



工作坊

创意编程工作坊从创意的角度带给你对各类技术新的理解，通过工作坊的学习，来自不同背景的同学可以了解到国际流行的编程软件以及制作属于自己的电子交互设计作品。



创意编程

CREATIVE PROGRAMMING



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创意编程

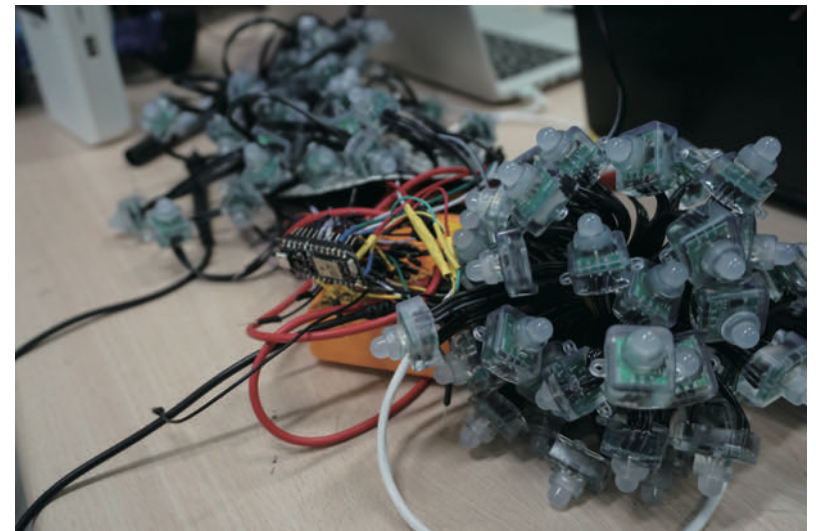
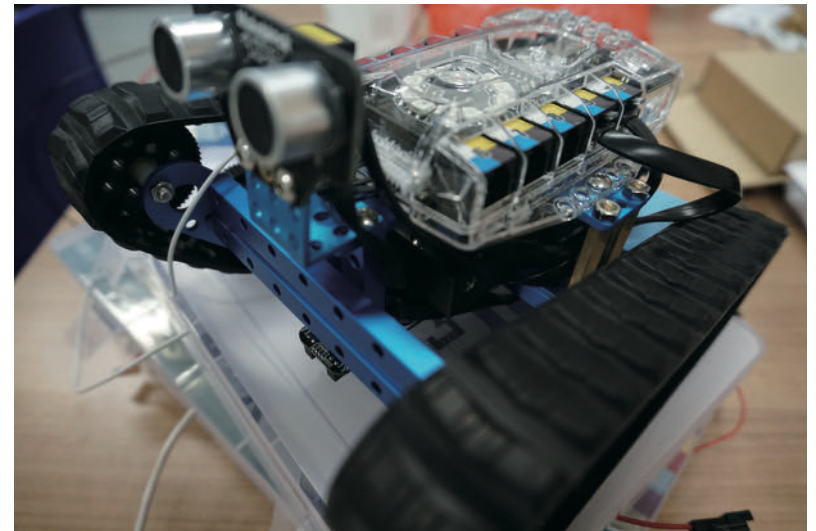
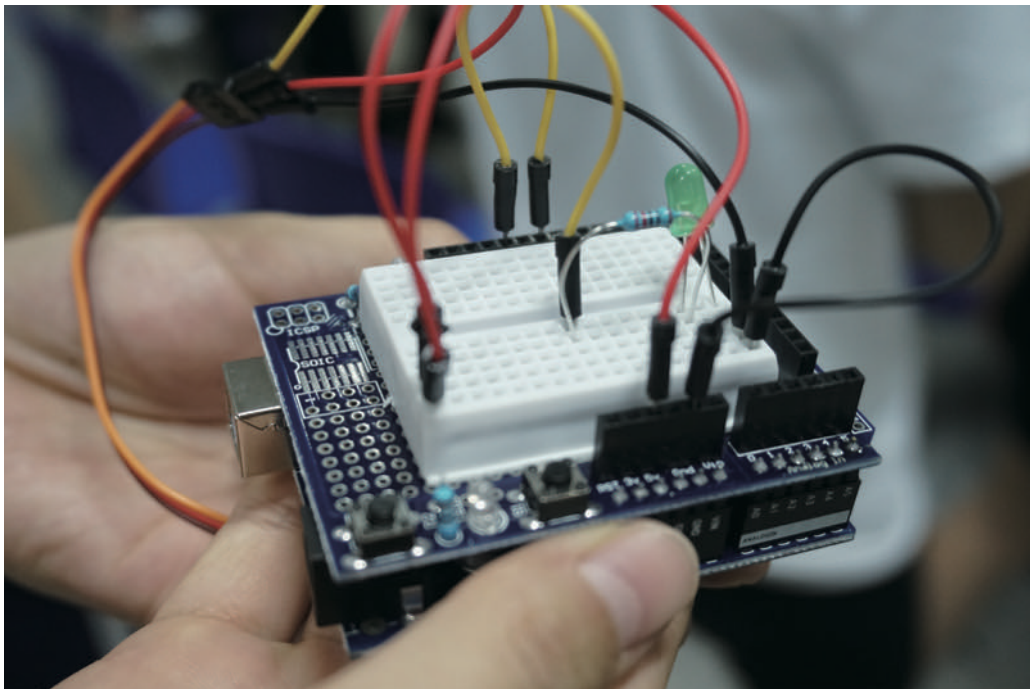
在此课程中，由Sean Clark教授和纪毅教授带领大家领略创意编程的乐趣。课程主要分为两个部分：一是Scratch的学习，二是Arduino的学习。

创意编程工作坊的目标是为了激发大家的创意和想象力并以小组合作的方式完成一个创意编程作品。

课程简介

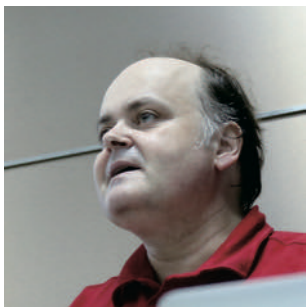


INTRODUCTION



CREATIVE PROGRAMMING

This course is led by Prof. Sean Clark and Prof. Ji Yi, who lead us to learn about the fun of creative programming. The course is divided into two parts: one is Scratch learning, the other is Arduino learning. The goal of the Creative Programming Workshop is to inspire everyone's creativity and imagination, and work together as a team to create a work.



