

Contoh dg logika untuk konversi bilangan desimal ke bilangan biner.

1. Bilangan dimasukkan oleh user dilakukan perintah 'div'

Handwritten calculation showing the division of 6 by 2. The number 6 is written in red, and 2 is written in blue. The quotient 3 is written in blue. A yellow arrow points from the 6 to the 3, and another yellow arrow points from the 3 to the 0 in the remainder. The result is 3, which is written in yellow.

Handwritten calculation showing the division of 4 by 2. The number 4 is written in red, and 2 is written in blue. The quotient 2 is written in blue. A yellow arrow points from the 4 to the 2, and another yellow arrow points from the 2 to the 0 in the remainder. The result is 2, which is written in yellow.

```
In [11]: 1 bilangan=int(input('masukkan bilangan = '))
        2 hasilDiv=bilangan
        3 while hasilDiv!=0:
        4     hasilDiv=hasilDiv//2
        5     print(hasilDiv)

masukkan bilangan = 6
3
1
0
```

```
In [12]: 1 bilangan=int(input('masukkan bilangan = '))
        2 hasilDiv=bilangan
        3 while hasilDiv!=0:
        4     hasilDiv=hasilDiv//2
        5     print(hasilDiv)

masukkan bilangan = 4
2
1
0
```

Stop condition bias diletakan di deklarasi 'while'

Handwritten calculation showing the division of 10 by 2. The number 10 is written in blue, and 2 is written in blue. The quotient 5 is written in blue. A red checkmark is next to the 5. The result is 5, which is written in blue.

```
In [13]: 1 bilangan=int(input('masukkan bilangan = '))
        2 hasilDiv=bilangan
        3 while hasilDiv!=0:
        4     hasilDiv=hasilDiv//2
        5     print(hasilDiv)

masukkan bilangan = 10
5
2
1
0
```

2. Bilangan juga dilakukan perintah 'mod'. Catatan: yang di 'mod' adalah hasil bagi (div)

Handwritten calculation showing the division of 10 by 2. The number 10 is written in blue, and 2 is written in blue. The quotient 5 is written in blue. A red checkmark is next to the 5. The result is 5, which is written in blue.

```
In [15]: M bilangan=int(input('masukkan bilangan = '))
hasilDiv=bilangan
while hasilDiv!=0:
    hasilMod=hasilDiv%2
    hasilDiv=hasilDiv//2
    print(hasilMod)

masukkan bilangan = 6
0
1
1
```

```
In [16]: M bilangan=int(input('masukkan bilangan = '))
hasilDiv=bilangan
while hasilDiv!=0:
    hasilMod=hasilDiv%2
    hasilDiv=hasilDiv//2
    print(hasilMod)

masukkan bilangan = 4
0
0
1
```

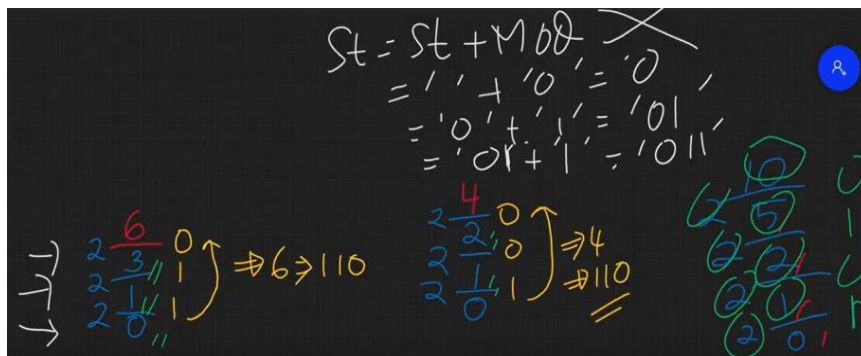
```
In [17]: M bilangan=int(input('masukkan bilangan = '))
hasilDiv=bilangan
while hasilDiv!=0:
    hasilMod=hasilDiv%2
    hasilDiv=hasilDiv//2
    print(hasilMod)

masukkan bilangan = 10
0
1
0
1
```

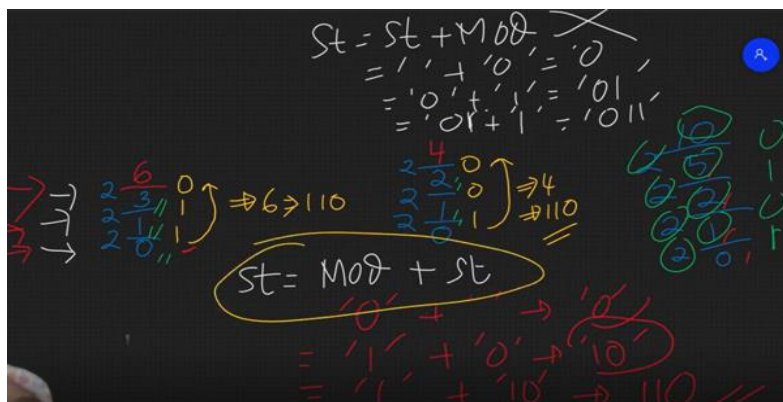
### 3. Membaca hasil konversi desimal ke biner

Bagaimana dibaca kebalik dari bawah ke atas?

Kemungkinan 1:



Kemungkinan 2:



```
In [18]: M bilangan=int(input('masukkan bilangan = '))
hasilDiv=bilangan
strBiner=''
while hasilDiv!=0:
    hasilMod=hasilDiv%2
    hasilDiv=hasilDiv//2
    #strBiner=strBiner+str(hasilMod)
    strBiner=str(hasilMod)+strBiner
    print(hasilMod)
print(bilangan,':',strBiner)
```

```
masukkan bilangan = 6
0
1
1
6 : 110
```

```
In [20]: M bilangan=int(input('masukkan bilangan = '))
hasilDiv=bilangan
strBiner=''
while hasilDiv!=0:
    hasilMod=hasilDiv%2
    hasilDiv=hasilDiv//2
    #strBiner=strBiner+str(hasilMod)
    strBiner=str(hasilMod)+strBiner
    print(hasilMod)
print(bilangan,':',strBiner)
```

```
masukkan bilangan = 10
0
1
0
1
10 : 1010
```