

Folgende Funktionen seien wie in der Vorlesung definiert:

```
// POST: leading whitespace characters are extracted
//       from input, and the first non-whitespace character
//       input returned (0 if there input no such character)
char lookahead (std::istream& input){
    input >> std::ws;      // skip whitespaces
    if (input.eof())
        return 0;        // end of stream
    else
        return input.peek(); // next character in input
}

// POST: if next character in input input ch, consume c and return
//       true, otherwise return false
bool consume (std::istream& input, char c){
    if (lookahead (input) == c) {
        input >> c;
        return true;
    } else
        return false;
}
```

```
bool A(std::istream& in){
    while (consume(in,'0')){
        if (!A(in))
            return false;
        if (!consume(in,'1'))
            return false;
    }
    return true;
}

int main(){
    std::string s;
    while(std::cin >> s){
        std::stringstream in(s);
        if (A(in) && consume(in,'!'))
            std::cout << "o ";
        else
            std::cout << "x ";
    }
}
```

Was gibt main bei Vorliegen folgender Eingabe aus?

0! 01! 10! 001011! 010101!

1	o	o	x	o	o
2	x	o	x	o	o
3	o	o	x	o	x
4	x	x	x	o	o
5	x	o	x	o	x
6	o	o	o	o	x



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0! 01! 10! 001011! 010101!

1    0 0 X 0 0

2    X 0 X 0 0    ●

3    0 0 X 0 X

4    X X X 0 0

5    X 0 X 0 X

6    0 0 0 0 X