SEAN CLARK

著名数字艺术家

FAMOUS DIGITAL ARTIST

2016年国际交互大会艺术大奖获得者

WINNER OF INTERNATIONAL CONGRESS OF ART AWARD

2016年英国鲁文3D交互雕塑大奖获得者

WINNER OF 2016 LUWEN 3D INTERACTIVE SCULPTURE AWARD

广东工业大学艺术与设计学院副教授

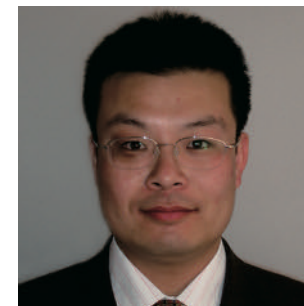
ASSOCIATE PROFESSOR OF ART AND DESIGN IN GDUT

交互媒体艺术家

INTERACTIVE MEDIA ARTIST

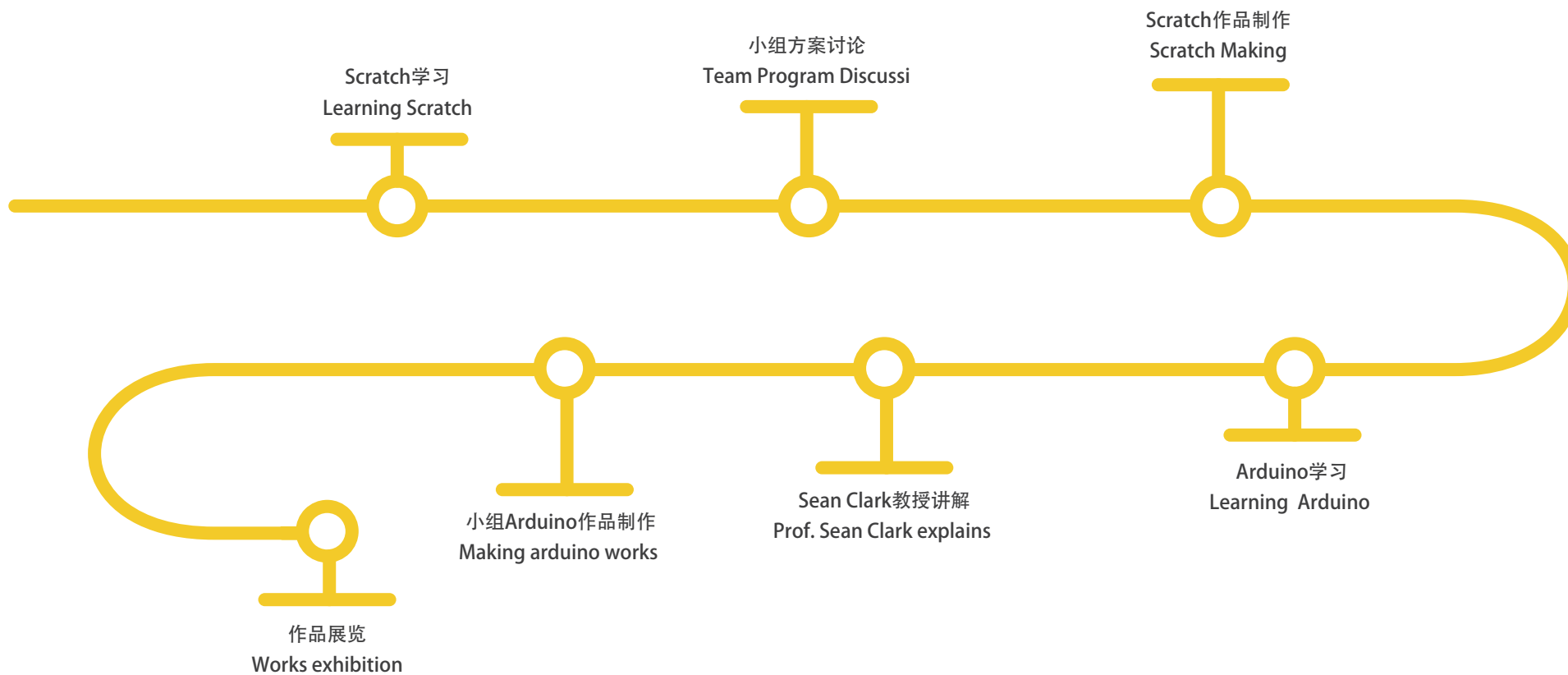
专注于个性化交互设计研究与实践

FOCUS ON PERSONALIZED INTERACTION DESIGN RESEARCH AND PRACTICE



纪毅

日程安排 SCHEDULE



SCRATCH是麻省理工媒体实验室开发的一套电脑程序开发平台，旨在让程序设计语言初学者不需先学习语言语法便能设计作品。

Scratch is a computer program development platform developed by MIT Media Lab to enable programming language developers to design their products without having to learn the language syntax first.

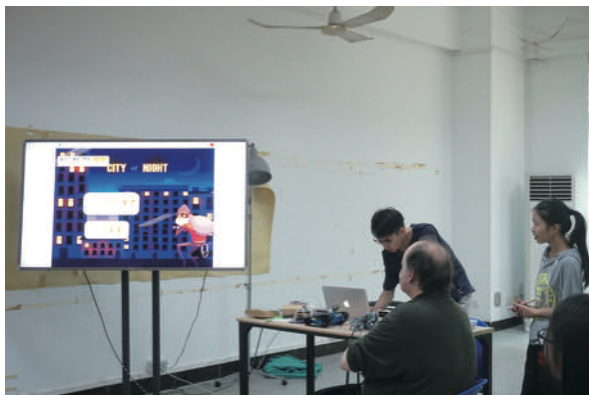


Scratch官网 <https://scratch.mit.edu/>

期望通过学习SCRATCH，启发和激励学生在愉快的环境下经由操作（如设计交互故事）去学习程序设计、数学和计算知识，同时获得创造性的思考，逻辑编程和协同工作的体验。

By learning Scratch, developers are expected to inspire and motivate users to learn programming, math and computational knowledge in a pleasant environment via operations such as designing interactive stories while gaining creative thinking, logic programming, and collaborative experience.

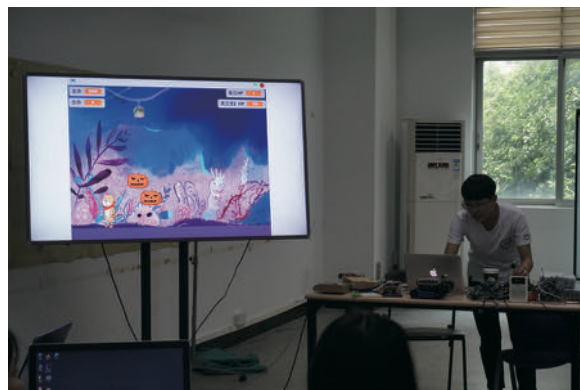




游戏展示
向肖恩教授展示自己小组的SCRATCH成果，
游戏的灵感来源与操作。

THE GAME SHOW
Each team presented their results to professor,
introducing the design and operation of the game.





创意编程 ARDUINO

Arduino, 是一个开放源代码的单片机微控制器, 它使用了Atmel AVR单片机, 采用了开放源代码的软硬件平台, 建构于简易输出/输入 (simple I/O) 接口板, 并且具有使用类似Java、C语言的Processing/Wiring开发环境。

Arduino, an open source microcontroller microcontroller that uses Atmel AVR microcontrollers, uses an open source software and hardware platform built on a simple I / O interface board and has the capability of using Java , C language Processing / Wiring development environment.



Arduino官网 <https://www.arduino.cc/>

Arduino简单的开发方式使得开发者更关注创意与实现，更快的完成自己的项目开发，大大节约了学习的成本，缩短了开发的周期。

Arduino simple development mode allows developers to focus more on creativity and implementation, faster completion of their own project development, significant savings in learning costs and shorten the development period.

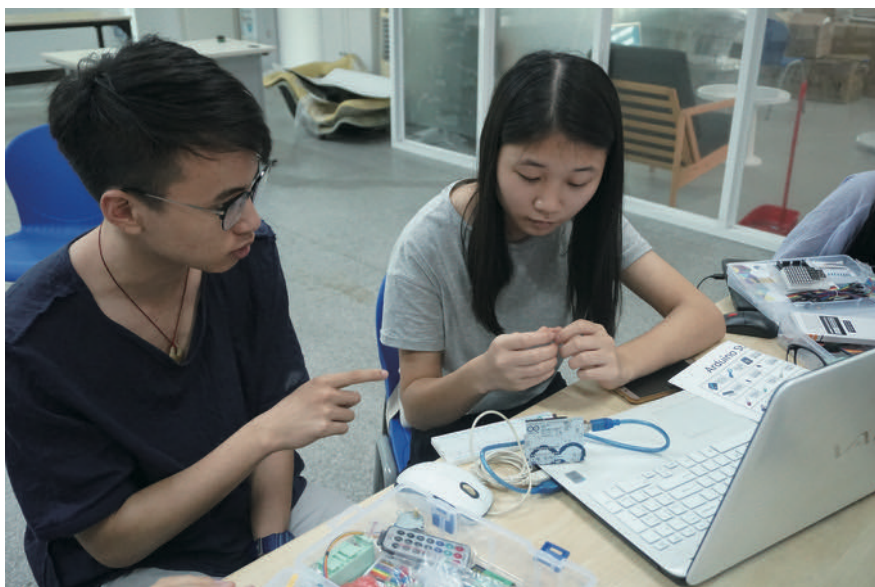


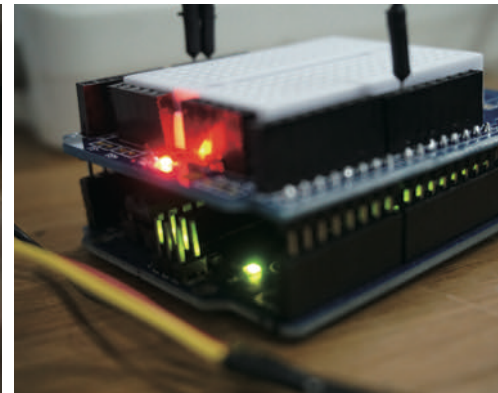
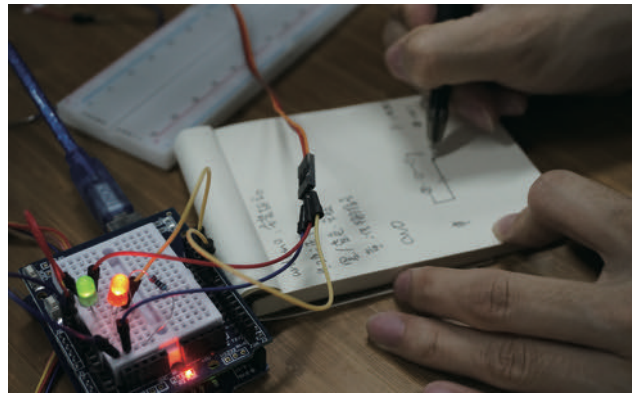
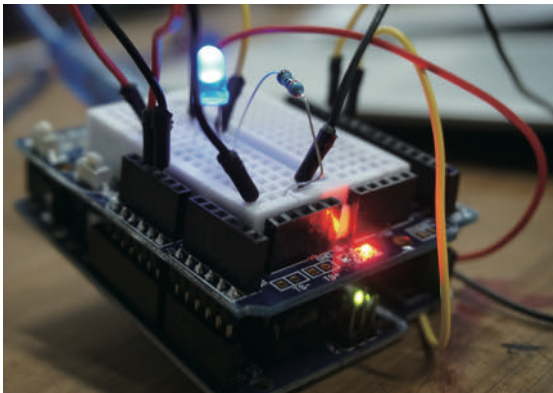


