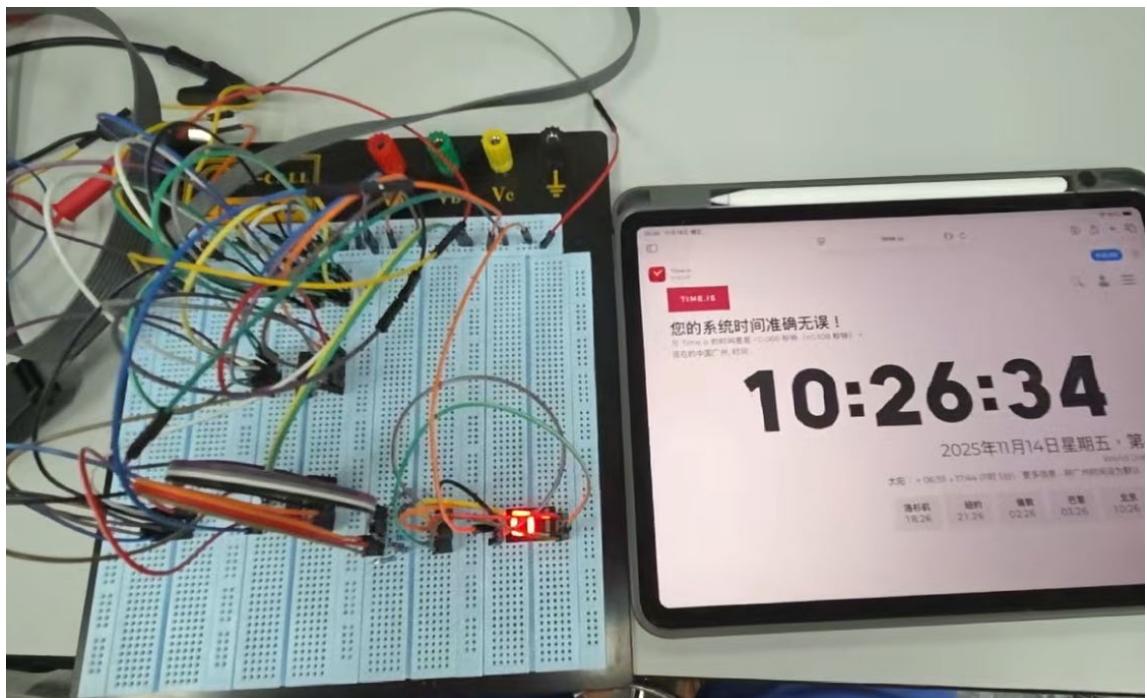
### 2.1 Design

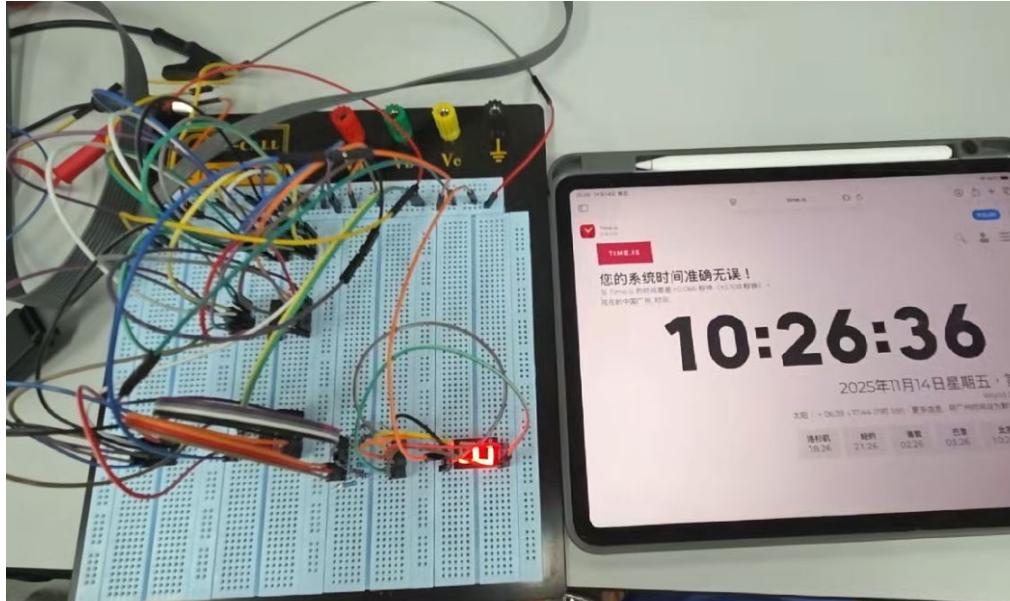
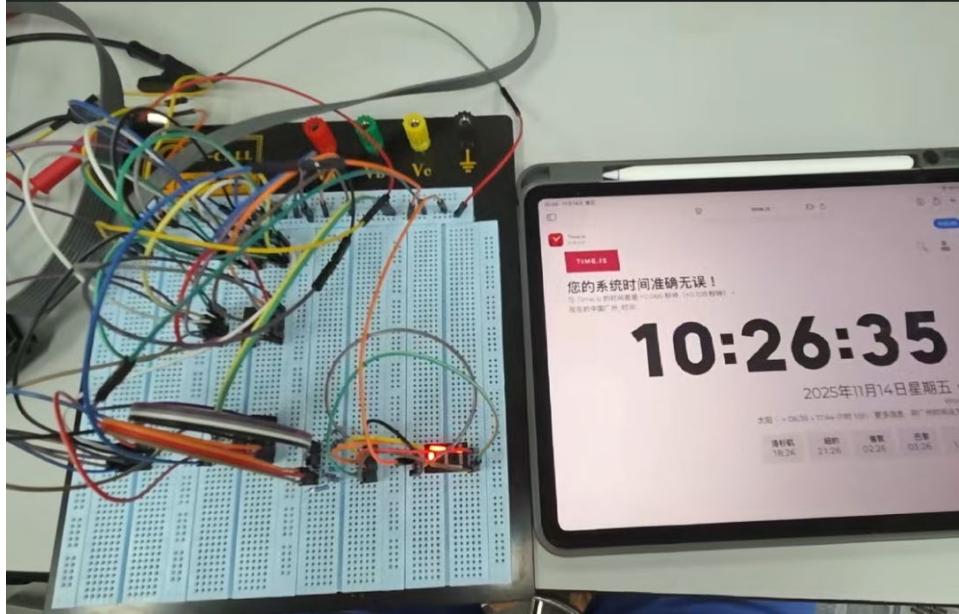
