OSS기반 AI프로그래밍

1장. 이벤트 이해하기

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양 선

교재의 9장에 해당합니다.

종류	이벤트	이벤트 리스너	종류	이벤트	이벤트 리스너
마우스	click	onclick	입력	focus	onfocus
	dblclick	ondblclick		blur	onblur
	mouseover	onmouseover		submit	onsubmit
	mouseout	onmouseout		reset	onreset
	mousedown	onmousedown		change	onchange
	mouseup	onmouseup	키보드	keydown	onkeydown
	mousemove	onmousemove		keyup	onkeyup
	wheel	onwheel		keypress	onkeypress
윈도우	load	onload	터치	touchstart	ontouchstart
	unload	onunload		touchmove	ontouchmove
	resize	onresize		touchend	ontouchend
	scroll	onscroll			

1.1 예제1

```html
<!DOCTYPE html>
<html>
<head>
  <meta charset="UTF-8">   <title>예제1</title>
  <style>
    body { text-align: center; }
    #rotateImage { transition: transform 1s; }  /* 회전시간 */
  </style>
</head>
<body>
  <h4>이미지를 클릭해보세요</h4>   <hr>
  <img id="rotateImage" src="/static/photo1.jpg" onclick="rotate()">
  <script>
    const i = document.getElementById("rotateImage");
    let d = 0;
    function rotate() {
      d += 360;   /* 회전각도*/
      i.style.transform = `rotate(${d}deg)`;
    }
</script>
</body>
</html>
```

1.2 예제2

```html
<!DOCTYPE html>
<html>
<head>
  <meta charset="UTF-8">   <title>예제2</title>
  <style>
    body { text-align: center; }
    #rotateImage { transition: transform 1s; }
  </style>
</head>
<body>
  <h4>마우스 커서를 이미지 위에 올렸다가 치워보세요</h4><hr>
  <img id="rotateImage" src="/static/photo2.jpg">
  <script>
    const i = document.getElementById("rotateImage");
    i.onmouseover = small;
    i.onmouseout = back;

    function small() {      i.style.transform = "scale(0.2, 0.2)";     }
    function back() {      i.style.transform = "scale(1, 1)";     }
  </script>
</body>
</html>
```
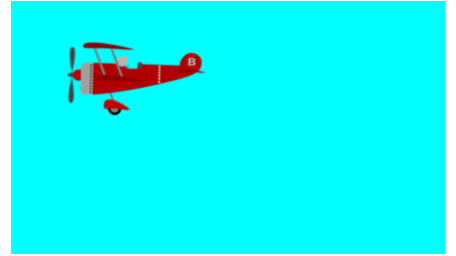
1.3 예제3

```html
<!DOCTYPE html>
<html>
<head>
  <meta charset="UTF-8">   <title>예제3</title>
  <style>
    #sky { width:800px; height: 400px; background:cyan; overflow: hidden; }
    #followMouse { transition: transform 1s linear; }
  </style>
</head>
<body>
  <div id="sky">  <img id="followMouse" src="/static/photo3.png">  </div>
  <script>
    const i = document.getElementById("followMouse");
    const d = document.getElementById("sky");
    d.onmousemove = updateImage;
    function updateImage(event) {
      const X = event.clientX;
      const Y = event.clientY;
      i.style.transform = `translate(${X}px, ${Y}px)`;
    }
  </script>
</body>
</html>
```
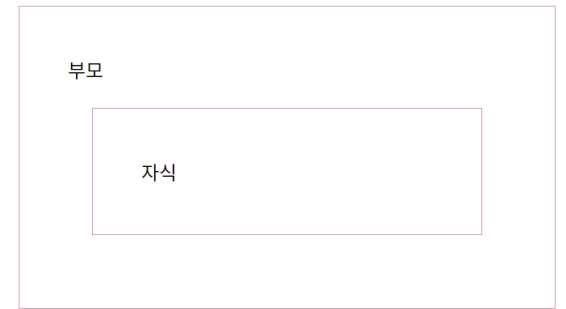
1.4 예제4

```html
<!DOCTYPE html>
<html>
<head>
  <meta charset="UTF-8">   <title>예제4</title>
  <style>
   div {    padding: 40px; border: 1px solid #c9a;   margin: 20px;    }
  </style>
</head>
<body>
  <div id="parent"> 부모
     <div id="child"> 자식</div>
  </div>
  <script>
   const p = document.getElementById("parent");
   const c = document.getElementById("child");
   // 버블링 (기본. 자식부터)
   p.addEventListener( "click", function() { alert("부모 (버블링)"); } );
   c.addEventListener( "click", function() { alert("자식 (버블링)"); } );

  </script>
</body>
</html>
```

부모

자식

1.5 예제5

```html
<!DOCTYPE html>
<html>
<head>
  <meta charset="UTF-8">   <title>예제5</title>
  <style>
    body {      text-align: center;      overflow: hidden;    }
  </style>
</head>
<body>
  <h4>마우스의 휠을 돌려보세요</h4><hr>
  <img id="largerImage" src="/static/photo5.jpg" width="320" height="210">
  <script>
    const i = document.getElementById("largerImage");
    document.addEventListener('wheel', (e) => {
      if (e.deltaY < 0) {
        i.width *= 1.1;       i.height *= 1.1;
      } else {
        i.width /= 1.1;       i.height /= 1.1;
      }
    });
  </script>
</body>
</html>
```

