

```
a=1;
```

```
while (a > 0) {
```

```
    block
```

```
    } update a
```

```
do {
```

```
    printf(.....)
```

```
    scanf("%d", &a)
```

```
    if (a > 0)
```

```
        printf(.....);
```

```
} while (a > 0);
```

# Homework 6 - Prime Numbers

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$$n = 64$$

$$\text{sgn} = \text{sgn}(x) \rightarrow \underline{8}$$

Start at 2

loop: 2 to 8  
step of 1

$$64 \% 2 \rightarrow 0$$

$$64 / 2 \rightarrow 32$$

---

$$64 \% 3 \rightarrow 1$$

---

$$64 \% 4 \rightarrow 0$$

$$64 / 4 = 16$$

5, 6, 7

---

$$64 \% 8 \rightarrow 0$$

$$64 / 8 \rightarrow 8$$

is  
64 Not prime

---

7

$$7 \% 2 \rightarrow 1$$

7 is prime

Survival  
strategy

---

11

2, 3

$$\left( \begin{array}{l} 11 \% 2 \neq 0 \\ 11 \% 3 \neq 0 \end{array} \right)$$