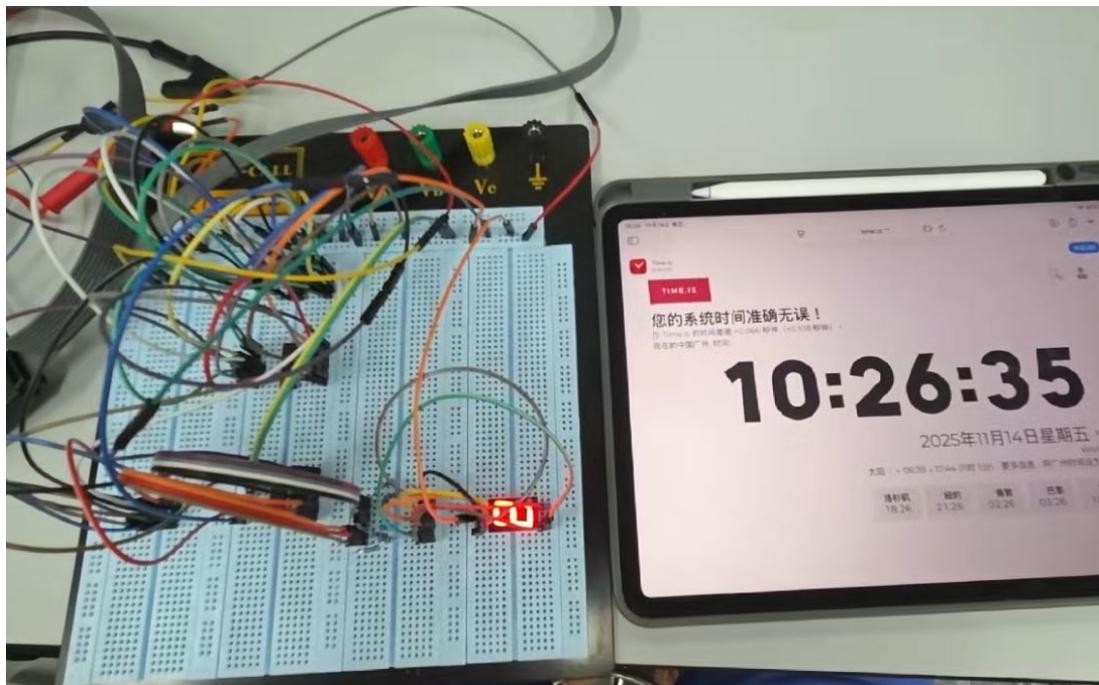


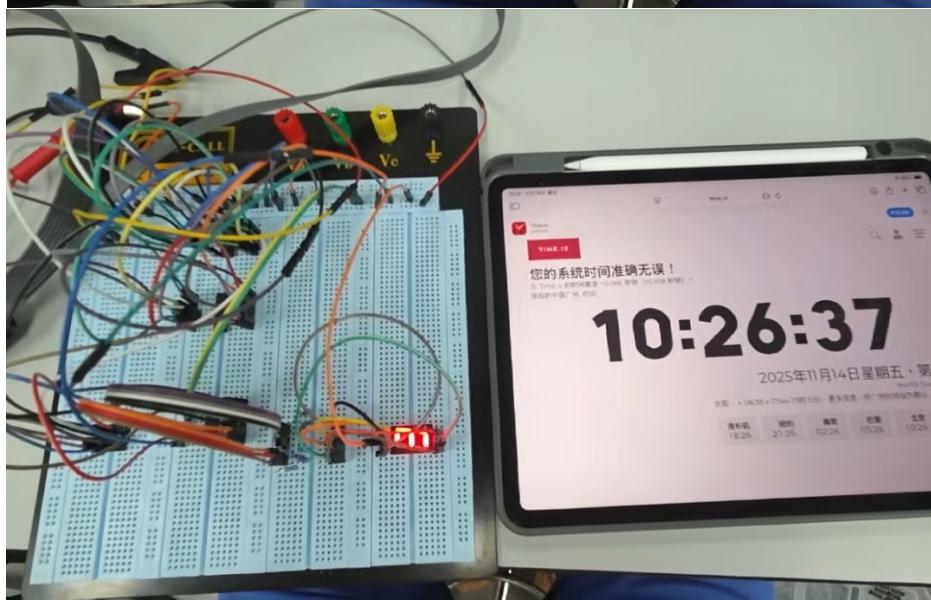
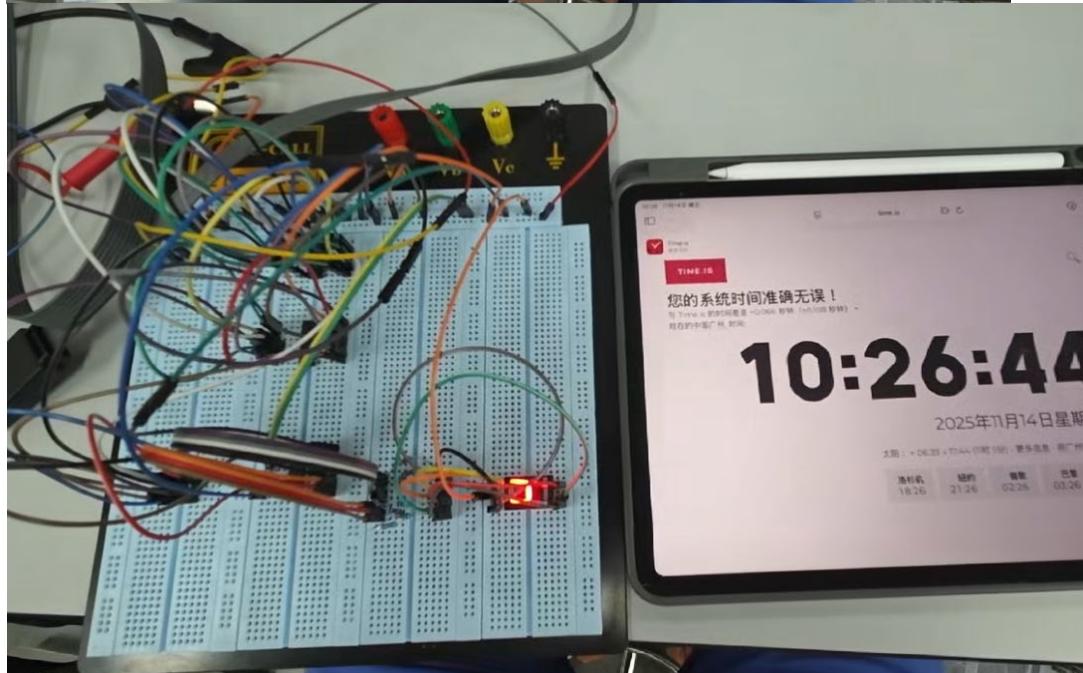
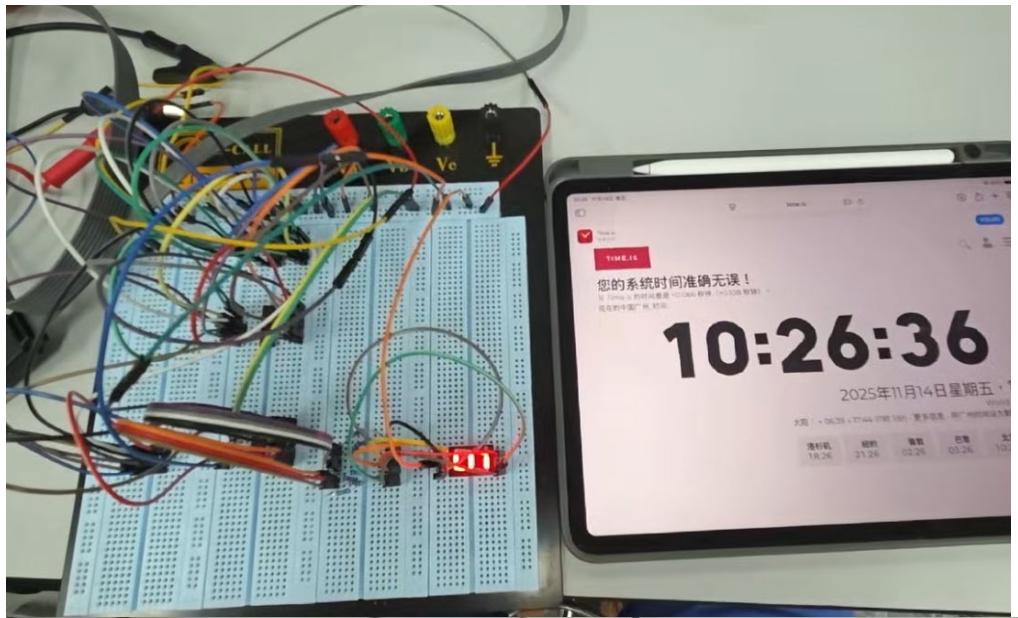


