C. Spider Robot

Material

1. Spider Robot
2. Computer

Project #1: Infrared Remote Controller Controls Robot

Reference Code

	The block checks if the specified key of IR remote controller is pressed. If the key is being pressed, the block returns "true"; if it is not, it returns "false".

Project #2: Singing Robot

Task: Control the buzzer module to broadcast the sound according to the notes and tones of the music.

Program Idea

Little Star

$1=C\frac{4}{4}$

1 1 5 5 | 6 6 5 - | 4 4 3 3 | 2 2 1 - | 5 5 4 4 | 3 3 2 - |

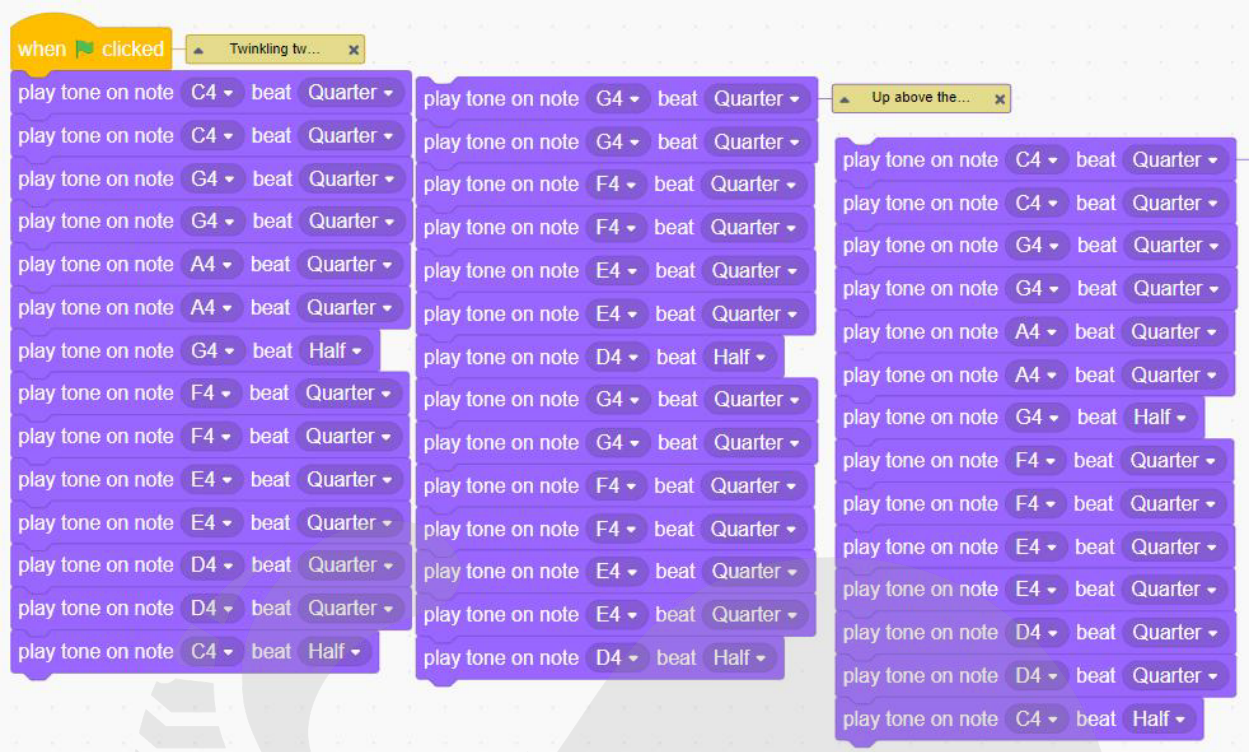
Twinkle twinkle ,little star, How I wonder what you are, Up above the world so high,

5 5 4 4 | 3 3 2 - | 1 1 5 5 | 6 6 5 - | 4 4 3 3 | 2 2 1 - |

Like a diamond in the sky. Twinkle twinkle,little star, How I wonder what you are.