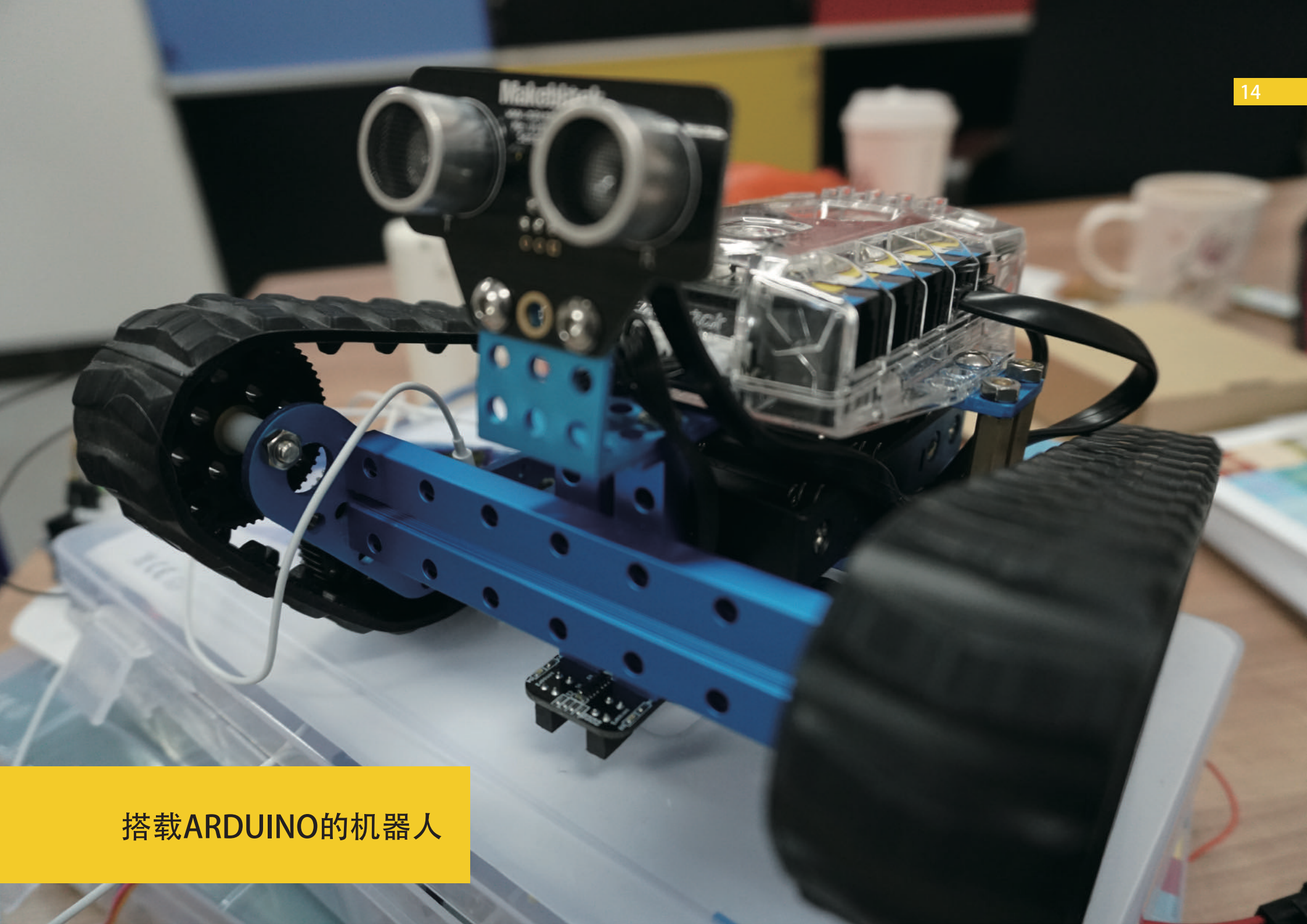
ARDUINO的配件

根据自己想要实现的内容来设计和组装

同学们积极尝试，自己动手设计



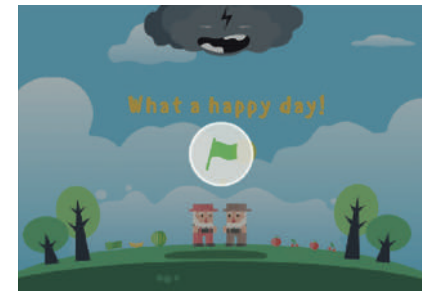
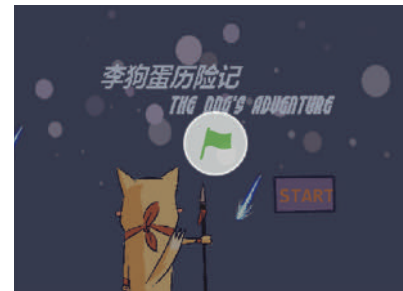
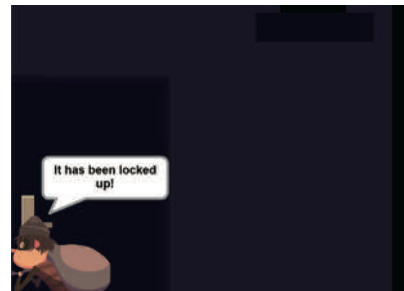
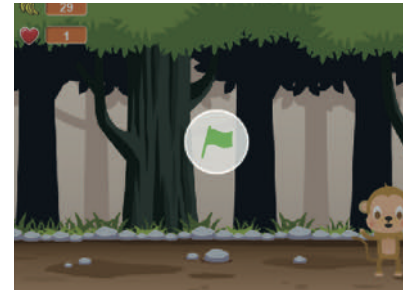
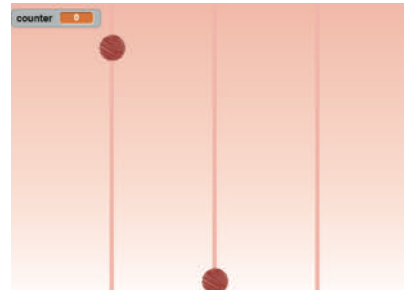


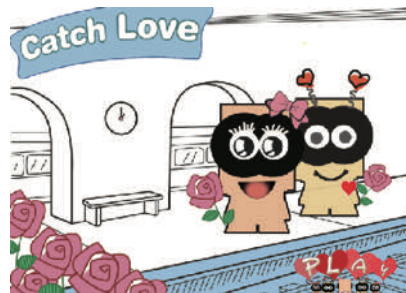
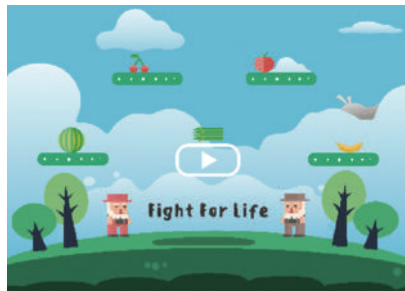


搭载ARDUINO的机器人

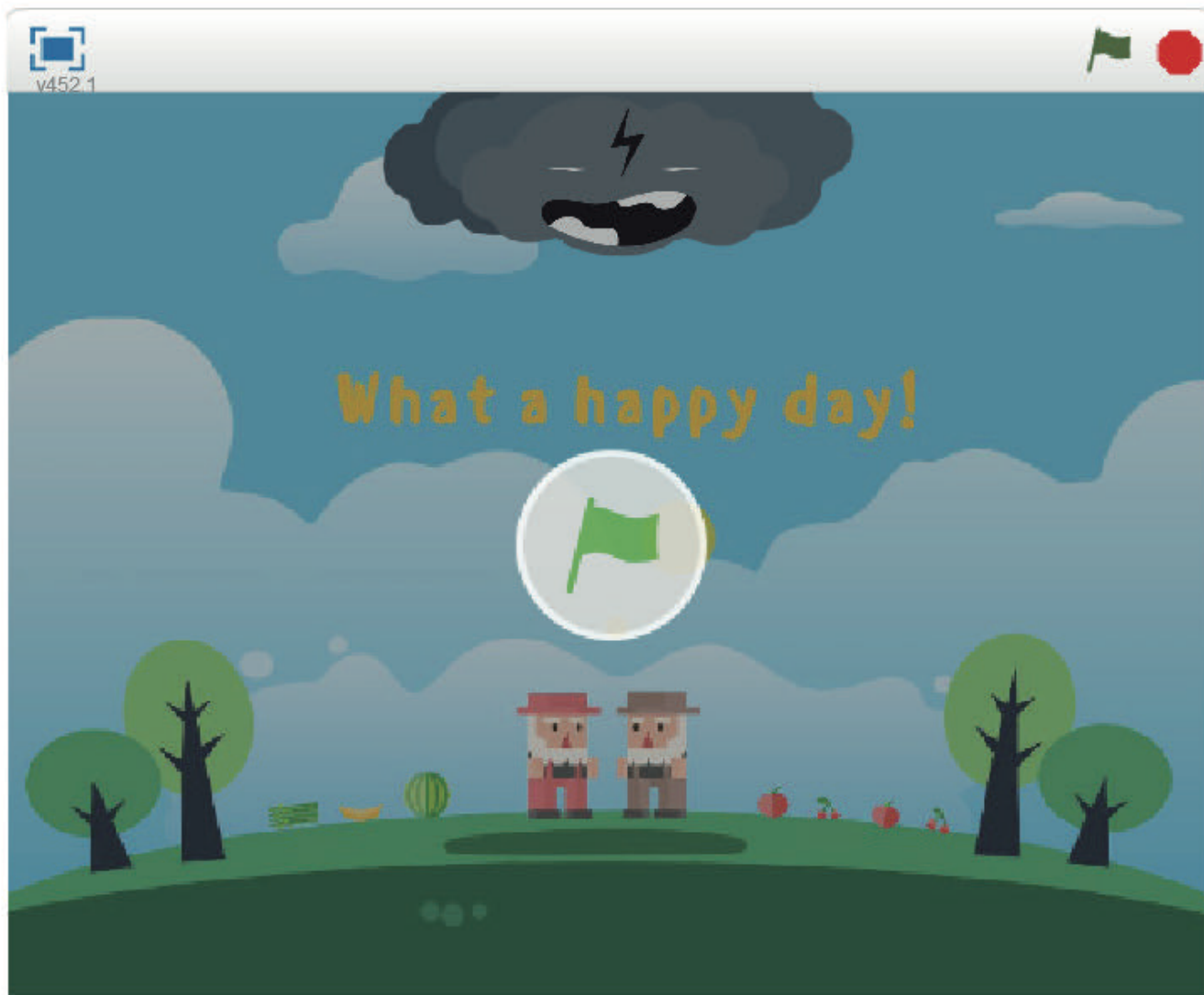
作品介绍 WORKS

最终的Scratch小组作业展示。
Final group work presentation.





