$$\frac{1}{b}$$

$$(2017)_{10} \longrightarrow (?)_2$$

```
2017 | 2
-2016 | 1008 | 2
   1     -1008 | 504 | 2
          0     -504 | 252 | 2
                  0    -252
                        0
```

```
126 | 2
-126 | 63 | 2
  0    -62 | 31 | 2
   1    -30 | 15 | 2
         1   -14 | 7
              1   -6
                   1
```

```
3 | 2
-2 | 1
 1
```

$$(2017)_{10} = \boxed{(11111100001)_2}$$