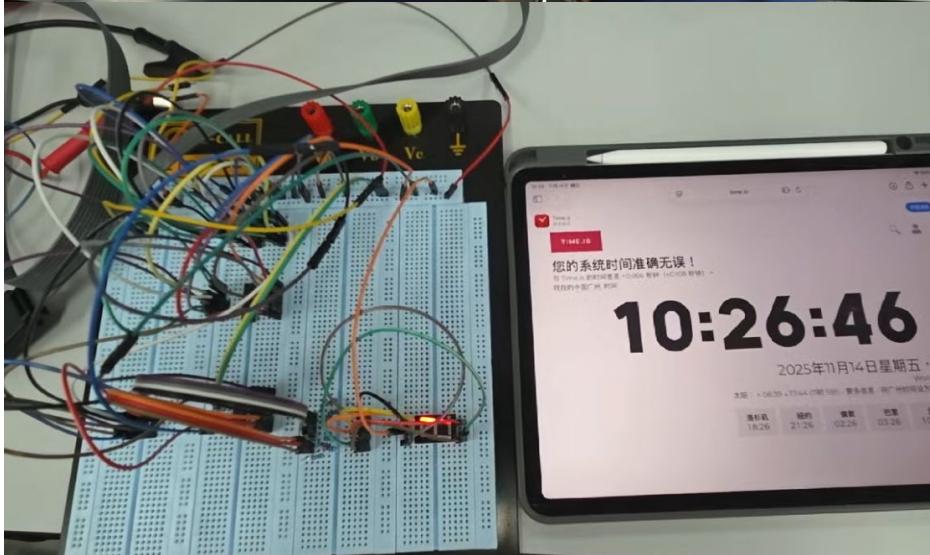
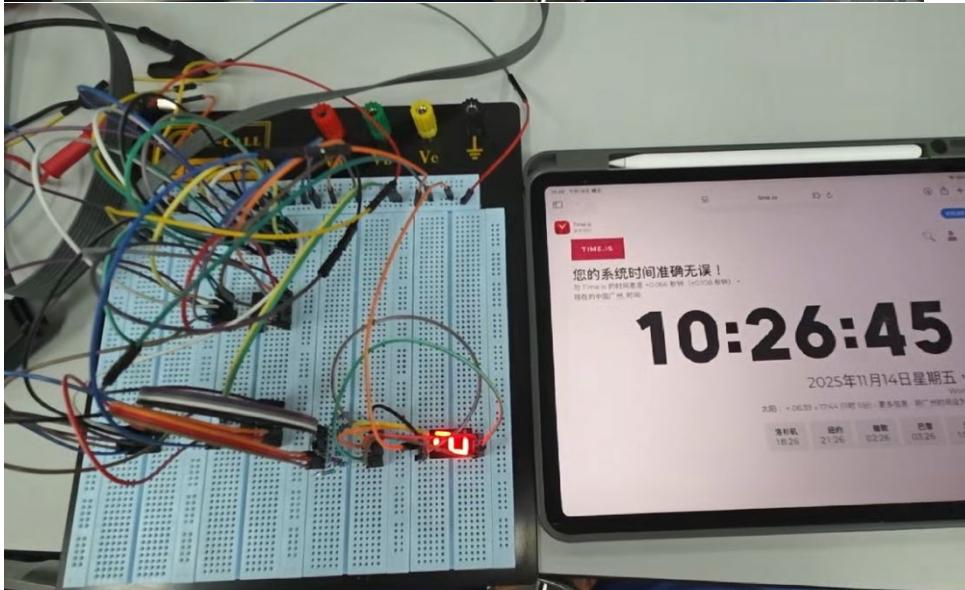
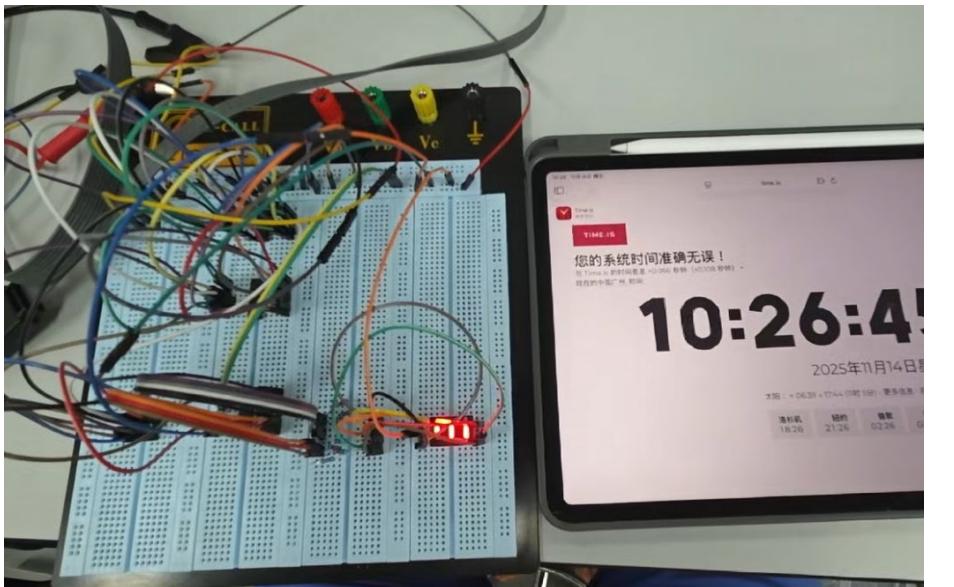
Count in Loop (0->9->0)

