

Pemrograman Web

Pertemuan 5



JAVASCRIPT

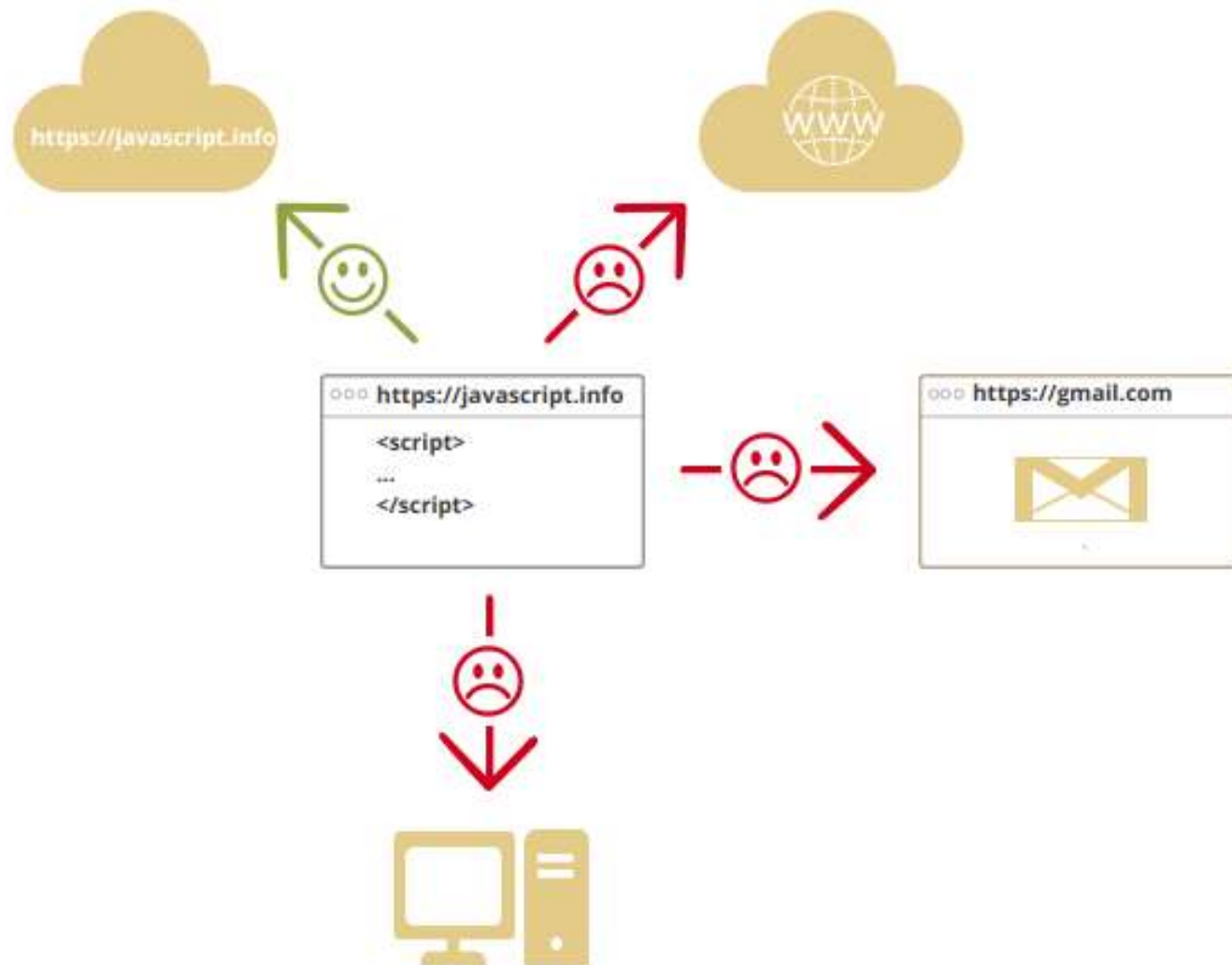
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WHAT

- * bahasa scripting yang **awalnya** dirancang untuk berjalan di client
- * tapi, sekarang bisa berjalan di sisi Server, IoT, Desktop, Mobile dll
- * disupport oleh semua major web browser, dan secara default sudah dienable
- * membuat web lebih interaktif/dinamis

ex :

- Menyisipkan elemen HTML baru di suatu halaman, mengubah konten yang ada, memodifikasi style
- bereaksi terhadap aksi dari user (mouse click, pergerakan kurson, key pres, dll)
- mengirimkan request ke server, mendownload dan upload file (AJAX)
- dll



!= JAVA

- ❖ interpreted, not compiled
- ❖ more relaxed syntax and rules
 - ✓ fewer and "looser" data types
 - ✓ variables don't need to be declared
 - ✓ errors often silent (few exceptions)
- ❖ key construct is the function rather than the class

