# 3.04 DO-WHILE LOOPS

**Unit 3** Control Structures

4/23-4/26/21

# HAPPY FRIDAY!

**Share in the chat:**

Which Spongebob best matches your Friday mood?

# DO NOW

## Waterfall Style!

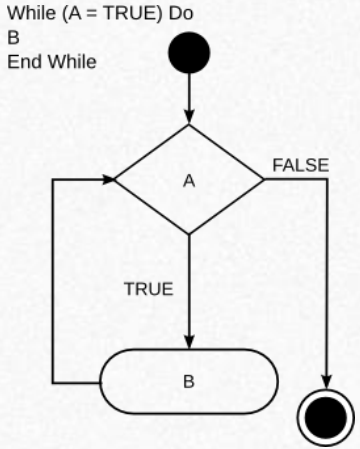
Some people say,
"It's better to ask forgiveness than permission."

**In the chat,** explain why that might be true – or give a situation where it would be better to act first and check in later!

# DO-WHILE LOOPS

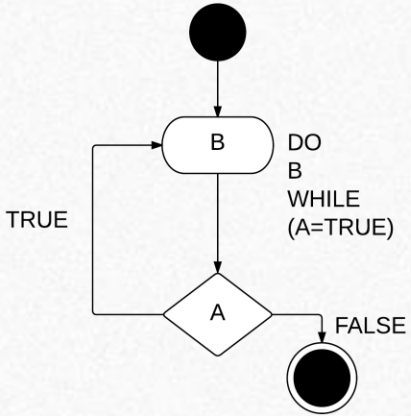
## `while` loops

1. check if a condition is true
2. execute code if condition is true
3. check; if condition still true, rerun code
4. exit loop when condition becomes false




## `do-while` loops

1. execute code
2. check if a condition is true
3. re-run code ONLY if condition is true
4. exit loop when condition becomes false



# DO-WHILE LOOPS

## while loops

```
int x = 100;

while (x<100) {
  Lightshow();
};
```

1. sets x to 100
2. checks if 100 < 100 (false)
3. DOES NOT RUN LIGHTSHOW

## do-while loops

```
int x = 100;

do {
  Lightshow();
} while (x < 100);
```

1. sets x to 100
2. runs Lightshow function
3. checks if 100 < 100 (false)
4. exits the loop

# DO-WHILE LOOPS

```
int x = 0;

do {
  Serial.println(x);   // print variable
  x++;                 // increment x
} while (x < 100);     // check condition
```

```
String destReached = "no";

  do {
    Serial.println("Are we there yet?");
    while(!Serial.available()) {}
    destReached = Serial.readString();
    Serial.println(destReached);
  } while (destReached == "no");

  Serial.println("I'm so happy we're
here!");
```

# DO-WILE LOOPS

# DO-WHILE LOOPS

## GOALS:

- Understand the difference between "while" and "do-while" control structures
- Identify programming situations where a do-while loop would be useful!

## TUTORIAL TASK:

Revisit one of our previous tutorials (sample code OR challenges) and implement a do-while loop.

**Your tutorial or project MUST include a <u>minimum of 2 components</u> (inputs or outputs).**

You may choose to additionally streamline the code using any functions or structures we have learned so far.