

Pointer Declaration

The addresses of variables we've been talking about can be stored inside special variables called **pointer** variables.

A pointer variable holds the address of another variable. To declare a pointer variable, we need to specify the type of data that the address will point to. The syntax for declaring a pointer variable looks like this:

```
data_type *pointer_name;
```

- **data_type**: This is the type of data stored at the address. For example, if the pointer will store the address of an int variable, data_type will be int
- *****: This is the asterisk operator. It indicates that the variable is a pointer
- **pointer_name**: This is the name you give to your pointer variable

Pointer Initialization

Now we can get the address using **&** operator and store the address inside a pointer variable, like so:

```
int main() {  
    int x = 40; // Declare and initialize an integer variable  
    int *p;     // Declare a pointer to an integer  
    p = &x;     // Initialize the pointer with the address of 'num'  
    return 0;  
}
```