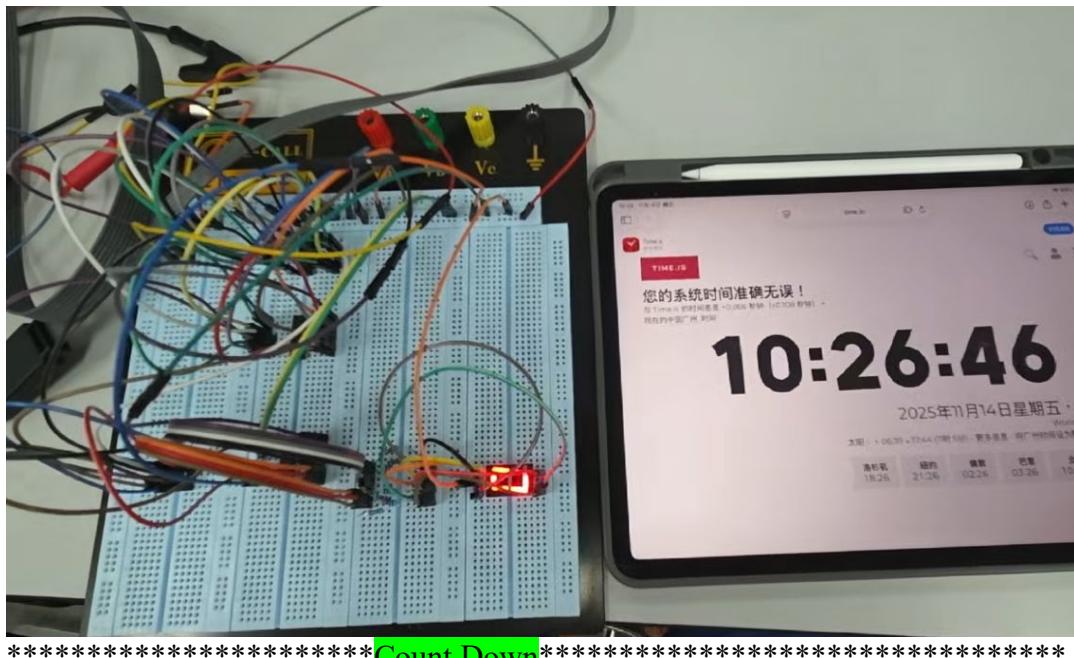
2.2Result



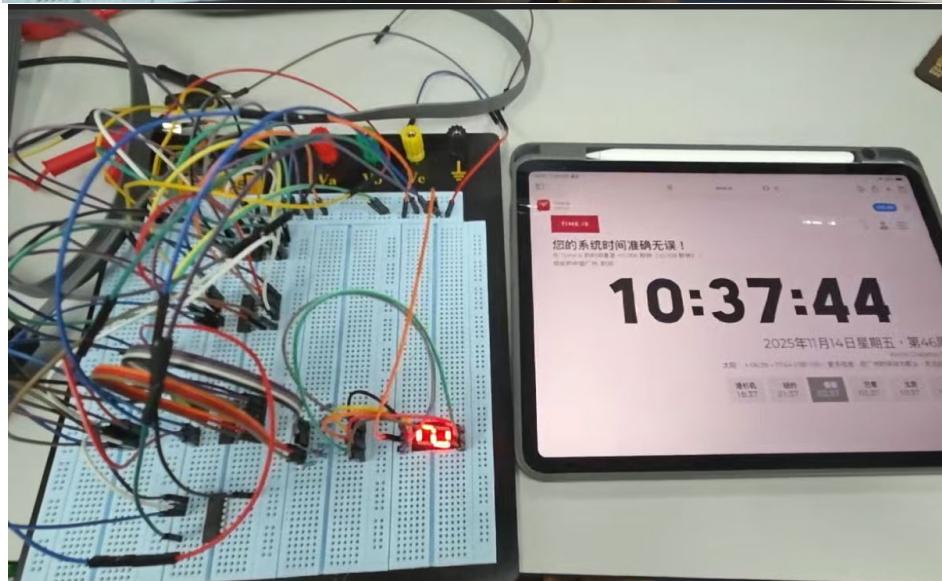
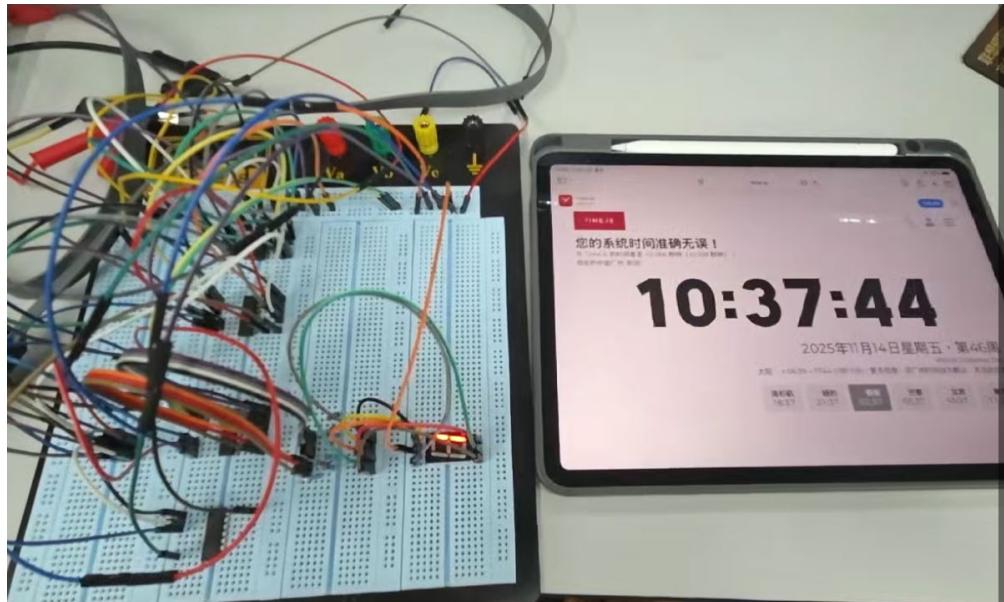


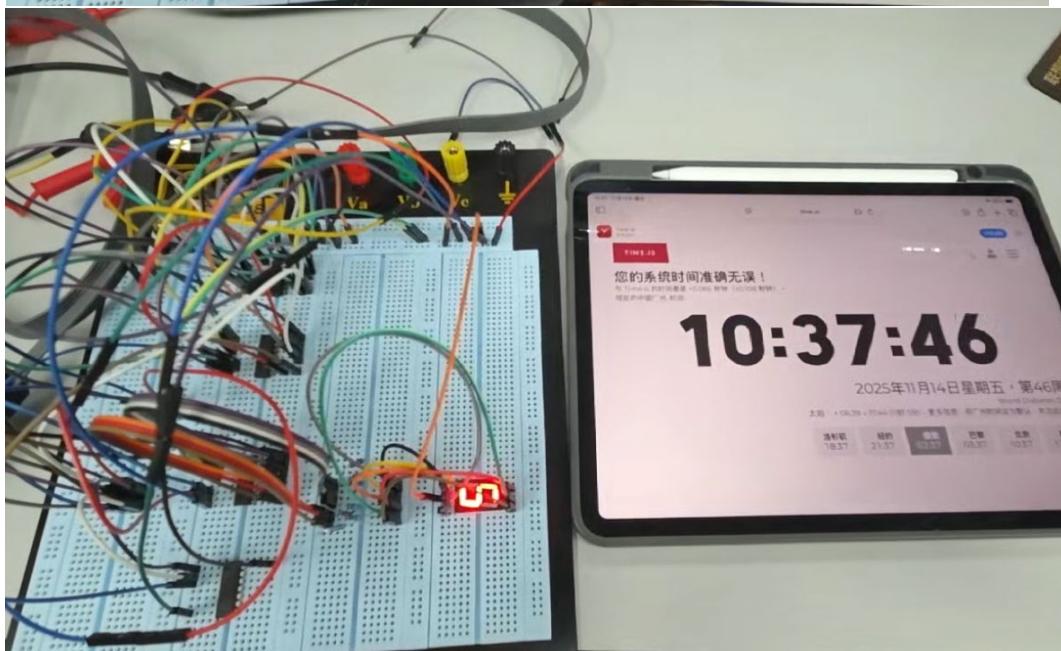
