

Pointers

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Revisiting variables

What a variable actually is?

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Address of a variable

Understanding address-of operator

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A way to store addresses

Introduction to Pointers

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Pointers

```
data_type * pointer_name;
```

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Pointers

Understanding in detail

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Why such syntax?

Why not a simple syntax such as:

```
pointer pointer_name;
```

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Playing with pointers

Dereference operator

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Practice

Write a program to calculate sum of two numbers using pointers.

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Pass by value and Pass by reference

Writing the correct swap function

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Pass by reference (using alias)

Alias names using & operator

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Pointer Arithmetic

Increment and Decrement

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Pointer Arithmetic

The dependence of addition and subtraction to pointers on the data type

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Predict the output

```
int a = 15;  
int *ptr = &a;  
int b = ++*ptr;  
cout << a << ' ' << b;
```

Assume the address of a is 1000.

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Practice

Write a function to find out the first and last digit of a number without returning anything.

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Null Pointer

Good practices of using pointers

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Double pointers

Playing with double pointers

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Next Lecture

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