## Objectives - Tue 3/22/2022

- Const
- Static
- Linked lists

## const

int const n = 5; // n is a read-only value
n = 7; // X
// "assignment of read-only variable 'a\_n'"

#### **«Type»** CONSt **«NAME»** Const makes whatever *variable* comes after it read-only.

We will expand this into a stronger statement before we're done here.

#### CONST «*TYPE*» ... is equivalent to... «*TYPE*» CONST Rule: You can switch the position of const and a type name that is directly adjacent to const.

## const\*

int const\* a\_n = "; // \*a\_n is read-only const int\* a\_n = "; // \*a\_n is read-only a\_n = &q; // \* \*a\_n = 4; // \* "assignment of read-only location '\*a\_n'"

int\* const a\_n = "; // a\_n is read-only
a\_n = &q; // X "assignment of read-only variable 'a\_n'"
\*a\_n = 4; //

ECE 26400 Advanced C Programming, Spring 2020

This content is protected and may not be shared, uploaded, or distributed.

## const\*\*

int const\*\* a a n = "; // \*\*a a n is read-only const int\*\* a a n; // Same as above

\*a a n = &q; // 🗟

\*\*a a n = 4; // X "assignment of read-only location '\*a n'"

### const\*\*\*

ECE 26400 Advanced C Programming, Spring 2020

This content is protected and may not be shared, uploaded, or distributed.

## const\*\*\*

#### Const makes the variable—including all \* <u>after</u> the const—read-only.

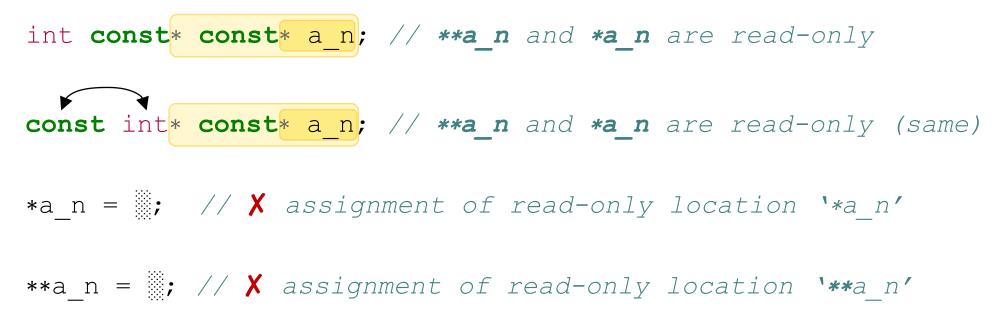
ECE 26400 Advanced C Programming, Spring 2020

This content is protected and may not be shared, uploaded, or distributed.

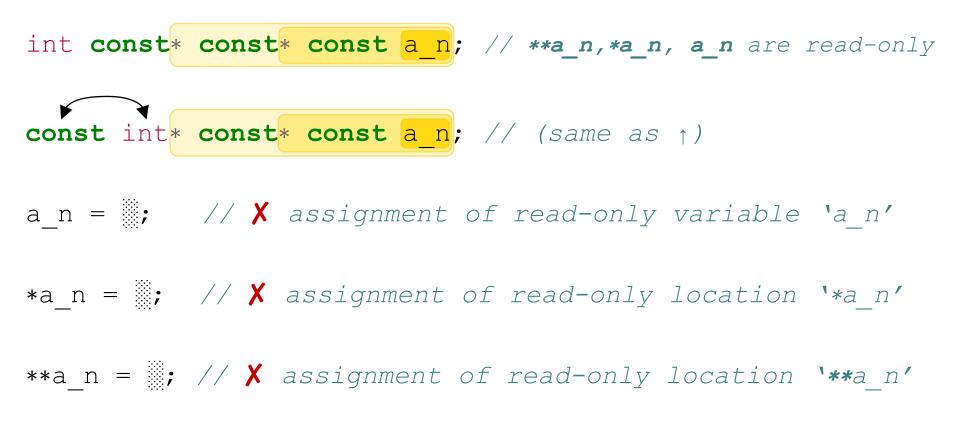
## const\* const

int const \* const a n; // \*a n and a n are read-only const int\* const a n; // \*a\_n and a\_n are read-only (same) a n = (); // X assignment of read-only variable 'a\_n' \*a n = ; // X assignment of read-only location '\*a n'

## const\* const\*



## const\* const\* const



This content is protected and may not be shared, uploaded, or distributed. © 2020 Alexander J. Quinn

## Rules

## Const is a promise you can't break \*.

<sup>\*</sup> Okay, there are tricks, but let's not go there.

# Const makes the variable—including all \* <u>after</u> the const—read-only.

## □ const «Type» ⇔ «Type» const

You can switch the position of const and a type name that is directly adjacent to const.