Reference Code

	Scripts that wear this block will activate once the Green Flag has been clicked these scripts can activate other scripts and enable the entire program.
	This block defines the tone and rhythms of the buzzer.



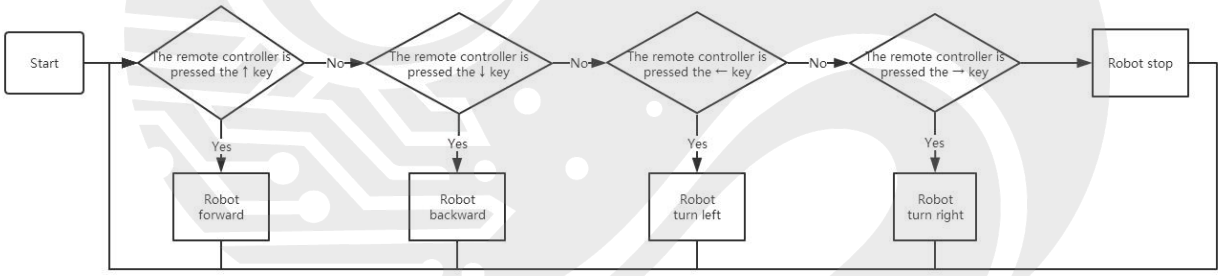
Expansion: You can make a music robot by pressing different buttons of the remote controller, and the robot sings different songs.

ARDUINO

Project #1 Infrared Remote Controller Controls Robot Arduino

Use the IR remote controller to control the movement of the robot: if IR remote controller is pressed the ↑key, the robot goes forward; if IR remote controller is pressed the ↓ key, the robot goes back; if IR remote controller is pressed the ← key, the robot turns left; if IR remote controller is pressed the → key, the robot turns right.

Program Idea



Reference Code

```
#include<WeELF328P.h>

void update();

WeInfraredReceiver ir(PORT_2);
WeEncoderMotor encoder_3(PORT_3);
WeEncoderMotor encoder_4(PORT_4);

void setup(){
        ir.begin();
}

void loop(){
        update();
        if(ir.isKeyPressed(IR_CONTROLLER_UP)){
                encoder_3.run(100);
                encoder_4.run(-100);
        }else if(ir.isKeyPressed(IR_CONTROLLER_DOWN)){
                encoder_3.run(-100);
                encoder_4.run(100);
        }else if(ir.isKeyPressed(IR_CONTROLLER_LEFT)){
                encoder_3.run(100);
                encoder_4.run(100);
        }else if(ir.isKeyPressed(IR_CONTROLLER_RIGHT)){
                encoder_3.run(-100);
                encoder_4.run(-100);
        }else{
                encoder_3.run(0);
                encoder_4.run(0);
        }
}

void update(){
        ir.loop();
}
```

Project #2: Singing Robot Arduino

Task: Control the buzzer module to broadcast the sound according to the notes and tones of the music.

Program Idea

Little Star

$1=C\frac{4}{4}$

1 1 5 5 | 6 6 5 - | 4 4 3 3 | 2 2 1 - | 5 5 4 4 | 3 3 2 - |

Twinkle twinkle ,little star, How I wonder what you are, Up above the world so high,

5 5 4 4 | 3 3 2 - | 1 1 5 5 | 6 6 5 - | 4 4 3 3 | 2 2 1 - |

Like a diamond in the sky. Twinkle twinkle,little star, How I wonder what you are.

Reference Code

```
#include<WeELF328P.h>

WeBuzzer buzzer(OnBoard_Buzzer);

void setup(){
        //event_whenflagclicked();
        buzzer.tone(262, 250);
        buzzer.tone(262, 250);
        buzzer.tone(392, 250);
        buzzer.tone(392, 250);
        buzzer.tone(440, 250);
        buzzer.tone(440, 250);
        buzzer.tone(392, 500);
        buzzer.tone(349, 250);
        buzzer.tone(349, 250);
        buzzer.tone(330, 250);
        buzzer.tone(330, 250);
        buzzer.tone(294, 250);
        buzzer.tone(294, 250);
        buzzer.tone(262, 500);
}

void loop(){
}
```