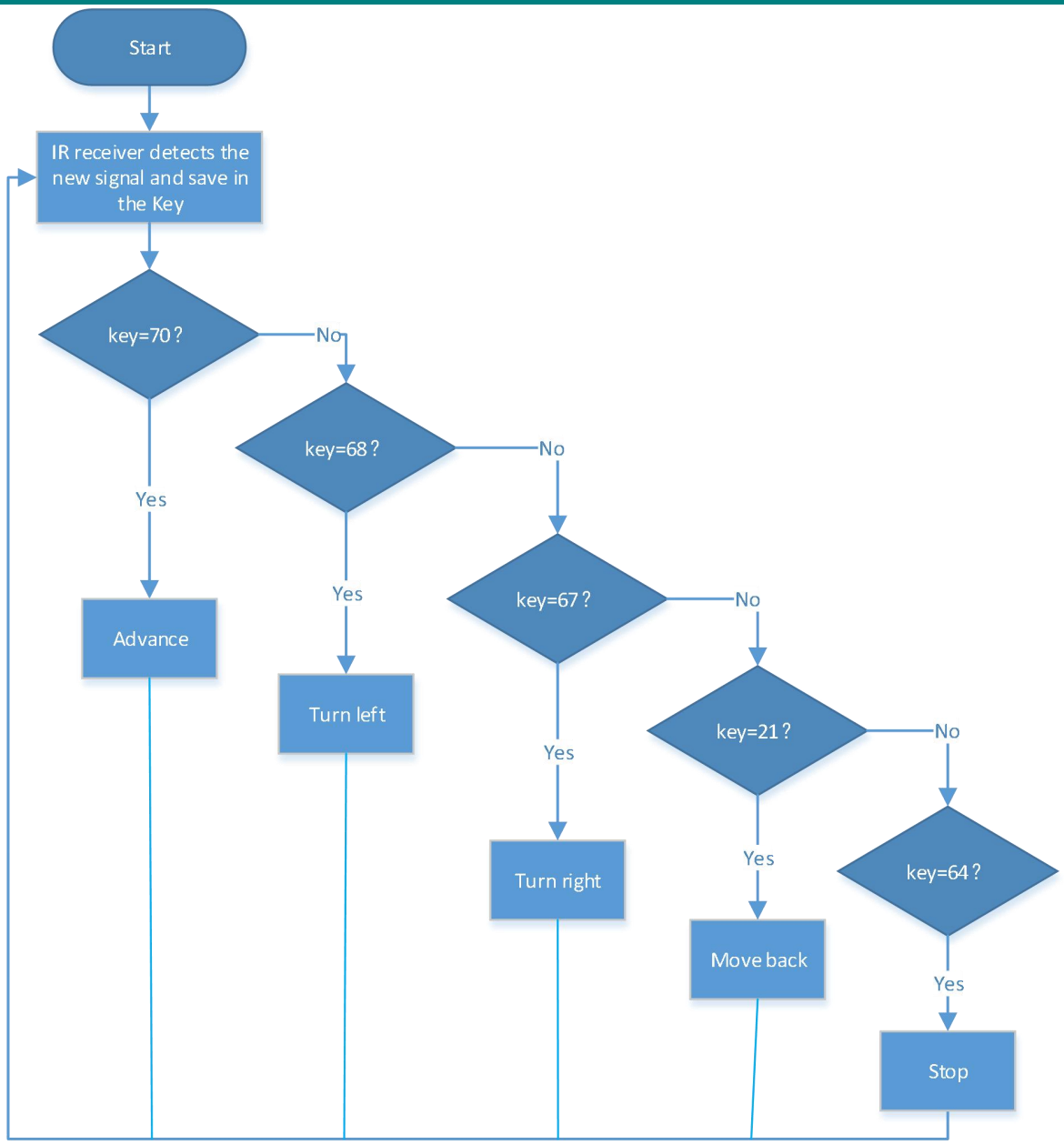
keyestudio

Project 11: IR Remote Control Smart Car

1. Description

In this project, we will work to control the car using an IR remote control.

2. Flow Diagram



3. Test Code

```
//*****************************************************************************
/*
  Keyestudio 4WD Mecanum Robot for Arduino
  lesson 11
  IRremote Control Robot
  http://www.keyestudio.com
*/
#include "MecanumCar_v2.h"
mecanumCar mecanumCar(3, 2);  //sda-->D3,scl-->D2

/****Introduce IR Remote Control header file***/
#include "ir.h"

IR IRreceive(A3);//IR receiver is connected to A3

void setup()
{
  Serial.begin(9600); //Set baud rate to 9600
  mecanumCar.Init(); //Initialize the seven-color LED and motor drive
}

void loop() {
  int key = IRreceive.getKey();
  if (key != -1) {
    Serial.println(key);
    switch (key)
    {
      case 64: mecanumCar.Stop();       break;  //Stop
      case 70: mecanumCar.Advance();    break;  //Advance
      case 21: mecanumCar.Back();       break;  //Move back
      case 68: mecanumCar.Turn_Left();  break;  //Turn left
      case 67: mecanumCar.Turn_Right(); break;  //Turn right
    }
  }
}
//*****************************************************************************
```

4.Test Result

After uploading the test code and turning the DIP switch to the ON end and powering up. When we press the button  on the remote control, the car moves forward, then  , the car turns left,  , the car moves back,  , the car turns right,  , the car stops.

5. Code Explanation

switch (key) **{** **case num: ..... break;** **}**	The switch statement, used with case, executes the statement after case when the variable in parentheses is the value after case
case 64: mecanumCar.Stop();	The car will stop
case 70: mecanumCar.Advance();	The car will go forward
case 21: mecanumCar.Back();	The car will move back
case 68: mecanumCar.Turn_Left();	The car will turn left
case 67: mecanumCar.Turn_Right();	The car will turn right