

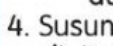
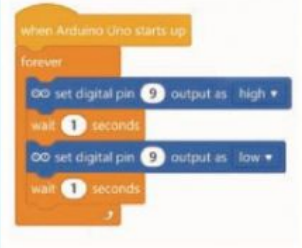
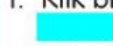
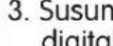
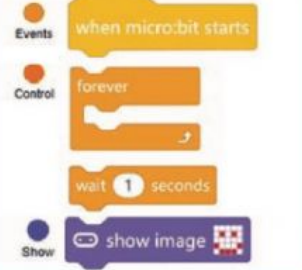
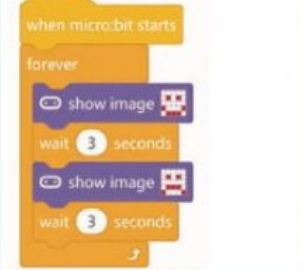
## NAMA:

Pilih jawaban yang betul dalam ruangan yang telah disediakan.

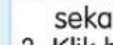
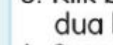
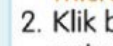
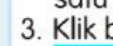
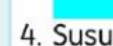
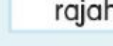
4

### MEMBINA PENGATURCARAAN BERPANDUKAN CARTA ALIR

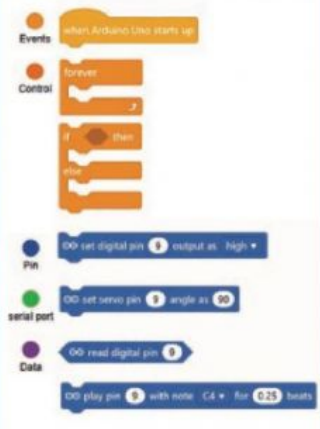
Contoh pengaturcaraan projek cahaya menggunakan antara muka  bagi papan mikropengawal yang berbeza.

| Langkah-langkah                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Blocks Palette                                                                      | Scripts Area                                                                         |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"><li>1. Klik blok  dan tarik keluar ke ruang Scripts Area.</li><li>2. Klik blok <b>Control</b>. Tarik keluar <b>forever</b> dan <b>wait</b> dua kali.</li><li>3. Klik blok  dan tarik keluar  dua kali.</li><li>4. Susun dan tukarkan jenis <b>output</b> pada digital pin mengikut rajah pada Scripts Area.</li></ol> |   |   |
| <ol style="list-style-type: none"><li>1. Klik blok <b>Events</b> dan tarik keluar  ke ruang Scripts Area.</li><li>2. Klik blok . Tarik keluar <b>forever</b> sekali dan <b>wait</b> dua kali.</li><li>3. Susun dan tukarkan jenis  pada digital pin mengikut rajah pada Scripts Area.</li></ol>                                                         |  |  |

Contoh pengaturcaraan projek bunyi menggunakan antara muka mBlock bagi papan mikropengawal yang berbeza.

| Langkah-langkah                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Blocks Palette                                                                       | Scripts Area                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"><li>1. Klik blok <b>Events</b> dan tarik keluar <b>when Arduino Uno starts up</b> ke ruang Scripts Area.</li><li>2. Klik blok <b>Control</b>. Tarik keluar <b>forever</b> sekali dan  dua kali.</li><li>3. Klik blok <b>Pin</b> dan tarik keluar  dua kali.</li><li>4. Susun dan tukarkan nombor pin serta jenis nada mengikut rajah pada Scripts Area.</li></ol>                                                                                  |  |  |
| <ol style="list-style-type: none"><li>1. Klik blok <b>Events</b> dan tarik keluar <b>when micro:bit starts</b> ke ruang Scripts Area.</li><li>2. Klik blok <b>Control</b>. Tarik keluar  satu kali.</li><li>3. Klik blok  dan tarik .</li><li>4. Susun dan tukarkan jenis muzik seperti rajah pada .</li></ol> |  |  |

Contoh pengaturcaraan projek gabungan cahaya, bunyi dan pergerakan menggunakan mBlock.

| Langkah-langkah                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Blocks Palette                                                                     | Scripts Area                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Klik blok  dan tarik keluar  ke ruang Scripts Area.</li> <li>2. Klik blok Pin, tarik keluar  dan set servo pin. Susun dan tukarkan nombor pin serta darjah pusingan motor servo mengikut rajah pada Scripts Area.</li> <li>3. Klik blok . Tarik keluar  dan .</li> <li>4. Klik blok  sekali lagi, tarik keluar set digital pin empat kali,  dua kali dan  sekali sahaja.</li> <li>5. Susun dan tukarkan nombor pin, nilai rentak, darjah pusingan motor servo mengikut rajah pada Scripts Area.</li> </ol> |  |  |

Contoh pengaturcaraan projek gabungan cahaya, bunyi dan pergerakan menggunakan Makecode.

| Langkah-langkah                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Blocks Palette                                                                       | Scripts Area                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. Klik blok  dan tarik keluar . Klik blok Pins dan tarik keluar . Susun dan tukarkan nilai pin mengikut rajah pada Scripts Area.</li> <li>2. Klik blok  dan tarik keluar .</li> <li>3. Klik blok  dan tarik keluar digital write pin empat kali.</li> <li>4. Klik blok  dan tarik keluar  dua kali.</li> <li>5. Klik blok  dan tarik keluar . Klik blok  dan tarik keluar operasi .</li> <li>6. Klik blok Music dan tarik keluar . Tarik masuk arahan  ke dalam arahan operasi. Tukarkan nilai 1 beat kepada 4 beat dan nilai 0 kepada 2.5. Susun dan tukarkan nilai pin mengikut rajah pada Scripts Area.</li> </ol> |  |  <div data-bbox="1173 1568 1316 1736">  <p>IMBAS SAYA</p> </div> |



## NOTA GURU

→ Bimbing murid mengikuti langkah untuk membina atur cara projek keselamatan dengan mengimbas kod QR.