游戏案例都已经上传到网上，可以扫描二维码体验游戏
Game cases have been uploaded to the Internet to scan the qr code experience game



游戏介绍

一场奇怪的大雨之后，农民们都受到了感染变得不正常，但他们发现水果可以使他们恢复，因此一场争夺水果的生存之战爆发了。

INTRODUCTION

After a strong rain, the farmers become crazy, but they notice that fruits can help them recover, so a fight for fruit breaks.



扫描二维码体验该Scratch

游戏操作：

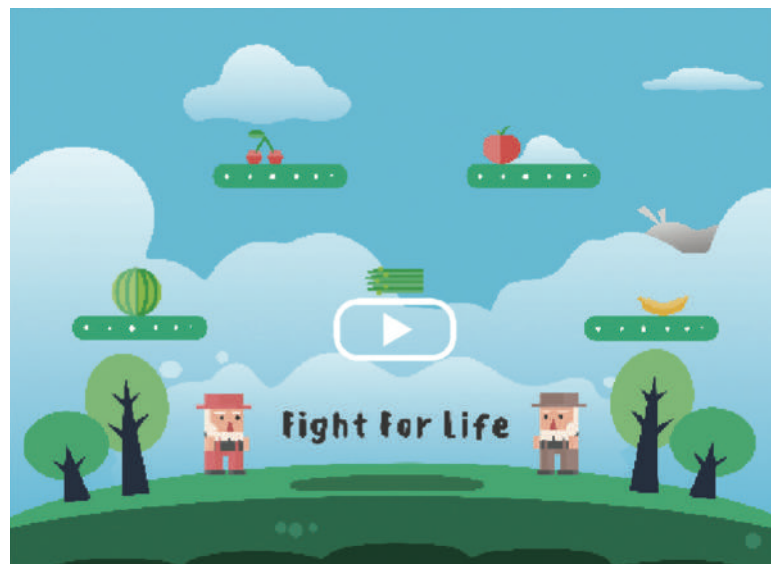
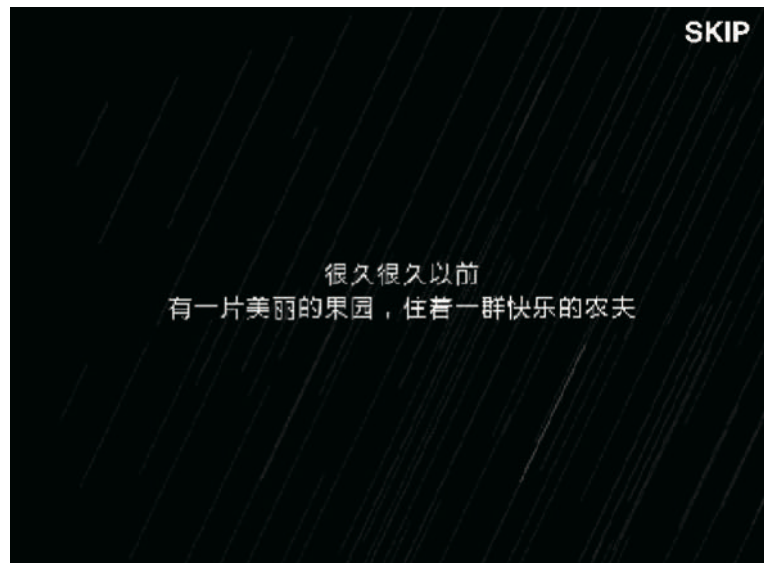
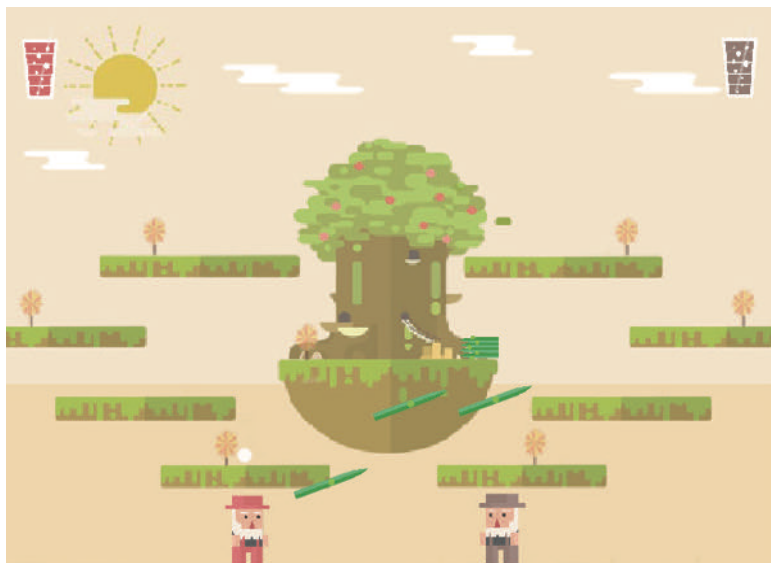
玩家1：“W” 跳跃，
“E” 扔水果攻击

玩家2：“I” 跳跃，“O”
扔水果攻击

HOW TO PLAY:

Player 1: “W” for jump-
ing, “E” for throwing
fruits to attack.

Player 2: “i” for jump-
ing, “O” for throwing
fruits to attack.





游戏介绍

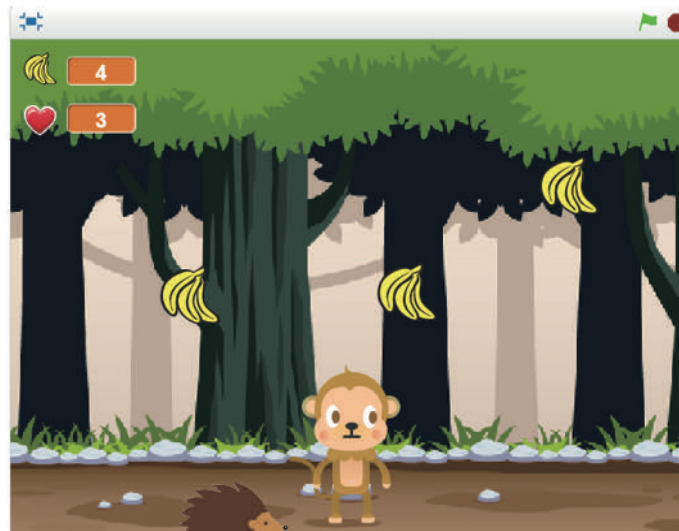
让小猴子尽可能地吃更多的香蕉而得分！

INTRODUCTION

Eat more bananas as you can! Go! Little monkey!



扫描二维码体验该Scratch

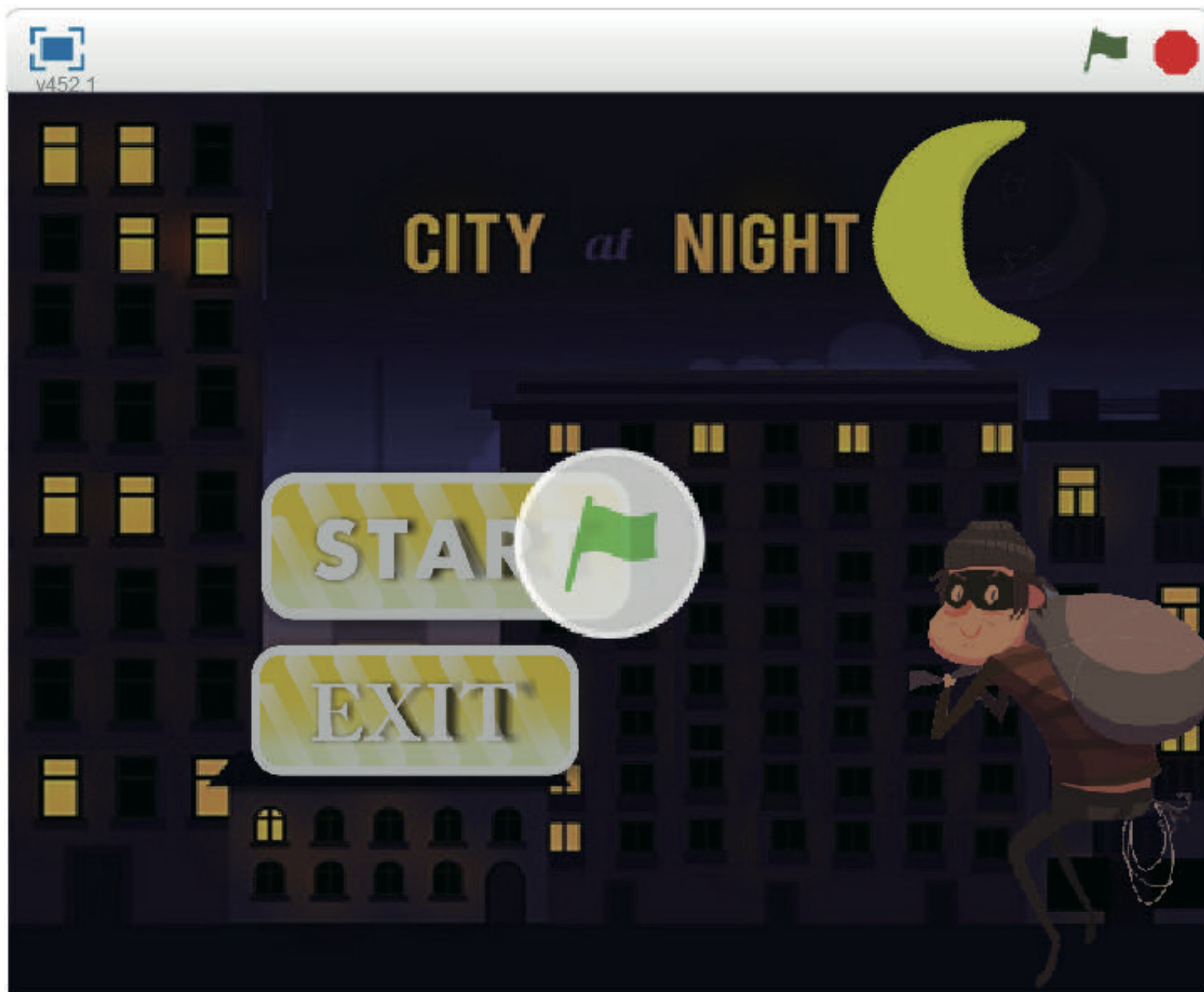


游戏操作：

使用上下左右键来控制猴子的运动来吃香蕉。

HOW TO PLAY:

Use your keyboard. "↑" for jumping
 "→" for moving to right "←" for moving to left



游戏介绍

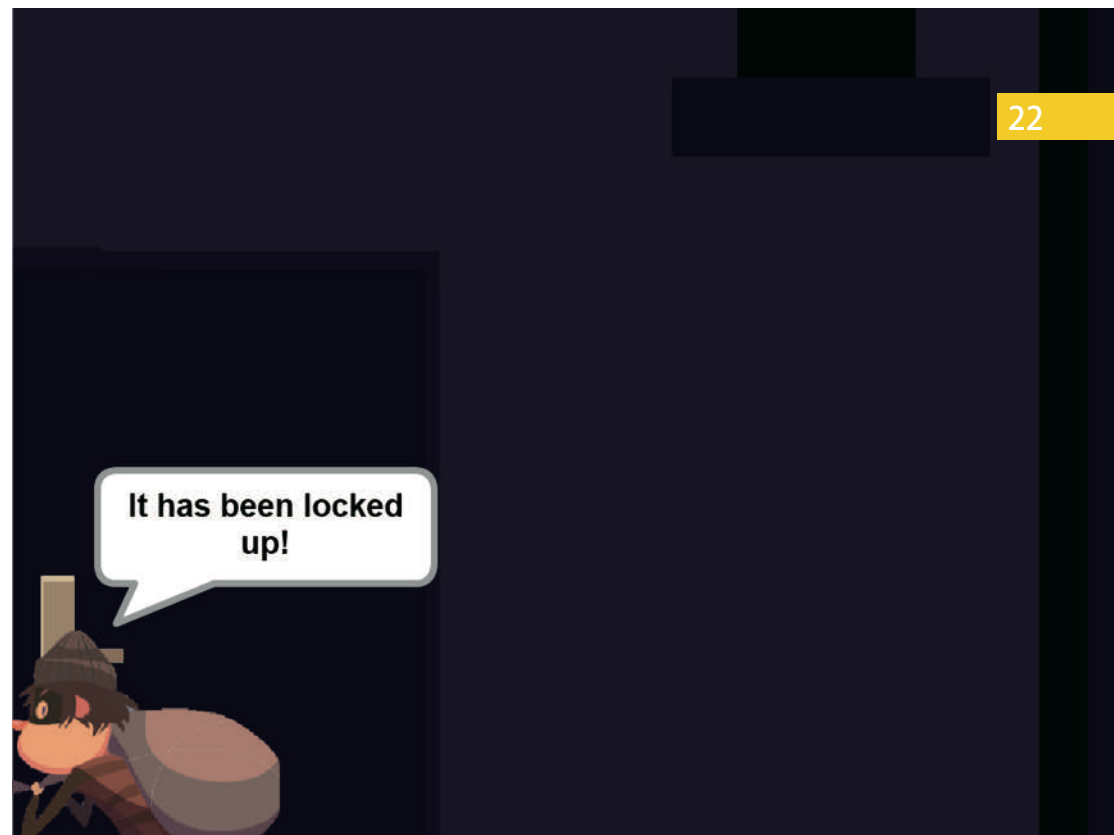
一个小偷想要到达一栋建筑的最高层，这样的话他就可以得到大宝藏，可是他必须经过层层关卡。

INTRODUCTION

A thief needs to go to the top of a building, so that he can get a treasure. But he has to go through a lot of obstacles.

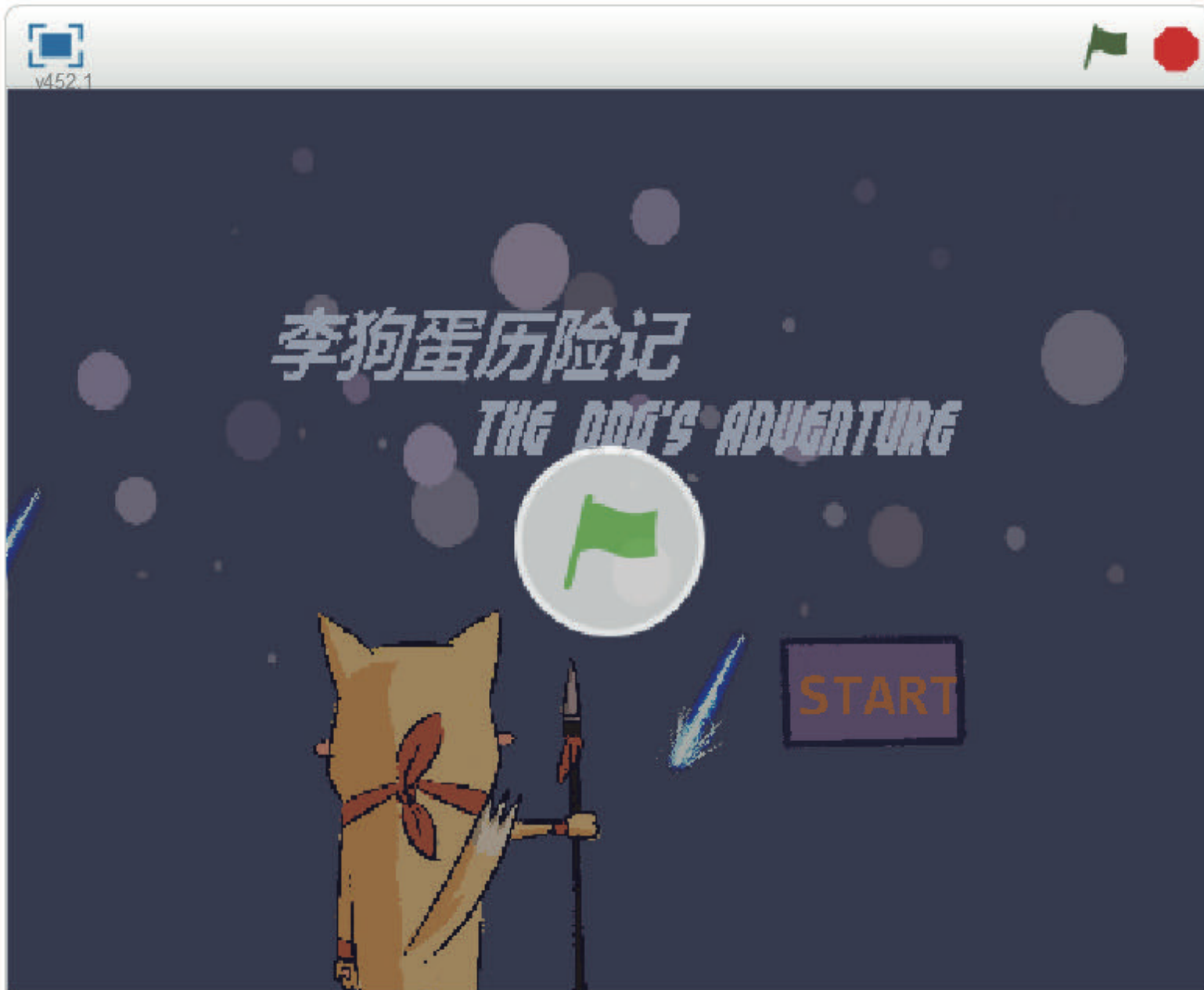


扫描二维码体验该Scratch



LEVEL 1

You need to find a special way to get in the house. Try it!



游戏介绍

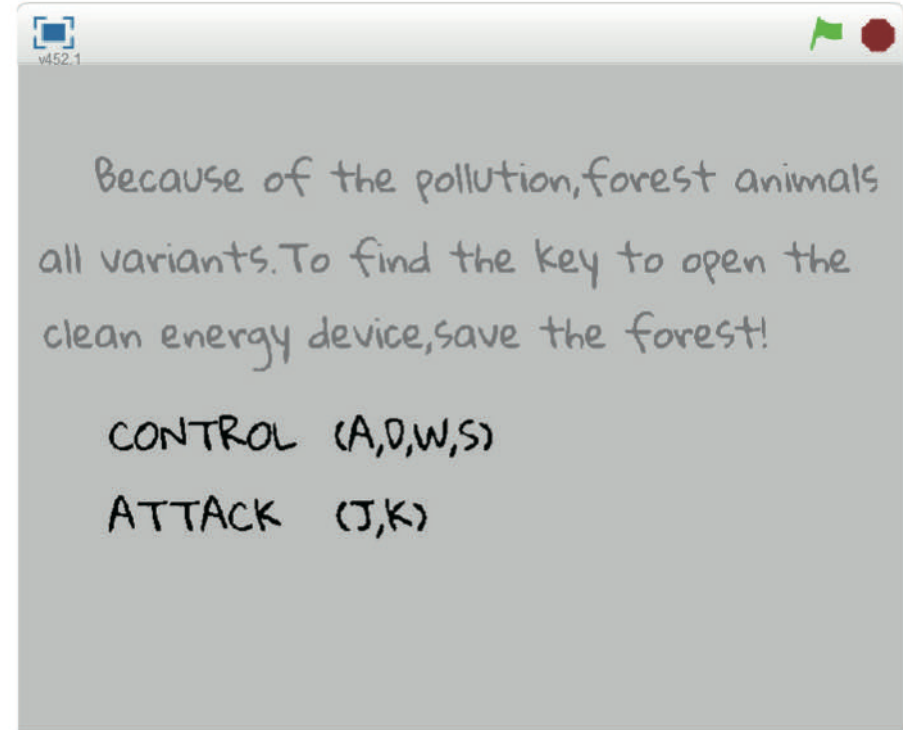
有一天狗蛋想去外面的世界冒险一下，于是他就拥有了一个神奇的旅行。

INTRODUCTION

One day the dog wants to have an adventure, so he goes out and has a magical trip.