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WHY

- * user experiences yang lebih cepat

- * web lebih interaktif

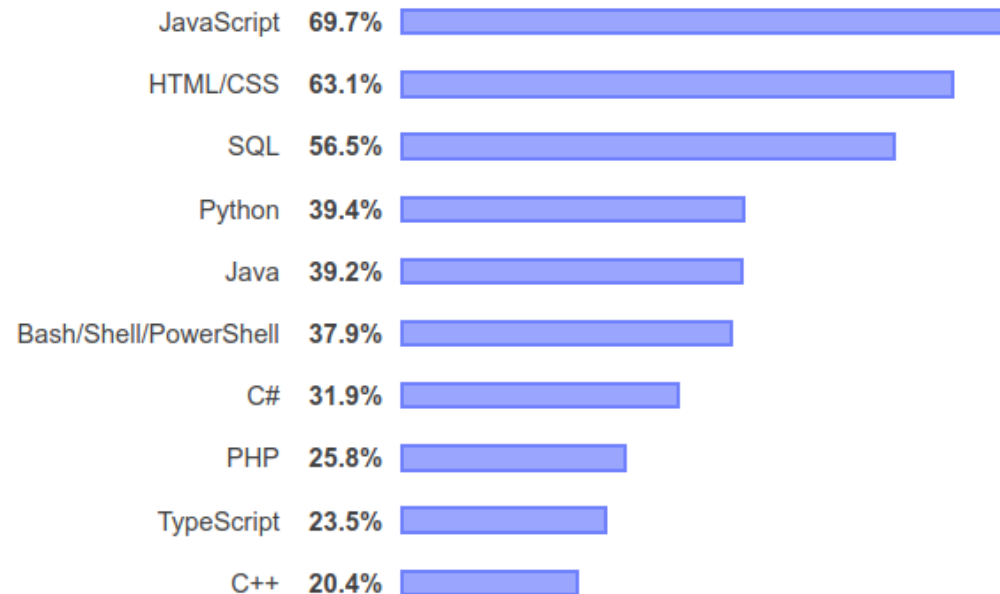


Most Popular Technologies

Programming, Scripting, and Markup Languages

All Respondents

Professional Developers



<https://insights.stackoverflow.com/survey/2019>

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WHEN

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WHO

front end developer

HTML + CSS + JavaScript

framework CSS + framework JavaScript

API (REST+RESTFul)