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1.6 예제6

```html
<!DOCTYPE html>
<html>
<head>
  <meta charset="UTF-8">   <title>예제6</title>
  <style>
    body { text-align: center; }
    #inputField {       margin: 50px;       padding: 10px;
      font-size: 16px;      outline: none;      border: 2px solid #3498db;     }
    #inputField:focus { border: 2px dotted #e74c3c; }
  </style>
</head>
<body>
  <input type="text" id="inputField" placeholder="-_-">
  <script>
    const box = document.getElementById("inputField");

    box.addEventListener("focus", () => { box.placeholder = "^~^";  });
    box.addEventListener("blur", () => {  box.placeholder = "-_-";  });

  </script>
</body>
</html>
```

1.7 예제7 (1)

```html
<!DOCTYPE html><html>
<head>
  <meta charset="UTF-8">
  <title>예제7</title>
  <link rel="stylesheet" href="style.css">
  <style>
    body, form { text-align: center; }
    #result { color: #933; }
  </style>
</head>
<body>
  <div>
    <form id="myForm">
      <label for="messageBox">입력하세요:</label>
      <input type="text" id="messageBox" name="mname"><br>
      <button type="submit">Submit</button>
      <button type="reset">Reset</button>
    </form>
  </div><hr>

  <div id="result"></div>
```
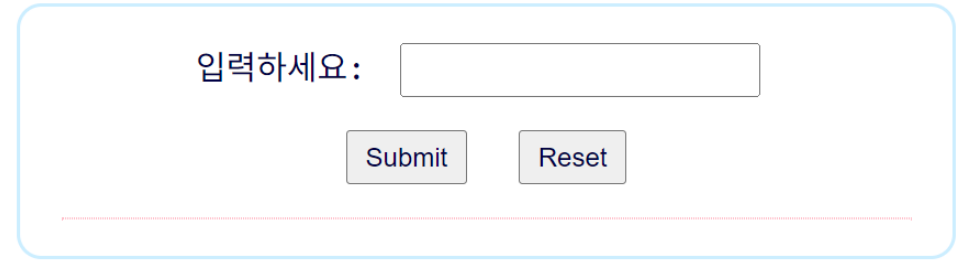
입력하세요: _____

Submit   Reset

1.7 예제7 (2)

```
<script>
    const f = document.getElementById("myForm");
    const dr = document.getElementById("result");

    f.addEventListener("submit", (e) => {
      e.preventDefault();         // 객체의 기본 동작을 막음
      dr.innerText = "You typed: " +  document.getElementById("messageBox").value;
    });

    f.addEventListener("reset", () => {
      dr.innerText = "Form reset!";
    });

  </script>

</body>
</html>
```

style.css

```css
body, textarea, table, td {
  font-family: consolas;
  font-size: 20px;
  color: #004;
  padding: 12px 25px;
  border: 2px solid #cef;
  border-radius: 15px;
  margin: 10px;
}

input, select, button {
  font-size: 16px;
  color: #004;
  padding: 5px 10px;
  margin: 10px;
}

hr {
    border: 1px dotted pink;
}
```

1.8 예제8 (1)

```html
<!DOCTYPE html>
<html>
<head>
  <meta charset="UTF-8">
  <title>예제8</title>
  <link rel="stylesheet" href="style.css">
  <style>
    body, form { text-align: center; }
   #result { color: #933; }
  </style>
</head>
<body>
  <div>
    <label for="selectBox">좋아하는 과일:</label>
    <select id="selectBox">
      <option>==선택==
      <option>사과
      <option>수박
      <option>포도
   </select>
  </div>
  <hr>
```

좋아하는 과일: ==선택== ⌄

1.8 예제8 (2)

```html
 <div id="result"></div>

<script>
    let s = document.getElementById("selectBox");
    let r = document.getElementById("result");

    s.addEventListener("change", changeFruits);

    function changeFruits() {
      const idx = s.selectedIndex;
      const fruit = s.options[idx].value;
      r.innerText = "맛있는 " + fruit + "!!";
    }

</script>

</body>
</html>
```

1.9 예제9

```html
<!DOCTYPE html>
<html><head>
  <meta charset="UTF-8">   <title>예제9</title>
</head>
<body>
  <h4>좌우 화살표 키를 눌러 보세요</h4><hr>
  <img id="man" src="/static/photo7.jpg">
  <script>
    const i = document.getElementById("man");
    let x = 0;
    document.addEventListener("keydown", (e) => {
      if(e.key == "ArrowLeft") {
        x -= 10;
        if ( x < 0 ) x = 0;
      }
      else if(e.key == "ArrowRight") {
        x += 10;
        if ( x > 450 ) x = 450;
      }
      i.style.transform = `translateX(${x}px)`;
    });
  </script>
</body></html>
```

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