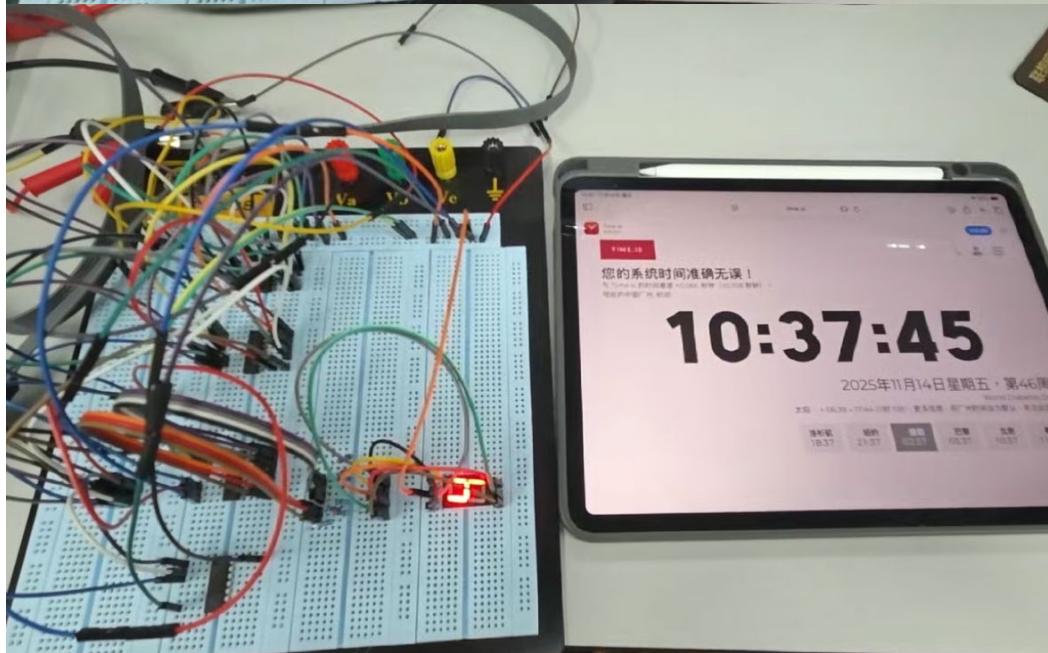
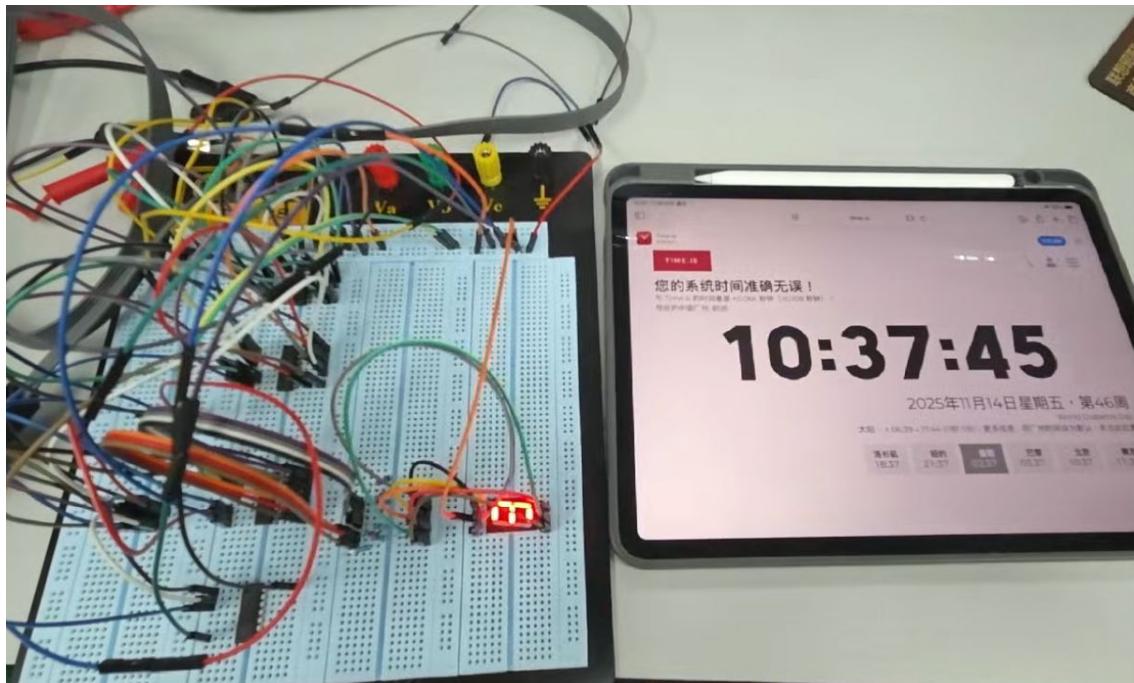


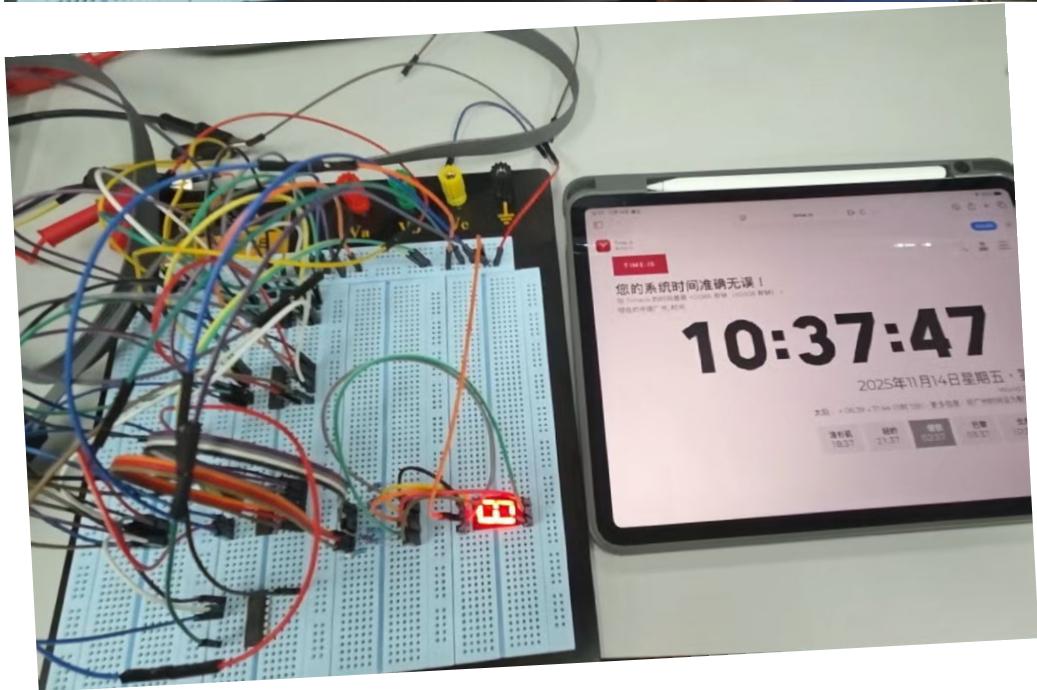
