

Computer

Gwangyu Lee

Token

Token

1 + 1 ;

Token

1 + 1 ;

1+1

2+2

Token

if

Token

i f

p o l y

Expression

Expression

```
int x = 7;
```

x

Expression

`int x = 7;`

`x + 1`

Expression

```
int x = 7;
```

```
x < 10
```

Expression

```
int x = 7;
```

```
x > 10
```

Statement

Statement

```
int x = 7;
```

```
var x = 7
```

Literal

Literal

```
int x = 7;
```

Literal

```
int x2 = 7;
```


Identifier

Identifier

```
int x = 7;
```

Identifier

```
int x = 7;
```

```
int y = 8;
```

Identifier

```
int myX = 7;
```

```
int MyName = 8;
```

```
int _Z = 9;
```

Keyword

Keyword

```
int x = 7;
```

Keyword

```
int x = 7;
```

```
var x = 7
```

Keyword

```
int x = 7;
```

```
int int = 7;
```


Compile

Compile

{code} Compile \longrightarrow 0101001

Compile

Warning

Error

Compile

```
int x = 7;
```

```
int x = 7;
```

```
x = 8;
```

```
print(x); // 8
```

```
X = 9;
```

```
Print(x); // 9
```

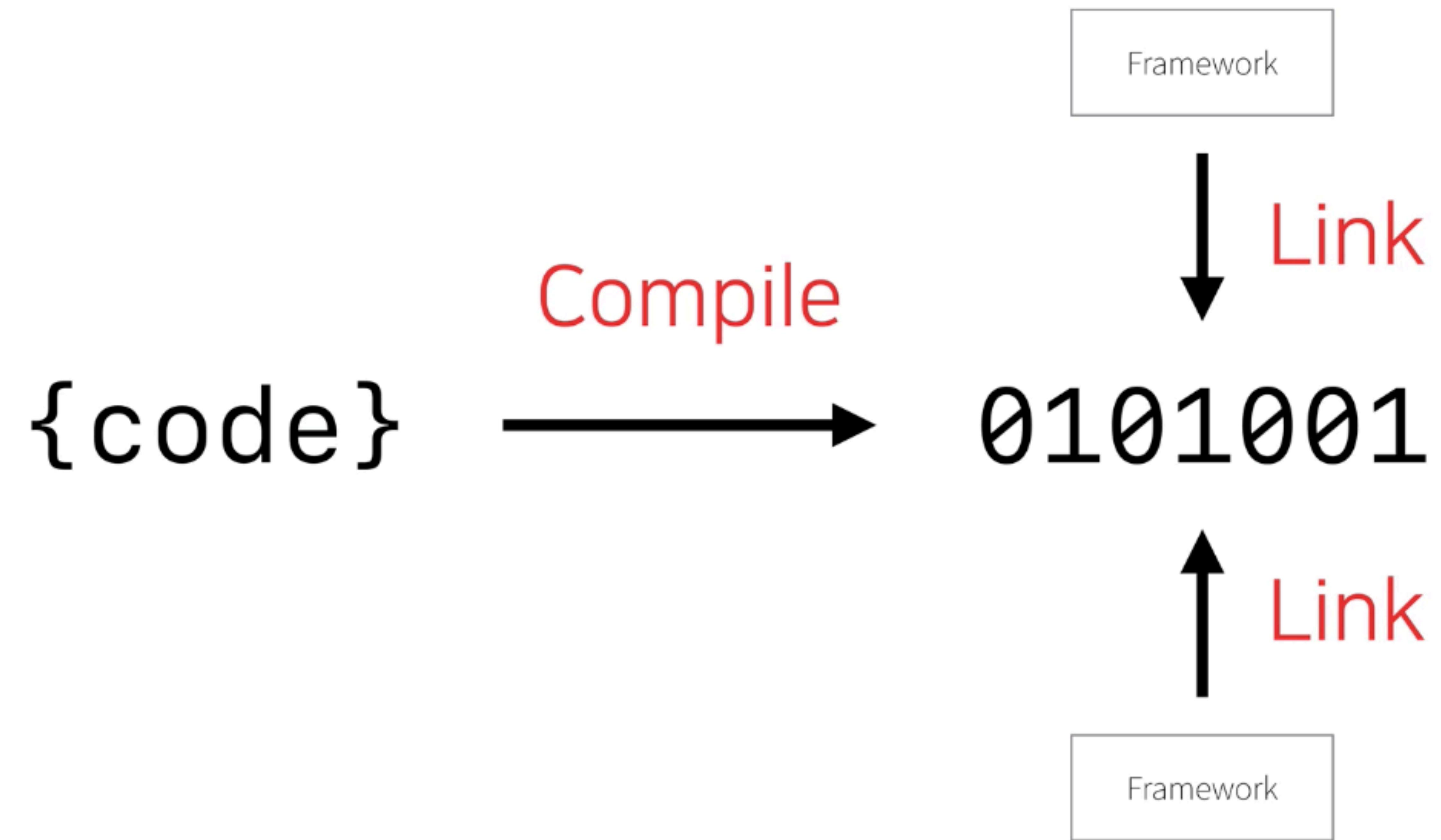
Compile

```
int int = 7;
```

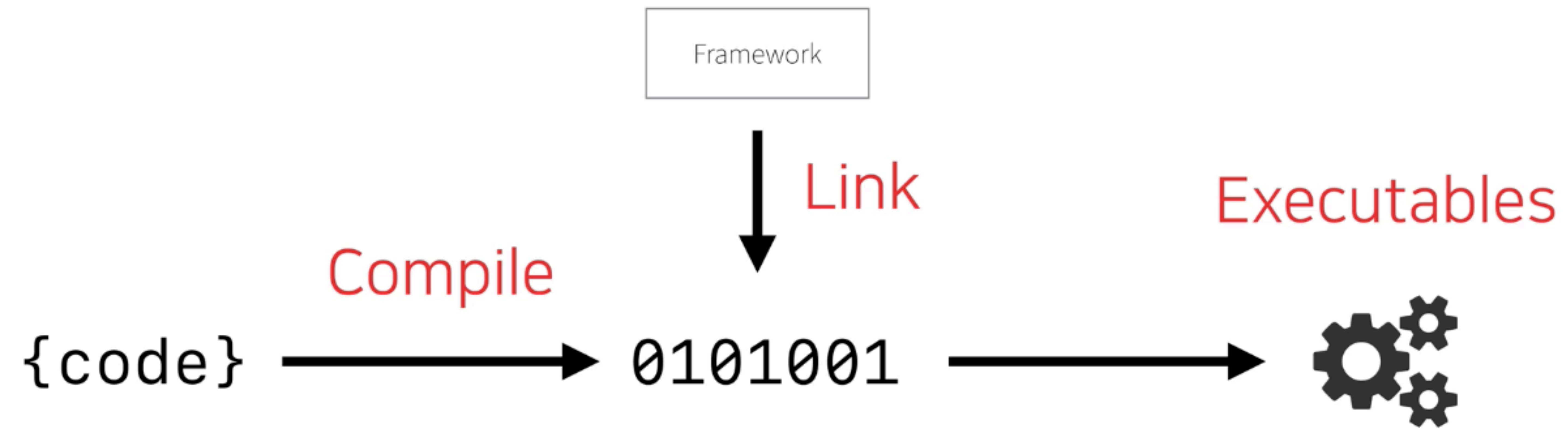
```
int 7x = 7;
```

Link

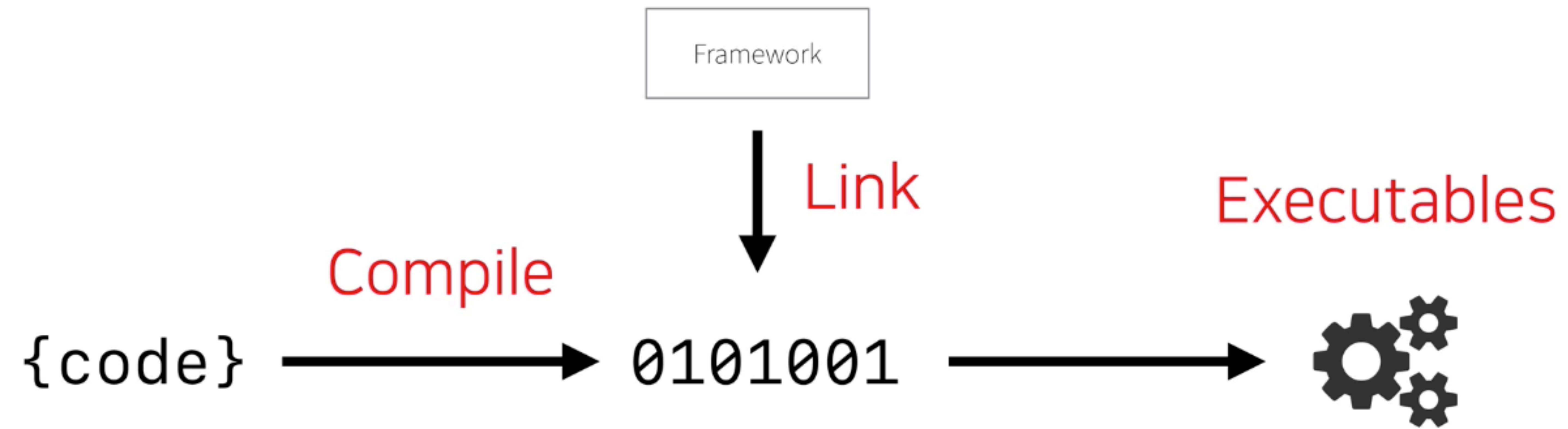
Link



Link



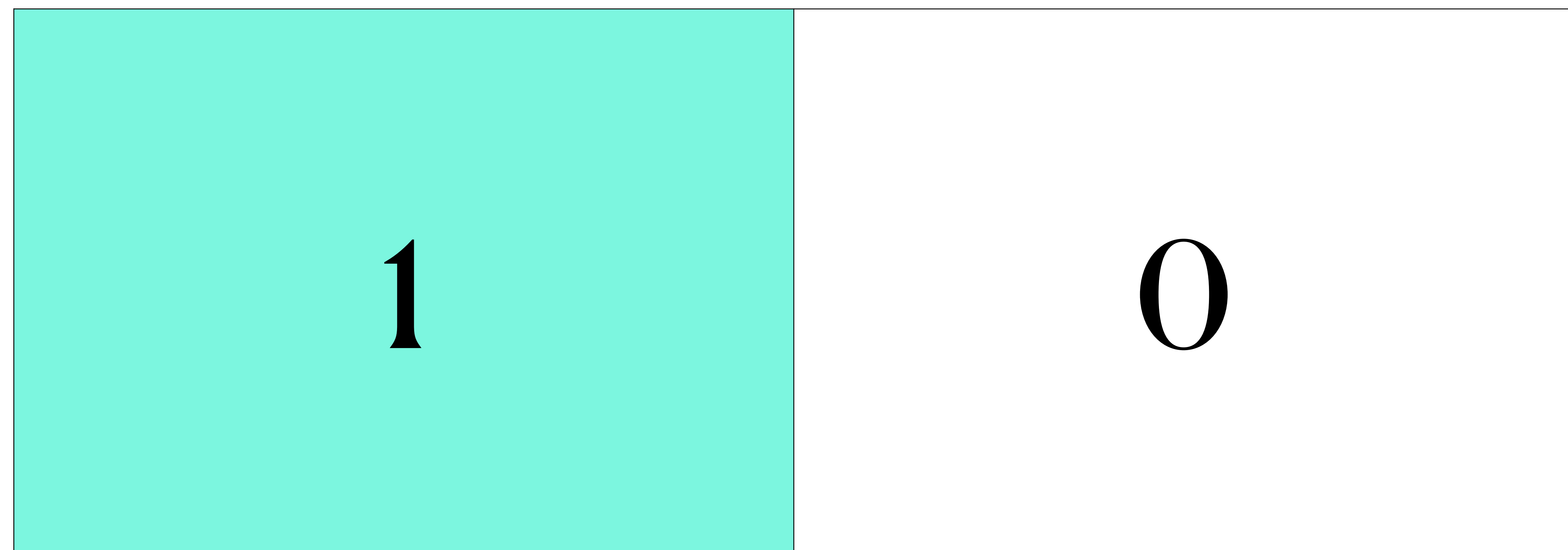
Link



Build

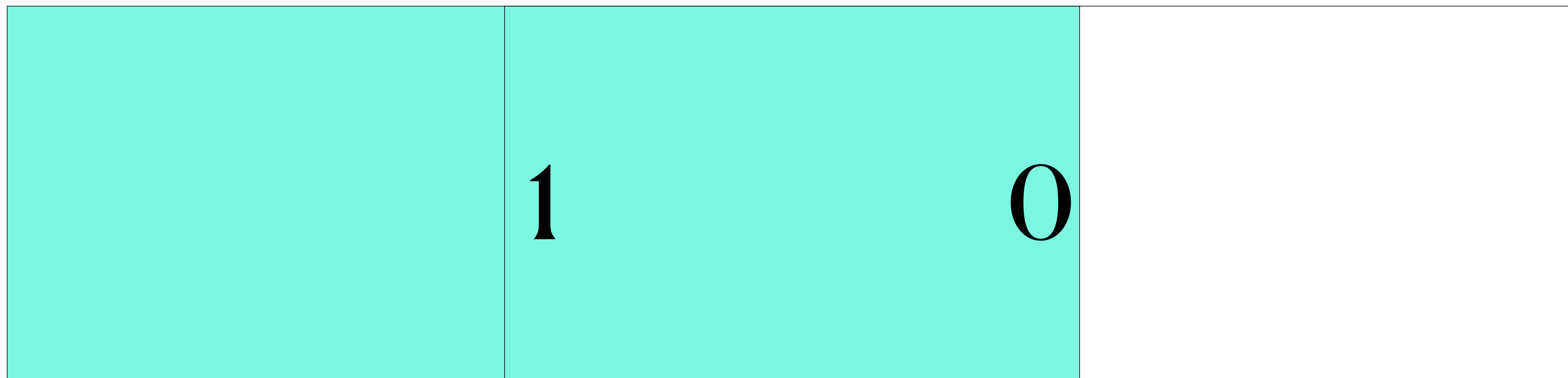
Memory

Memory



Bit

Bit



Byte

1	0	1	0	0	0	1	0
---	---	---	---	---	---	---	---

Byte

1byte	8bit
1kilobyte	1024byte
1megabyte	1024kB
1gigabyte	1024MB
1terabyte	1024GB
1petabyte	1024TB
1exabyte	1024PB
1zettabyte	1024EB
1yottabyte	1024ZB

Byte

0	0	0	1
---	---	---	---

0	1	0	0
---	---	---	---

0	0	0	1
---	---	---	---

1kilobyte Memory

1023	1byte
1022	1byte
1021	1byte
1020	1byte
~	~
3	1byte
2	1byte
1	1byte
0	1byte

Memory

$$\begin{aligned} 1\text{byte} \times 2^{32} &= 4,294,967,296 \text{ byte} \\ &= 4\text{GB} \end{aligned}$$

Memory

$$1\text{byte} \times 2^{64} = 16\text{EB}$$