扫描二维码体验该Scratch



游戏操作：

上下左右键控制李狗蛋运动，第二关里面空格键是用来控制下落。

HOW TO PLAY:

Use your keyboard.

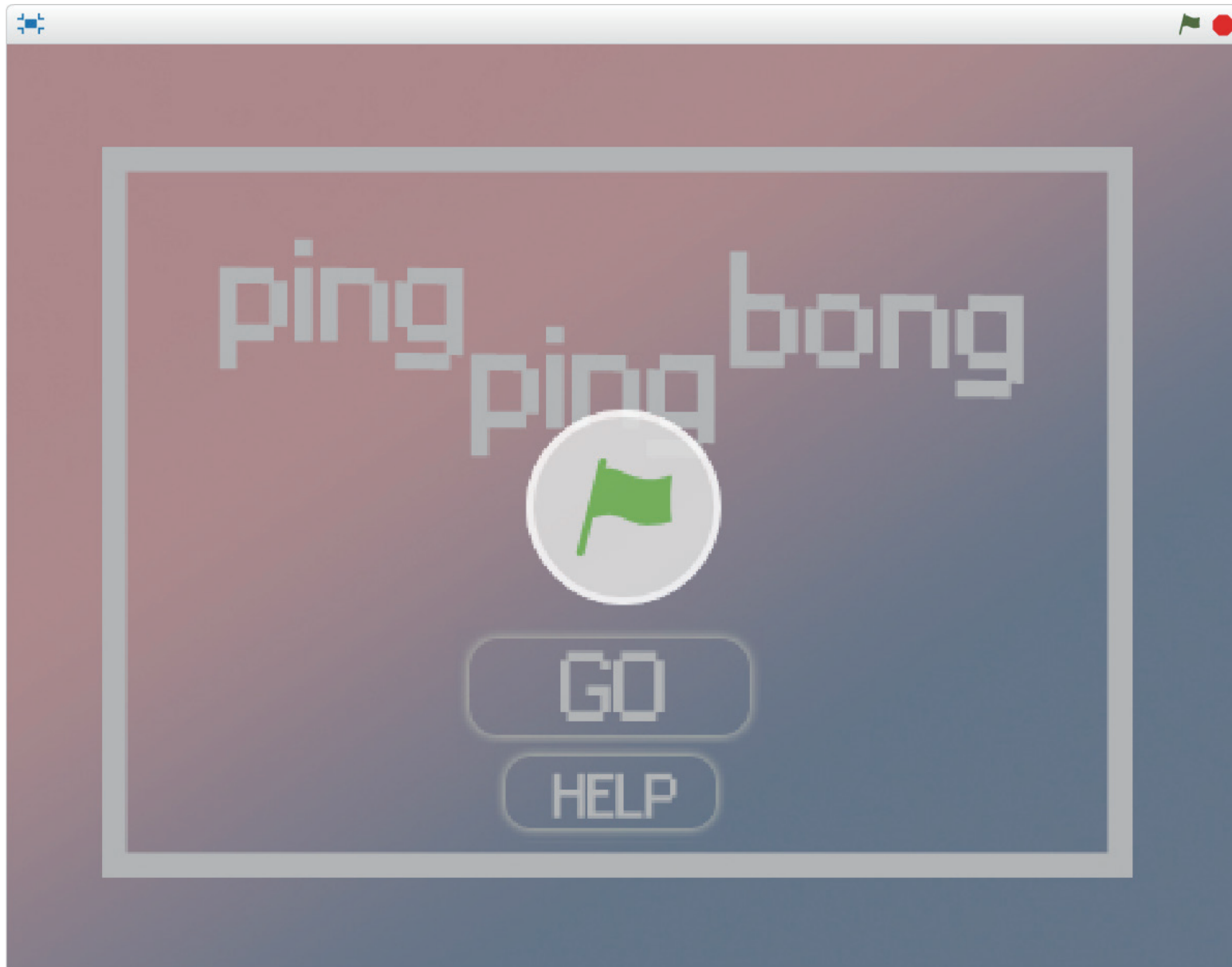
“↑” for jumping

“↓” for falling down

“→” for moving to right

“←” for moving to left

The space key in the 2 levels is for falling down.



游戏介绍

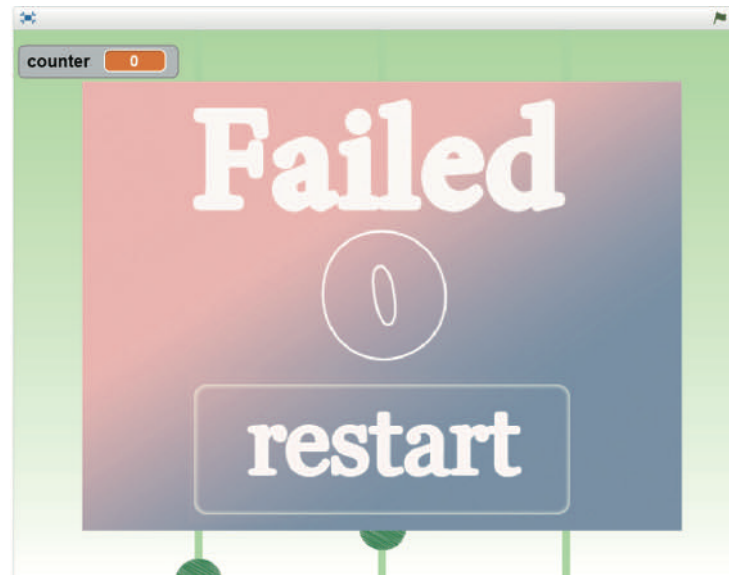
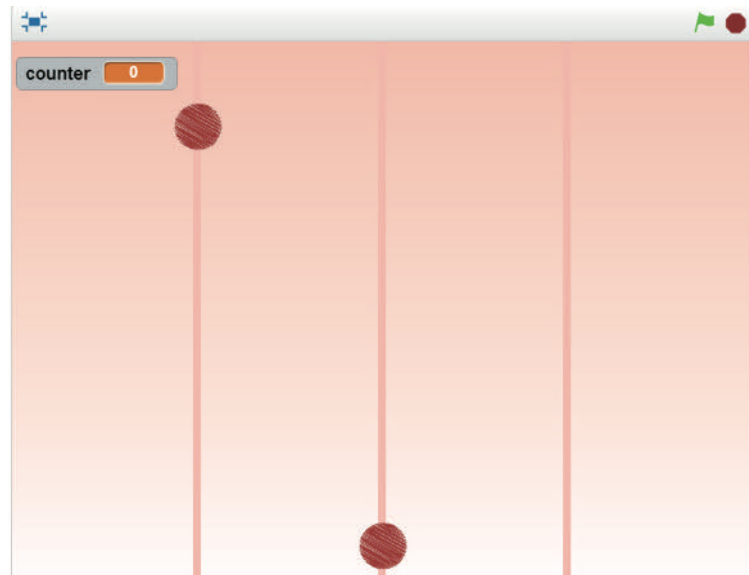
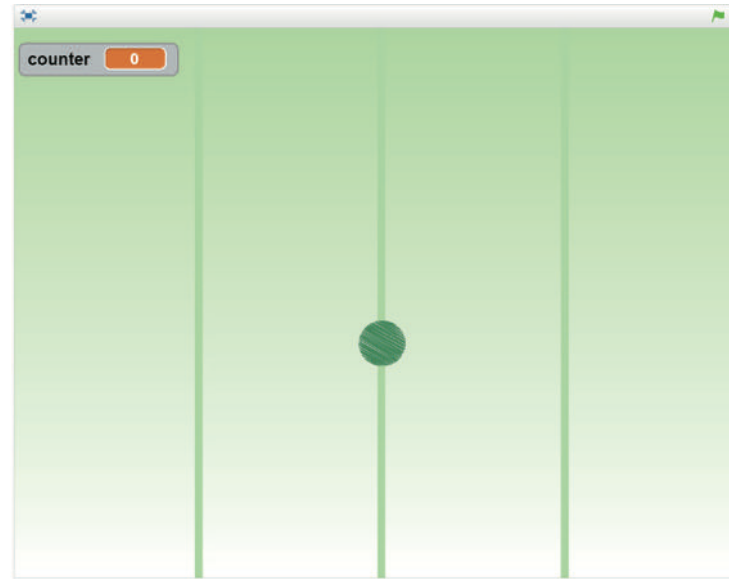
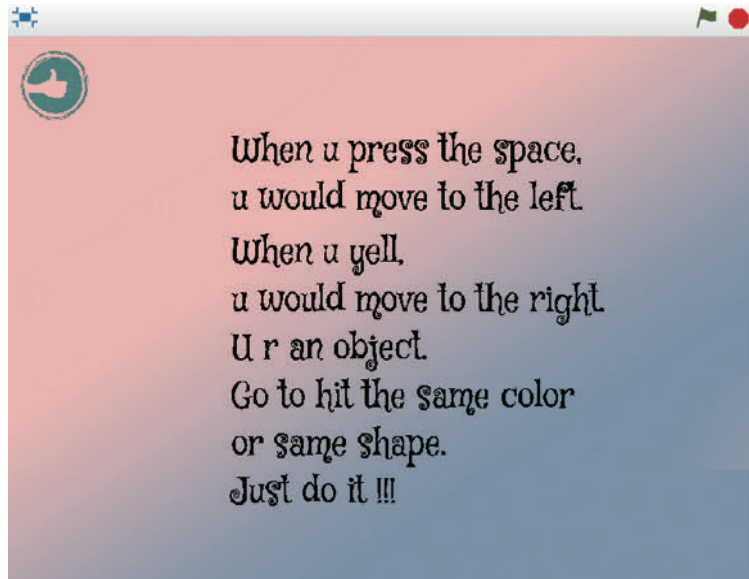
用声音来控制小球，
喊出来吧！玩得开心点！

INTRODUCTION

Control the ball with
sound Try to yell and
have fun!