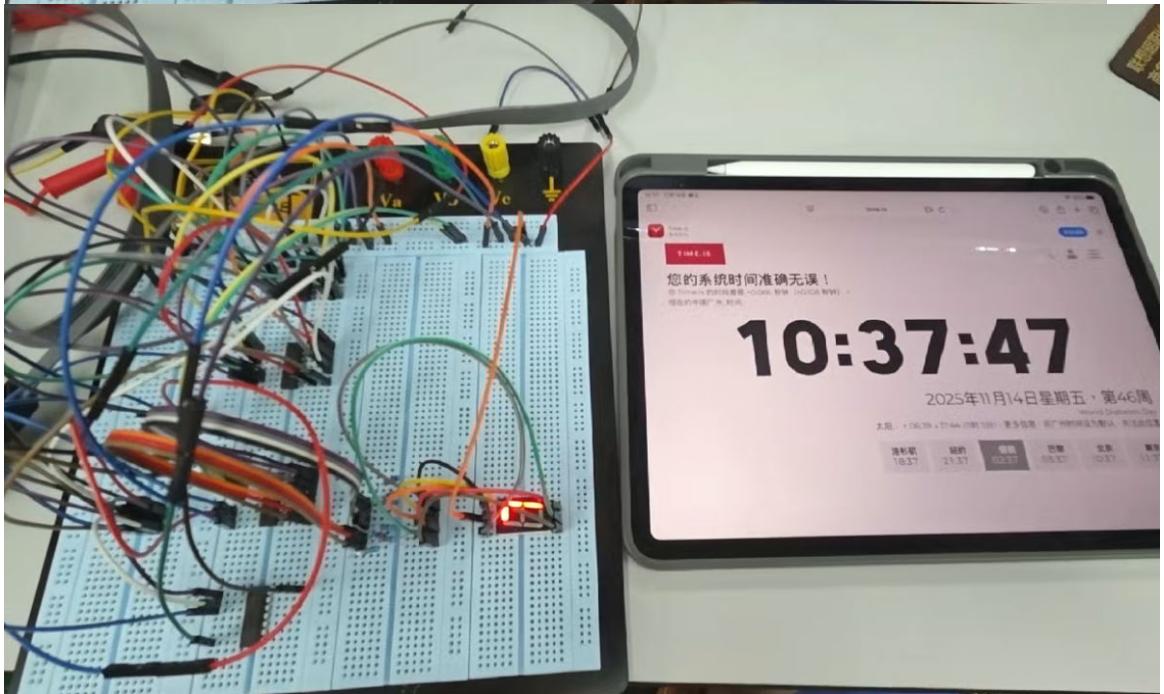
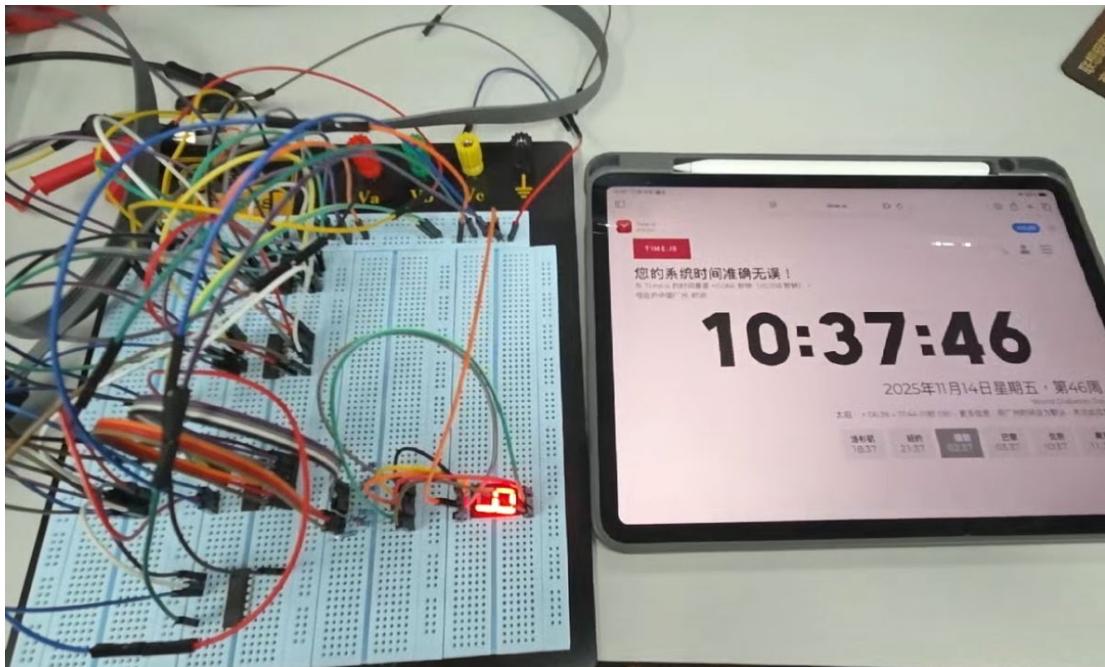


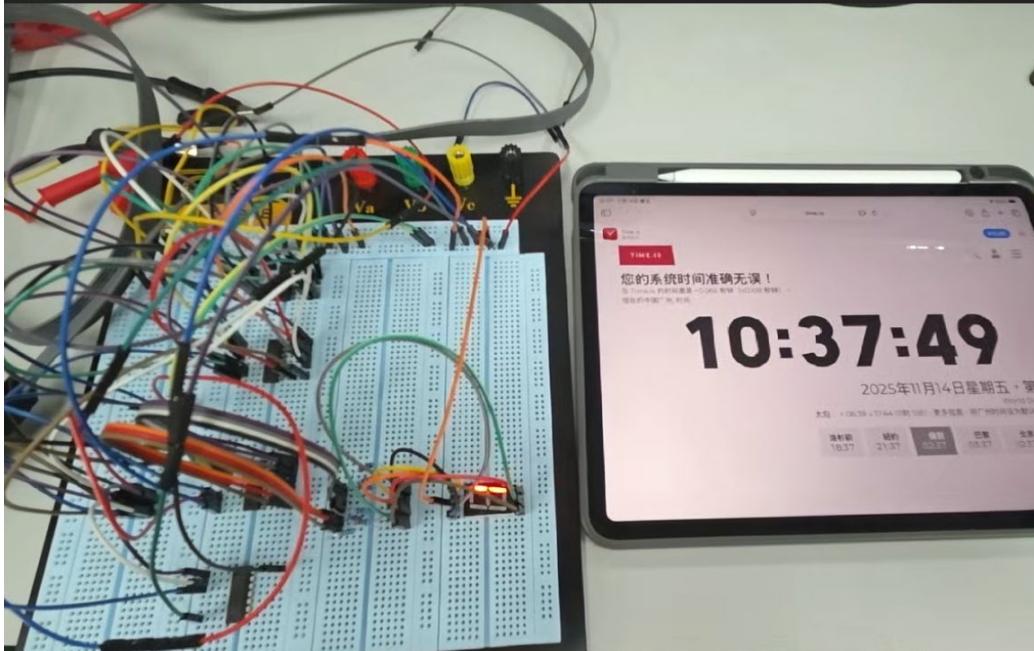
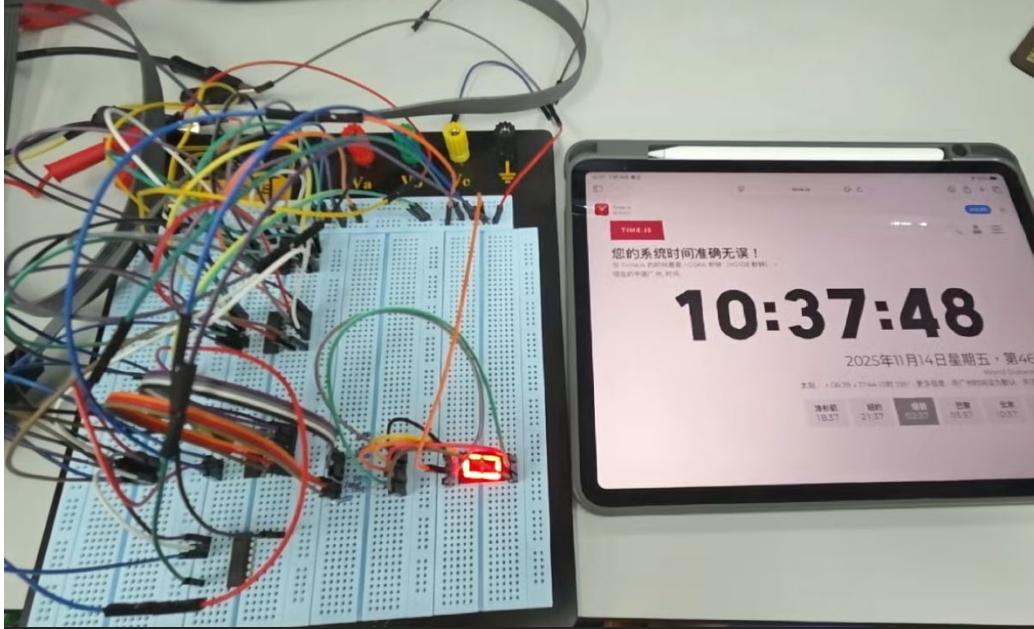
