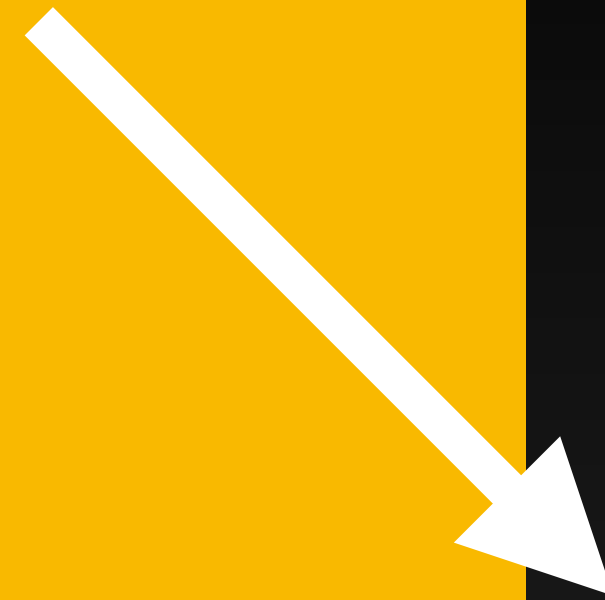


```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

載入程式 main() 進入
Call Stack



main()

Event Loop



Call Stack

Web APIs



Terminal



Task Queue

```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

執行 line 1，放入 Call Stack

console.log(1)
main()

Event Loop



Call Stack

Web APIs

Terminal

Task Queue

```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

console.log(1) 完成，從
Call Stack pop，
Terminal 印出 1

main()

Event Loop



Call Stack

Web APIs

1

Terminal

Task Queue

```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

執行 line 2，放入 Call Stack

setTimeout(cb, 0)
main()

Event Loop



Call Stack

Web APIs

1

Terminal

Task Queue

```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

發出要求，要瀏覽器設置 0 ms 的倒數計時器，時間到了，就呼叫第一個參數的 arrow function

main()

setTimeout(cb, 0)

Event Loop

Call Stack

Web APIs

1

Terminal

Task Queue

```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

倒數完成，將第一個參數的 arrow function 放入 Task Queue

main()

Event Loop



Call Stack

Web APIs

() => {console.log(2)}

1

Terminal

Task Queue


```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

Event Loop 的機制是等到 Call Stack 空了之後，才會讓 Task Queue 的東西放入 Call Stack。因為 Call Stack 還有東西，所以 Task Queue 裡面的東西要繼續等待

main()

Event Loop 

Call Stack

Web APIs

1

Terminal

() => {console.log(2)}

Task Queue

```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

執行 line 5，放入 Call Stack

console.log(3)
main()

Event Loop



Call Stack

Web APIs

1

Terminal

() => {console.log(2)}

Task Queue


```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

console.log(3) 完成，從
Call Stack pop，
Terminal 印出 3

main()

Event Loop



Call Stack

Web APIs

() => {console.log(2)}

1
3

Terminal

Task Queue

```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

執行 line 6，放入 Call Stack

setTimeout(cb, 0)
main()

Event Loop



Call Stack

Web APIs

1
3

Terminal

() => {console.log(2)}

Task Queue

```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

發出要求，要瀏覽器設置 0 ms 的倒數計時器，時間到了，就呼叫第一個參數的 arrow function

main()

setTimeout(cb, 0)

Event Loop

Call Stack

Web APIs

1
3

Terminal

() => {console.log(2)}

Task Queue

```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

倒數完成，將第一個參數的 arrow function 放入 Task Queue

main()

Event Loop



Call Stack

Web APIs

1
3

Terminal

() => {console.log(2)}

() => {console.log(4)}


Task Queue

```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

因為 Call Stack 還有東西，所以 Task Queue 裡面的東西要繼續等待

main()

Event Loop 

Call Stack

Web APIs

1
3

Terminal

() => {console.log(2)}

() => {console.log(4)}

Task Queue

```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

執行 line 9，放入 Call Stack

console.log(5)
main()

Event Loop



Call Stack

Web APIs

1
3

Terminal

() => {console.log(2)}

() => {console.log(4)}

Task Queue


```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

console.log(5) 完成，從
Call Stack pop，
Terminal 印出5

main()

Event Loop



Call Stack

Web APIs

() => {console.log(2)}

() => {console.log(4)}

1
3
5

Terminal

Task Queue

```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

main()，完成 pop

Event Loop 

Call Stack

Web APIs

1
3
5

Terminal

() => {console.log(2)}

() => {console.log(4)}

Task Queue

```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

Call Stack 空了，因為
Event Loop 是先進先
出，所以放行第一個進
來 Task Queue 的東西去
Call Stack

```
() => {
  console.log(2)
}
```

Event Loop 

Call Stack

Web APIs

1
3
5

Terminal

```
() => {console.log(4)}
```

Task Queue

```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

印出 2，完成，從 Call
Stack pop

Event Loop 

Call Stack

Web APIs

1 2
3
5

Terminal

() => {console.log(4)}

Task Queue

```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

Call Stack 空了，所以
Event Loop 放行 Task
Queue 的東西進來

```
() => {  
  console.log(4)  
}
```

Event Loop 

Call Stack

Web APIs

```
1      2
3
5
```

Terminal

Task Queue

```
console.log(1)
setTimeout(() => {
  console.log(2)
}, 0)
console.log(3)
setTimeout(() => {
  console.log(4)
}, 0)
console.log(5)
```

步驟解說

印出 4 ，完成，從 Call
Stack pop

Event Loop



Call Stack

Web APIs

1 2
3 4
5

Terminal

Task Queue