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WHERE

diletakkan di antara `<script>` dan `</script>`

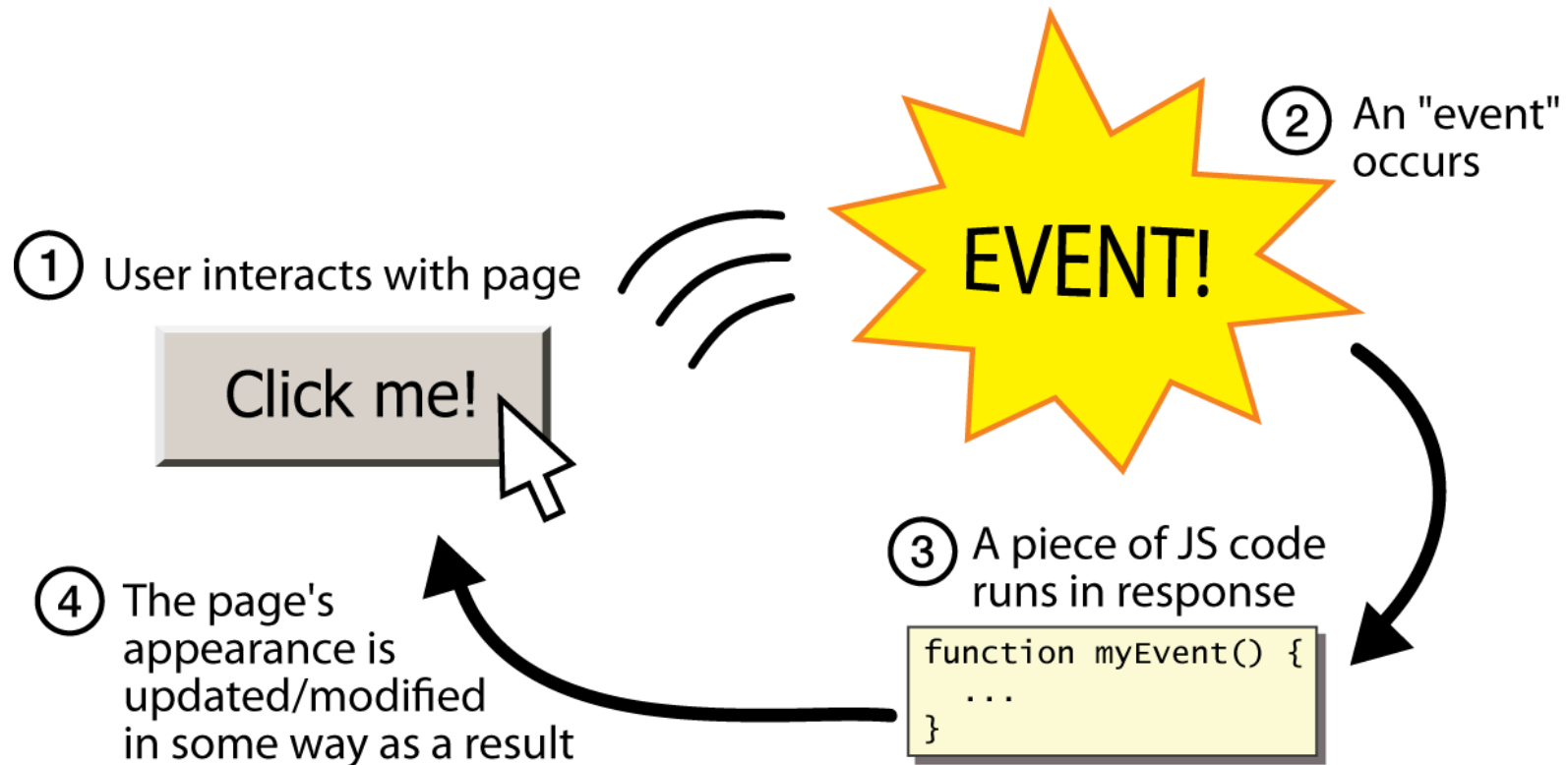
`<head>` dan / atau `<body>`

external file maupun internal file

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HOW

Event-driven programming



EVENT

- *onsubmit* akan dijalankan ketika submit diklik
- *onclick* akan dijalankan ketika tombol diklik
- *onreset* akan dijalankan ketika reset diklik
- *onload* akan dijalankan ketika page sudah terload semua
- *onmouseover*
- *onmouseout*
- *onfocus*
- *onblur*
- *onchange*
- *dll*

JS

```
<script src="filename" type="text/javascript"></script>
```

```
function namaFungsi(){  
    statement ;  
    ...  
    statement ;  
}
```

```
function myFunction(){  
    alert("Hallo!");  
    alert("apa kabar?");  
}
```

Event Handler

```
<element event ="namaFungsiJS();">...
```

```
<button onclick="myFunction();">Click me!</button>
```

Accessing elements:

`document.getElementById`

```
<button onclick="changeText();">Click me!</button>  
<div id="output">replace me</div>  
<input id="textbox" type="text" />
```

```
function changeText() {  
    var div= document.getElementById("output") ;  
    var textBox = document.getElementById("textbox") ;  
    textBox.style.color = "red";  
}
```

mengganti teks dan styling teks didalam div ?

Variable dalam JS

```
var name = expression;
```

- * nama variabel case sensitive
- * saat deklarasi variabel, tidak menyebutkan **tipe** variabel

Type data dalam JS



Primitive Data Types

- Number
- String
- Boolean (True, False)



Composite Data Types

- Arrays
- Objects

implicit data type



If you have an expression which combines two numbers, it will evaluate to a number



If you have an expression which combines a string and a number, it will evaluate to a string

implicit data type

var x = 4;

Ans = x + y;

Ans => 15

var y = 11;

Ans = z + x;

Ans => cat4

var z = "cat";

Ans = x + q;

Ans => 417

var q = "17";

Logical operators

- `> < >= <= && || ! == != === !==`
- most logical operators automatically convert types:
 - `5 < "7" is true`
 - `42 == 42.0 is true`
 - `"5.0" == 5 is true`
- `===` and `!==`
 - `"5.0" === 5 is false`

if/else statement (same as Java)

```
if (condition) {  
    statements;  
} else if (condition) {  
    statements;  
} else {  
    statements;  
}
```

- identical structure to Java's if/else statement

for loop (same as Java)

```
var sum = 0;  
for (var i = 0; i < 100; i++) {  
    sum = sum + i;  
}
```

```
var s1 = "hello";  
var s2 = "";  
for (var i = 0; i < s.length; i++) {  
    s2 += s.charAt(i) + s.charAt(i);  
}  
// s2 stores "hheelllloo"
```

while loops (same as Java)

```
while (condition) {  
    statements;  
}
```

```
do {  
    statements;  
} while (condition);
```

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TUGAS

- user melakukan operasi matematis, yaitu mencari max antara 3 angka.
 - buat satu form yang berisi 3 inputan
 - buat fungsi JS
 - grab nilai dari elemen inputan
 - lakukan operasi matematis
 - tampilkan output di halaman yang sama