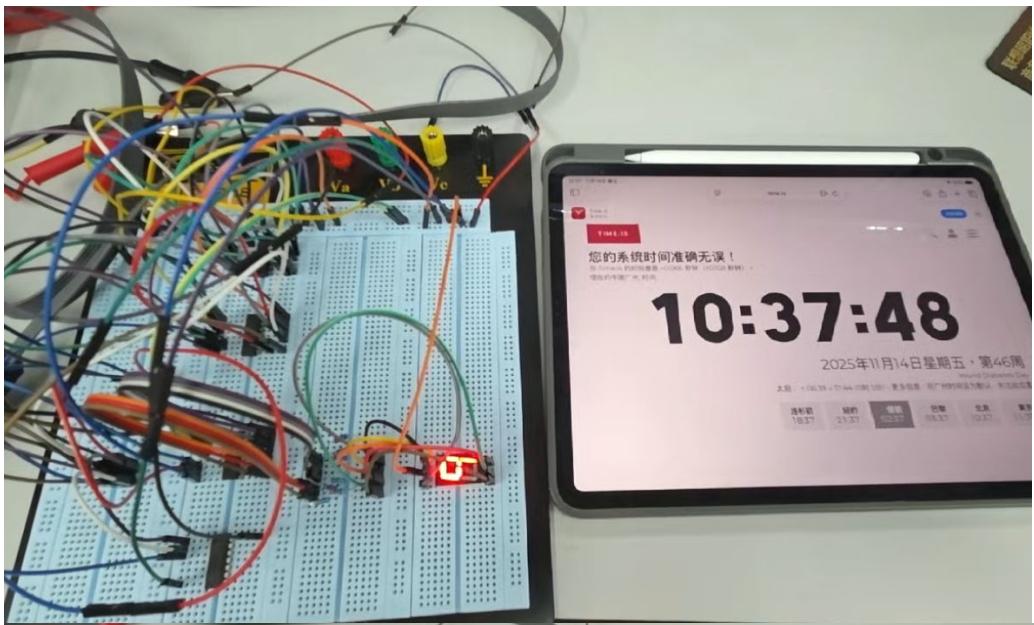


\*\*\*\*\*Count Down\*\*\*\*\*





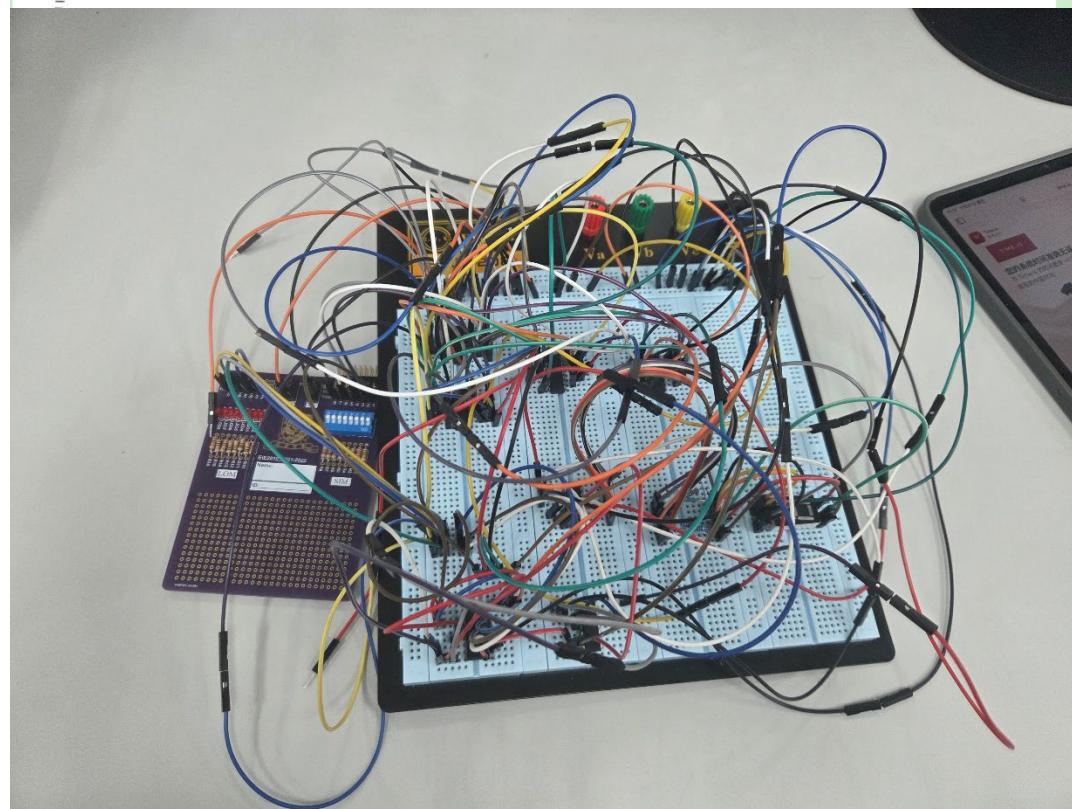
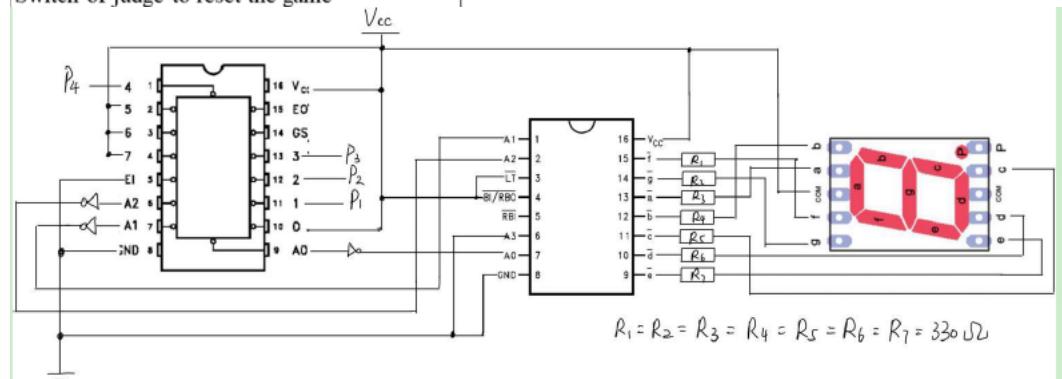
