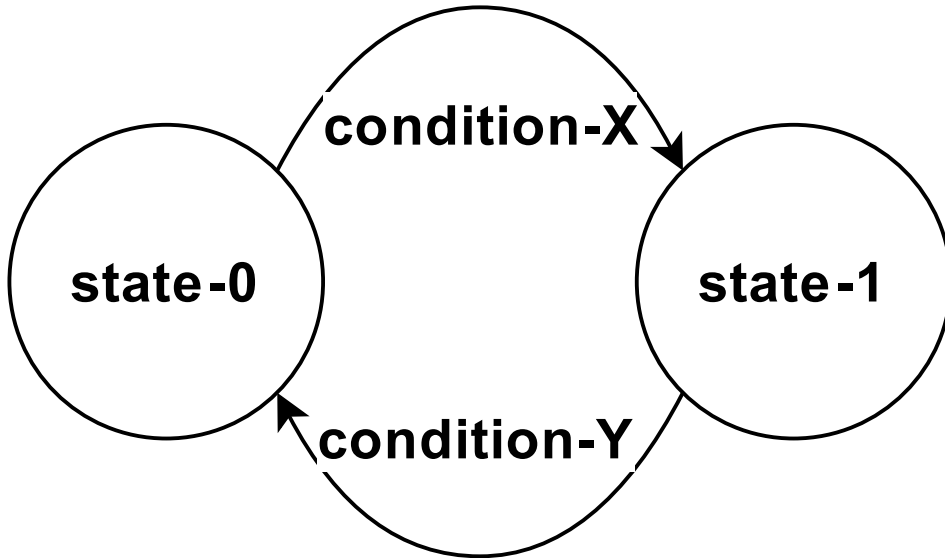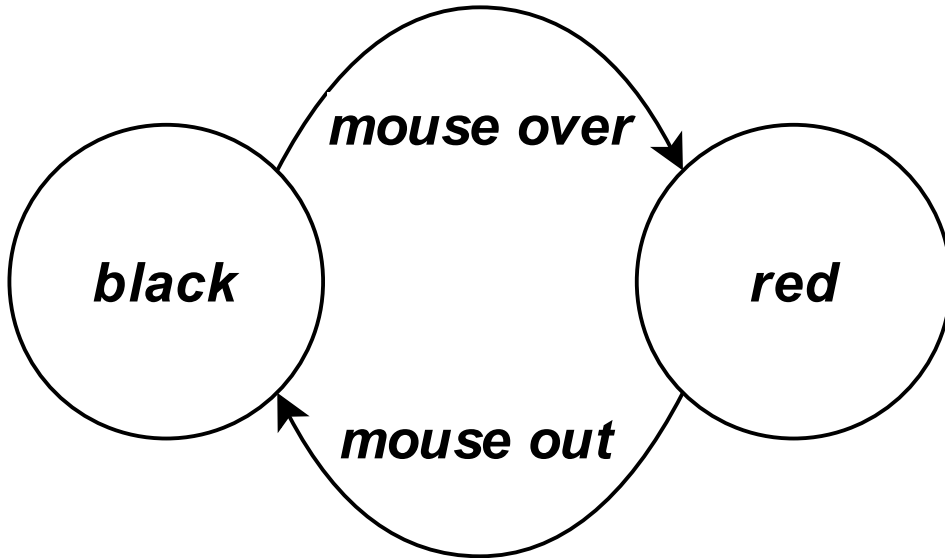# Events

- a modeling methodology for system behavior

- system states

- state changes

State machine

Two Events on a State Machine

Events in HTML

- HTML may react browser events

- Events are attached to tags

- Browser keeps track of events

- A set of event handler HTML attributes exist

Event Handlers

- Event handler HTML attributes

  aka: inline event handlers

- starts with `on` and followed by event name

  no spaces, no capitalization

- event handlers are attributes with a *script* as their value

Script

- *script*: defines the state transition
- To do that, it updates the state

A state update

```html
<!DOCTYPE html>
<html>
  <body>
    <h1
      onmouseover="style.color='red'"
    >
      When I was a little child,
    </h1>
  </body>
</html>
```

Two state updates

```html
<!DOCTYPE html>
<html>
  <body>
    <h1
      onmouseover="style.color='red'"
      onmouseout="style.color='black'"
    >
      Bir yokluktu Ankara.
    </h1>
  </body>
</html>
```

More event handlers

```html
<!DOCTYPE html>
<html>
  <body>
    <h1
      onmousedown="style.color='red'"
      onmouseup="style.color='black'"
    >
      Après moi dull and wild
    </h1>
  </body>
</html>
```

One window event

```html
<!DOCTYPE html>
<html>
  <body
    onresize="document.body.style.backgroundColor='yellow'"
  >
    <h1
      onmousedown="style.color='red'"
      onmouseup="style.color='black'"
    >
      Town ne oldu, que sera?
    </h1>
  </body>
</html>
```

Two window events

```html
<!DOCTYPE html>
<html>
  <body
    onoffline="document.body.style.backgroundColor='pink'"
    ononline="document.body.style.backgroundColor='white'"
  >
    <h1
      onmousedown="style.color='red'"
      onmouseup="style.color='black'"
    >
      Cranium fibula radius
    </h1>
  </body>
</html>
```

Key events

```html
<!DOCTYPE html>
<html>
  <body
    onkeydown="document.body.style.backgroundColor='cyan'"
    onkeyup="document.body.style.backgroundColor='white'"
  >
    <h1
      onmousedown="style.color='red'"
      onmouseup="style.color='black'"
    >
      Sacrum patella carpus
    </h1>
  </body>
</html>
```

Drag events

```html
<!DOCTYPE html>
<html>
  <body
    onscroll="document.title='This window has been scrolled'"
  >
    <h1
      onmousedown="style.color='red'"
      onmouseup="style.color='black'"
    >
      Nasıl ezberlenir Allahım
    </h1>
  </body>
</html>
```

Form events

```html
<!DOCTYPE html>
<html>
  <body>
    <input
      onfocus="style.color='red'"
      onblur="style.color='black'"
      value="Arapça dua eden insanın Latince kemikleri?"
    />
  </body>
</html>
```

Changing attributes

```html
<!DOCTYPE html>
<html>
  <body>
    <input
      onselect="this.value='Ey! Elesius dağlarından esen rüzgâr'"
      value="Bana ilham getirdin (Hem de yaktın bitirdin)"
    />
  </body>
</html>
```

Changing contents

```
<!DOCTYPE html>
<html>
  <body>
    <p
      onclick="innerHTML='Bu kadar.'"
    >
      Kısamız burada biter
    </p>
  </body>
</html>
```