扫描二维码体验该Scratch



游戏操作：

碰到同颜色或者是同一形状的物体会加分。按下空格，球球向左，喊1秒或者2秒，球球向右。

HOW TO PLAY:

To hit the same color or the same shape.

The space key is for moving to the left.

If you want to move the ball to the right, you have to yell for 1 or 2 second.



游戏介绍

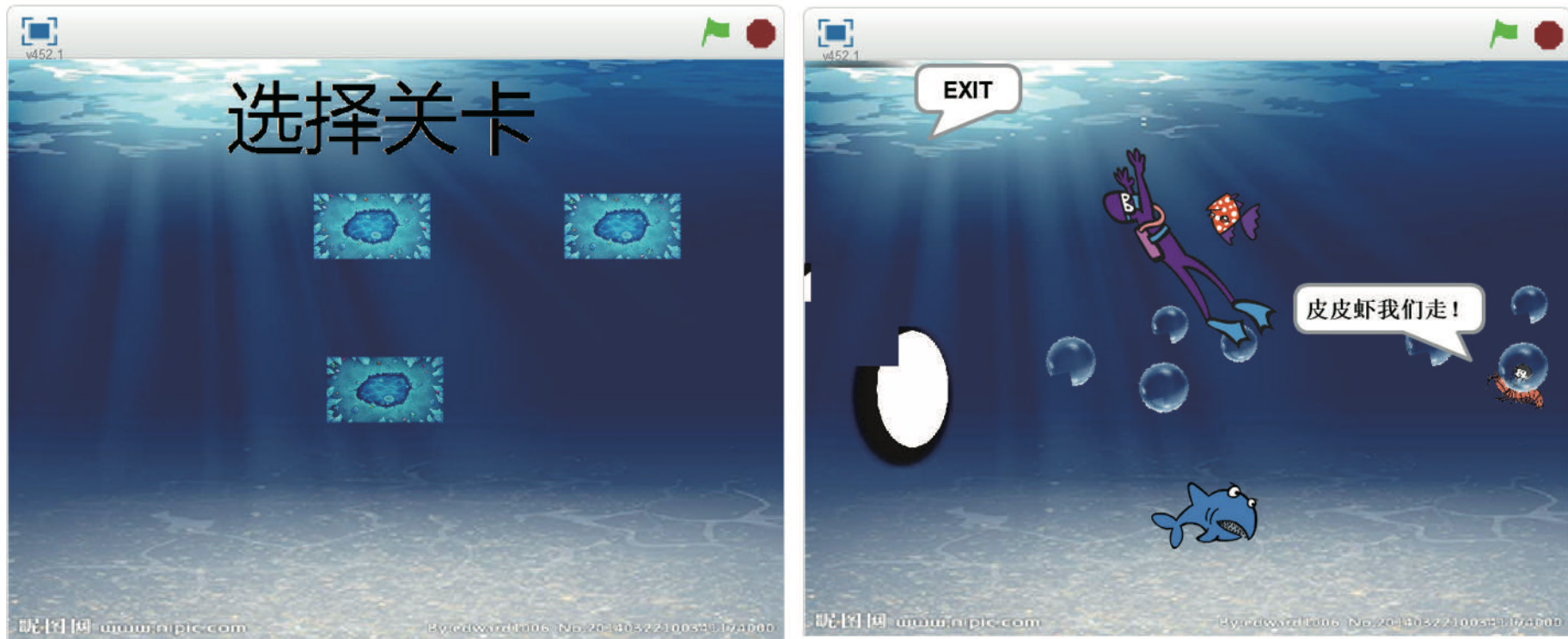
一个画风清奇的海底游戏吧！

INTRODUCTION

A special style of play ,it in the ocean!



扫描二维码体验该Scratch



游戏操作：

用上下左右键控制潜水员，注意注意不要碰到任何鱼或者海中的泡泡，不然会回到起点。

HOW TO PLAY:

Use your keyboard.

“↑” for jumping, “↓” for falling down, “→” for moving to right, “←” for moving to left
Remember do not touch the fish or the bubbles, or you will go back to the beginning area.



游戏介绍

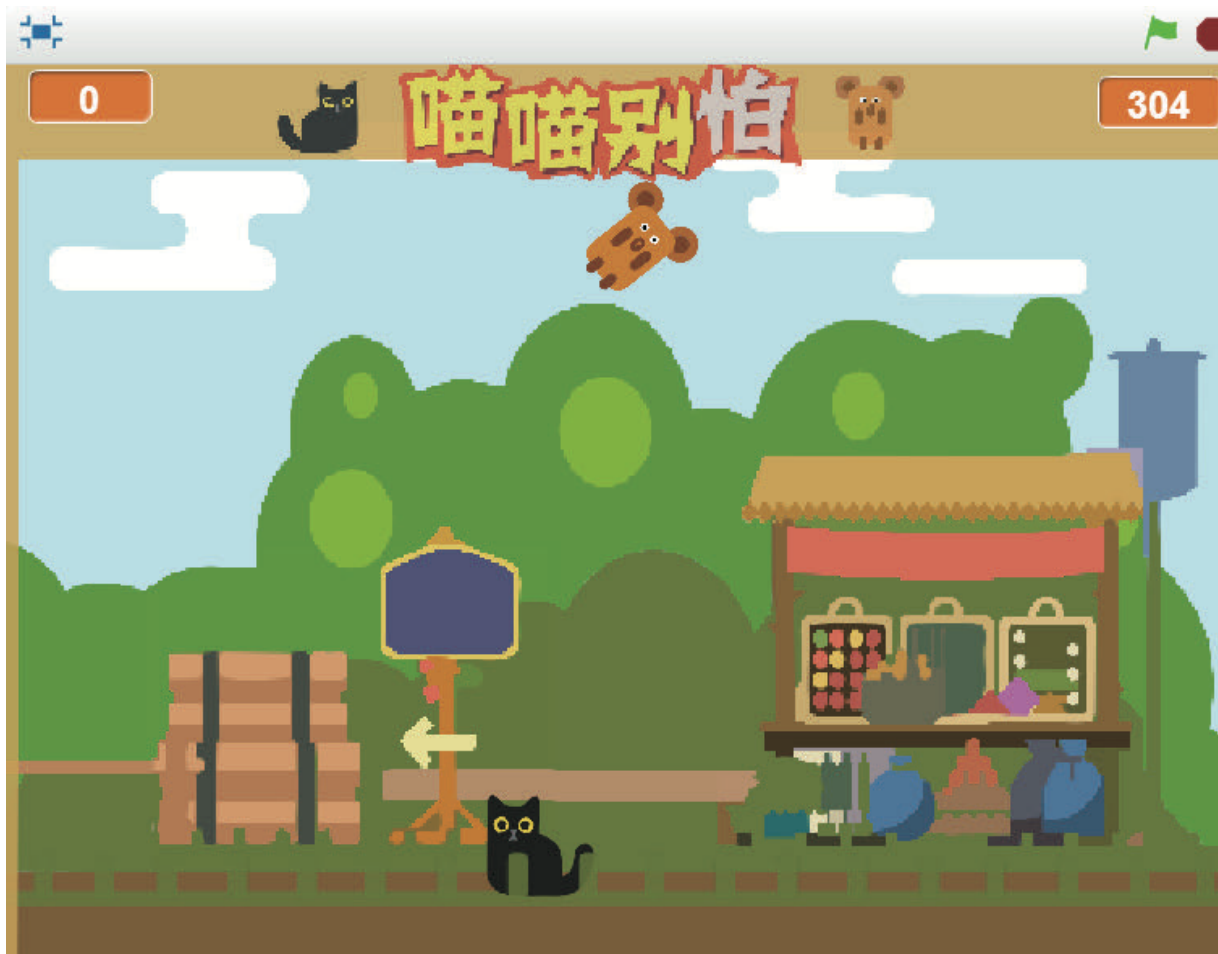
胆小的猫猫怕老鼠，不要碰到老鼠哦。

INTRODUCTION

The cat is too timid that it is afraid of mouse! So try not to touch the mouse.



