1-dimensional parity generate and check

A **parity bit**, is a bit added to a string of binary code. The parity bit ensures that the total number of 1-bits in the string is even or odd, which can be used for error detection. In this problem, **if the input data is 7 bits**, you need to generate **even parity bit** for the input data, which means the input data and the parity bit together should contain even number of 1-bits, output the generated parity bit. **If the input data is 8 bits**, you need to check weather it contains **even 1-bits**, output 1 for true and 0 for false.

example 1:

input:

```
1010001
```

output:

```
1
```

explain: the input `1010001` 7-bit data contains 3 1-bits, you should generate the even parity bit 1

example 2:

input:

```
1101001
```

output:

```
0
```

explain: the input `1101001` 7-bit data contains 4 1-bits, you should generate the even parity bit 0

example 3:

input:

```
11010010
```

output:

```
1
```

explain: the input `11010010` 8-bit data contains 4 1-bits, output 1 for successful check.

example 4:

input:

```
10010010
```

output:

```
0
```

explain: the input `10010010` 8-bit data contains 3 1-bits, output 0 for failed check.