

ДОДАТОК А**Лістинг програми для роботи модуля**

```
#define M_plus 5
#define M_minus 6

int buttonLeft = 11;
int buttonRight = 10;
int buttonMiddle = 9;
int dir = 0;

void setup()
{
  Serial.begin (9600);
  pinMode(M_plus, OUTPUT);
  pinMode(M_minus, OUTPUT);
  pinMode(12, OUTPUT);
  pinMode(13, OUTPUT);

  pinMode(buttonLeft, INPUT_PULLUP);
  pinMode(buttonRight, INPUT_PULLUP);
  pinMode(buttonMiddle, INPUT_PULLUP);
}

void GoLeft()
{
  digitalWrite(13, LOW);
  digitalWrite(12, LOW);
  digitalWrite(M_plus, HIGH);
```

```
digitalWrite(M_minus, LOW);
```

```
while (digitalRead(buttonLeft)== 1)
```

```
{
```

```
}
```

```
Stop();
```

```
}
```

```
void GoRight()
```

```
{
```

```
digitalWrite(13, LOW);
```

```
digitalWrite(12, LOW);
```

```
digitalWrite(M_plus, LOW);
```

```
digitalWrite(M_minus, HIGH);
```

```
while (digitalRead(buttonRight)== 1)
```

```
{
```

```
}
```

```
Stop();
```

```
}
```

```
void Stop()
```

```
{
```

```
digitalWrite(M_plus, LOW);
```

```
digitalWrite(M_minus, LOW);
```

```
digitalWrite(12, LOW);
digitalWrite(13, LOW);
}

void GoMiddle()
{
  if (dir == 1)
  {
    digitalWrite(M_plus, LOW);
    digitalWrite(M_minus, HIGH);
  }

  else if (dir == -1)
  {
    digitalWrite(M_plus, HIGH);
    digitalWrite(M_minus, LOW);
  }

  while (digitalRead(buttonMiddle)== 1)
  {

  }

  Stop();
}

void splitString(String str, char rozdilnuk)
{
  int startIndex = 0;
  int endIndex = str.indexOf(rozdilnuk);
```

```
while (endIndex != -1)
{
    String number = str.substring(startIndex, endIndex);

    if (number == "11")
    {
        digitalWrite(13, HIGH);
        digitalWrite(12, LOW);
    }

    if (number == "12")
    {
        digitalWrite(12, HIGH);
        digitalWrite(13, LOW);
    }

    if (number == "13")
    {
        GoLeft();
        dir = 1;
    }

    if (number == "14")
    {
        GoRight();
        dir = -1;
    }

    if (number == "23")
```

```
{
    GoMiddle();
    dir = 0;
}

startIndex = endIndex + 1;
endIndex = str.indexOf(rozdilnuk, startIndex);
}

}

void loop()
{
    if (Serial.available() > 0)
    {
        String inputString = Serial.readStringUntil('\n');
        Serial.println("Input string: " + inputString);
        splitString(inputString, ' ');
    }
}
```

ДОДАТОК Б**Демонстраційні матеріали у вигляді презентації**

