

# Pointers and Memory

## What is a pointer?

A pointer is a variable that stores the hexadecimal address of the variable it is pointing to.

## Declaring Pointers

A pointer variable is declared like so:

```
type* ptr;  
type *ptr;
```

## Accessing Memory Address

A memory address of a variable is obtained using the reference operator ( & ). Example: `&var` .

## Dereferencing Pointers

A pointer is dereferenced using the dereference operator ( \* ). Example: `*ptr` .

## Incrementing and Decrementing Pointers

Pointers can be incremented and decremented using the `+` and `-` arithmetic operators.

## Accessing Arrays

Arrays can be accessed by using a pointer to the first element and incrementing and decrementing as necessary.