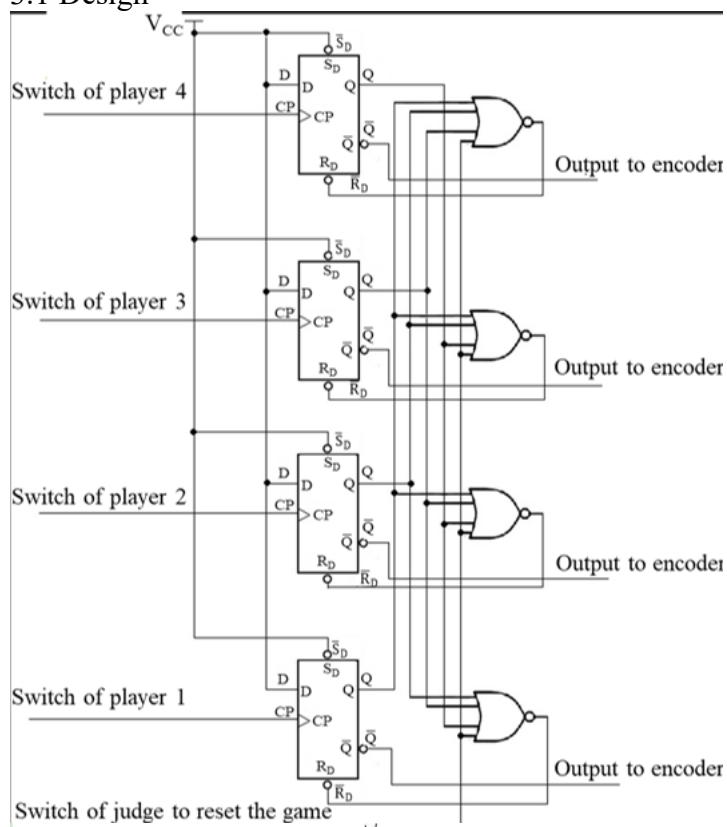




\*\*\*\*\* Count In Loop \*\*\*\*\*

### 3 Experiment C Responder

#### 3.1 Design



### 3.2 Results