扫描二维码体验该Scratch



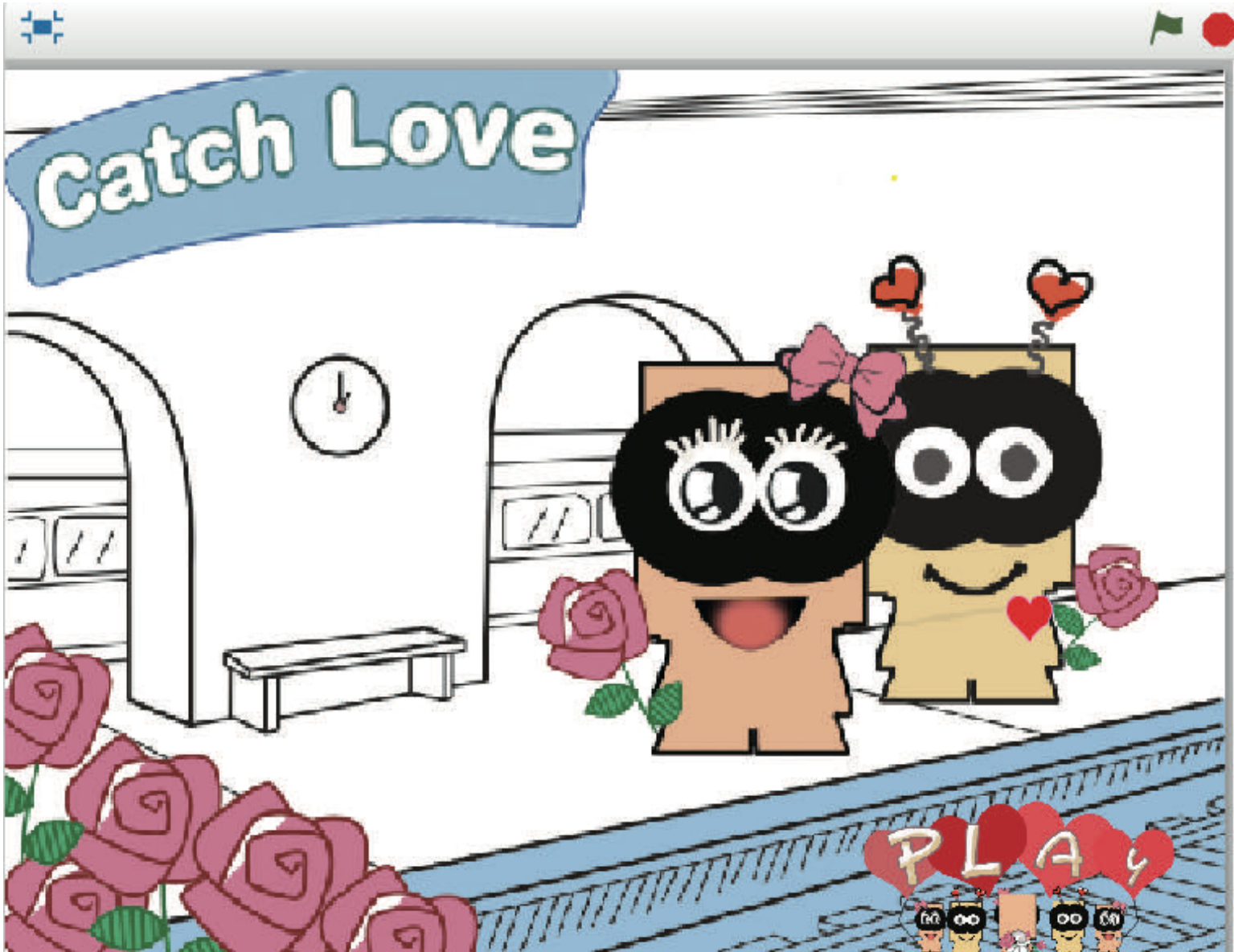
游戏操作

“↑” 向上走、 “↓” 下落
 “→” 向右走、 “←” 向左走
 不要碰到老鼠哦

HOW TO PLAY:

Use your keyboard.

“↑” for jumping (向上走)
 “↓” for falling down (下落)
 “→” for moving to right (向右走)
 “←” for moving to left (向左走)
 Try not to touch the mouse.



游戏介绍

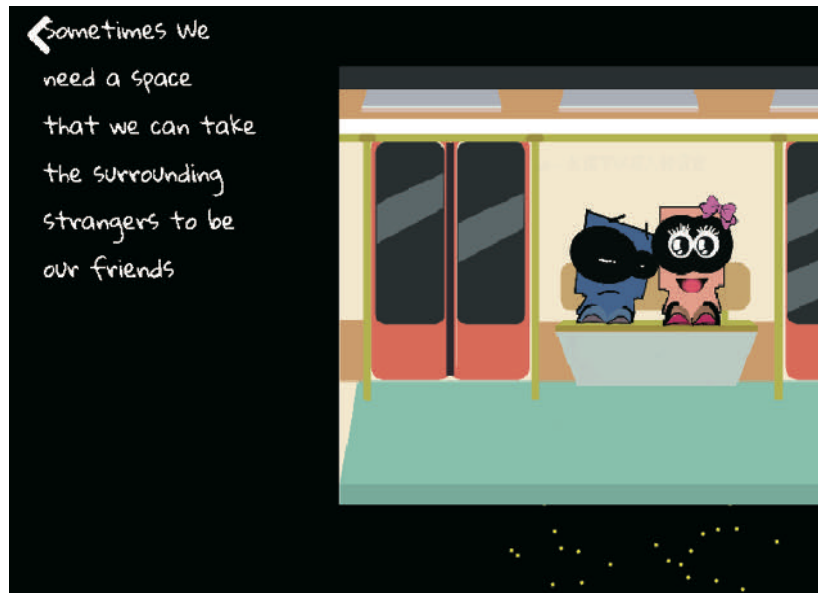
人与人之间，即使是陌生人之间都存在着爱，多点关注身边的人，勿让爱从手中流逝。

INTRODUCTION

There is always love between people, even strangers. Care about your friends, and don't just let love leave.

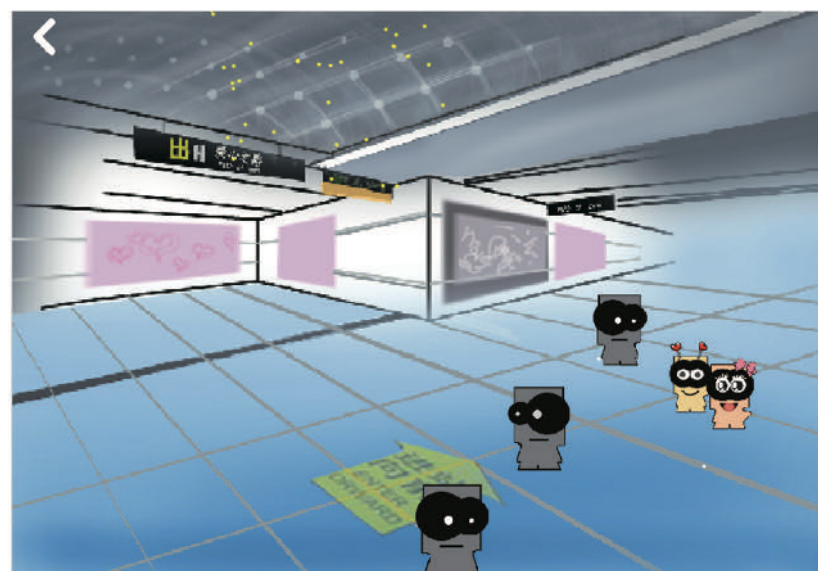
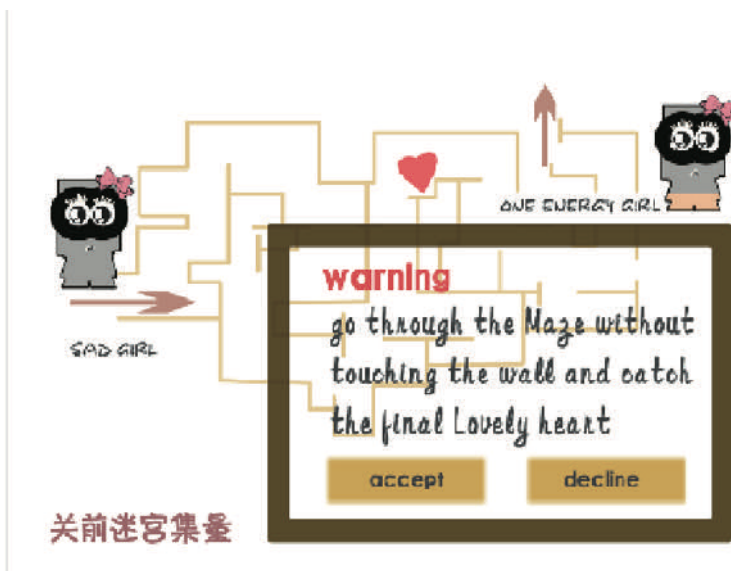


扫描二维码体验该Scratch



游戏操作：

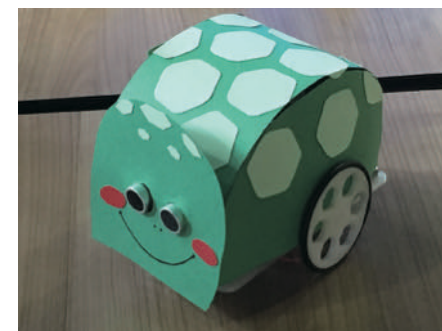
使用鼠标和键盘。鼠标控制小人的移动；键盘的上下左右键同样控制小人的移动。不同关卡操作不同。



HOW TO PLAY:

Use mouse and keyboard, and they both control the little girl's motion, but it differs among levels.

工作坊展示 Workshop presentation





创意编程

CREATIVE PROGRAMMING