

2311104023  
Yoga Eka Pratama  
SE-07-01

## Tugas Pendahuluan

```
O6_Praktikum > TP_2311104023 > JS tp.mjs > SayaTubeVideo > constructor
1  import crypto from "crypto";
2
3  class SayaTubeVideo {
4      constructor(title) {
5          if (!title || title.length > 100) {
6              throw new Error("Judul video tidak valid (null atau melebihi 100 karakter).");
7          }
8
9          this.id = crypto.randomInt(10000, 99999);
10         this.title = title;
11         this.playCount = 0;
12     }
13
14     increasePlayCount(count) {
15         if (typeof count !== 'number' || count <= 0 || count > 10000000) {
16             throw new Error("Jumlah play count tidak valid (harus angka positif maksimal 10.000.000).");
17         }
18
19         if (this.playCount + count > Number.MAX_SAFE_INTEGER) {
20             throw new Error("Play count melebihi batas maksimum integer aman.");
21         }
22
23         this.playCount += count;
24     }
25
26     printVideoDetails() {
27         console.log(`ID: ${this.id}, Title: ${this.title}, PlayCount: ${this.playCount}`);
28     }
29 }
30
31 try {
32     const video = new SayaTubeVideo("Tutorial Design By Contract - Yoga Eka Pratama");
33     video.increasePlayCount(5000000);
34     video.printVideoDetails();
35 } catch (error) {
36     console.error("Error:", error.message);
37 }
38
39
40
```

Penjelasan :

### 1. Constructor SayaTubeVideo:

- Membuat objek SayaTubeVideo dengan properti:
  - id: Angka acak sepanjang 5 digit.
  - title: Judul video, validasi panjang maksimal 100 karakter dan tidak null.
  - playCount: Default 0.

### 2. Method increasePlayCount:

- Menambahkan nilai playCount dengan validasi:
  - Nilai harus angka positif maksimal 10 juta.
  - Tidak menyebabkan overflow melebihi batas maksimum integer aman.

### 3. Method printVideoDetails:

- Menampilkan detail video berupa id, title, dan playCount.

#### 4. Implementasi Design by Contract:

- Validasi kondisi input (preconditions).
- Penanganan exception untuk menjaga program tetap berjalan meskipun terjadi kesalahan input.

Output :

```
macairm1@192 TP_2311104023 % node tp.mjs  
ID: 24626, Title: Tutorial Design By Contract - Yoga Eka Pratama, PlayCount: 5000000
```