var, let, const 차이점

[index01.html]

```
var smu = "Semyung University";
console.log(smu);

var smu = "School of ICT";                          // (1)
console.log(smu);
```

[결과]

```
PS E:\Years\2022\JSTest\dev_dignity\examples\js> node .\var-let-const.js
Semyung University
School of ICT
```

[index02.html]

```
let smu = "Semyung University";                     // (2)
console.log(smu);

let smu = "School of ICT"; // error 발생
console.log(smu);
```

[결과]

```
PS E:\Years\2022\JSTest\dev_dignity\examples\js> node .\var-let-const.js
E:\Years\2022\JSTest\dev_dignity\examples\js\var-let-const.js:10
let smu = "School of ICT"; // error 발생
    ^

SyntaxError: Identifier 'smu' has already been declared
    at Object.compileFunction (node:vm:352:18)
    at wrapSafe (node:internal/modules/cjs/loader:1031:15)
    at Module._compile (node:internal/modules/cjs/loader:1065:27)
    at Object.Module._extensions..js (node:internal/modules/cjs/loader:1153:10)
    at Module.load (node:internal/modules/cjs/loader:981:32)
    at Function.Module._load (node:internal/modules/cjs/loader:822:12)
    at Function.executeUserEntryPoint [as runMain] (node:internal/modules/run_main:81:12)
```

[index03.html]

```javascript
const smu = "Semyung University";
console.log(smu);

const smu = "School of ICT";                    // (3)
console.log(smu);
```

[결과]

```
PS E:\Years\2022\JSTest\dev_dignity\examples\js> node .\var-let-const.js
E:\Years\2022\JSTest\dev_dignity\examples\js\var-let-const.js:13
cnst smu = "Semyung University";
     ^^^

SyntaxError: Unexpected identifier
    at Object.compileFunction (node:vm:352:18)
    at wrapSafe (node:internal/modules/cjs/loader:1031:15)
    at Module._compile (node:internal/modules/cjs/loader:1065:27)
    at Object.Module._extensions..js (node:internal/modules/cjs/loader:1153:10)
    at Module.load (node:internal/modules/cjs/loader:981:32)
    at Function.Module._load (node:internal/modules/cjs/loader:822:12)
    at Function.executeUserEntryPoint [as runMain] (node:internal/modules/run_main:81:12)
    at node:internal/main/run_main_module:17:47
```

동일한 변수로 재선언(3)은 불가능 하지만, 재할당(4)은 가능하다.

[index04.html]

```javascript
let smu = "Semyung University";
console.log(smu);

smu = "School of ICT";                          // (4)
console.log(smu);
```

[결과]

```
PS E:\Years\2022\JSTest\dev_dignity\examples\js> node .\var-let-const.js
Semyung University
School of ICT
```

그러나 const는 중복된 변수명으로 선언도 불가능하지만, 할당 조차도 불가능하다.

let은 동일한 변수명으로 선언은 불가능하지만 재할당은 가능하였다.
const의 경우에는 재할당 조차 불가능하다.

[index05.html]
```
const smu = "Semyung University";
console.log(smu);

const smu = "School of ICT";                    // (5) Error 발생
console.log(smu);
```

[결과]
```
PS E:\Years\2022\JSTest\dev_dignity\examples\js> node .\var-let-const.js
E:\Years\2022\JSTest\dev_dignity\examples\js\var-let-const.js:16
const smu = "School of ICT";
      ^

SyntaxError: Identifier 'smu' has already been declared
    at Object.compileFunction (node:vm:352:18)
    at wrapSafe (node:internal/modules/cjs/loader:1031:15)
    at Module._compile (node:internal/modules/cjs/loader:1065:27)
    at Object.Module._extensions..js (node:internal/modules/cjs/loader:1153:10)
    at Module.load (node:internal/modules/cjs/loader:981:32)
    at Function.Module._load (node:internal/modules/cjs/loader:822:12)
    at Function.executeUserEntryPoint [as runMain] (node:internal/modules/run_main:81:12)
    at node:internal/main/run_main_module:17:47
```

[index06.html]
```
const smu = "Semyung University";
console.log(smu);

smu = "School of ICT";                          // (6) Error 발생
console.log(smu);
```

[결과]
```
PS E:\Years\2022\JSTest\dev_dignity\examples\js> node .\var-let-const.js
Semyung University
E:\Years\2022\JSTest\dev_dignity\examples\js\var-let-const.js:16
smu = "School of ICT";
    ^

TypeError: Assignment to constant variable.
    at Object.<anonymous> (E:\Years\2022\JSTest\dev_dignity\examples\js\var-let-const.js:16:5)
    at Module._compile (node:internal/modules/cjs/loader:1101:14)
```

```
    at Object.Module._extensions..js (node:internal/modules/cjs/loader:1153:10)
    at Module.load (node:internal/modules/cjs/loader:981:32)
    at Function.Module._load (node:internal/modules/cjs/loader:822:12)
    at Function.executeUserEntryPoint [as runMain] (node:internal/modules/run_main:81:12)
    at node:internal/main/run_main_module:17:47
```

이제 개발할 때 JavaScript에서 var를 사용하지 않도록 한다.

let과 const를 이용하는 것이 좋지만 let은 한번 할당된 변수값을 재이용하여 다른 값으로 할당할 일이
발생하였을 때 사용한다.
const는 변수에 이미 할당한 값을 보호하고 싶을 때 사용하도록 한다.