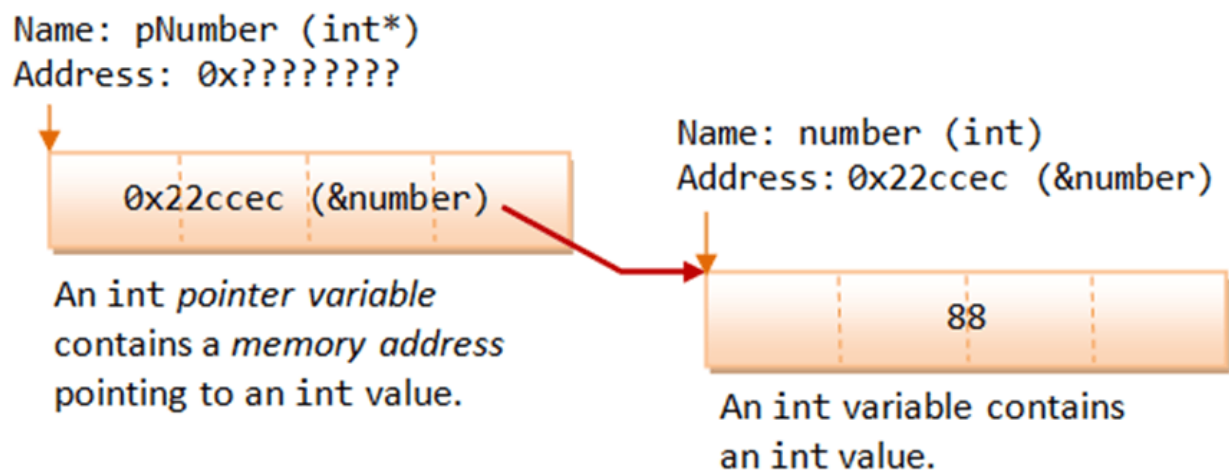


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## Computer Science: Pointer: Introduction and Objectives of Pointer

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### Introduction

- In C ++ , the programming with pointers is more powerful and it is used extensively. It saves the processing time.
- Pointer is a variable which holds the address of another variable. So, programming is concerned with the address, not with the direct value stored.

### Objectives

After going through this lesson, you would be able to:

- use pointers in arrays
- define pointer variables in a structure and access data members through pointer
- define pointer objects in a class and access members through pointer

### Pointer

- A pointer is a variable that represents the location (rather than the value) of a data item such as a variable or an array element.
- Pointers are used frequently in C ++ , as they have a number of useful applications. Consider the following example:

```
# include < iostream. h >
```

```
void main ()
```

```
{
```

```
int A = 5.  
  
cout << & A.  
  
int * ptr.  
ptr = & A.  
  
cout << * ptr.  
  
}
```

- If variable A in the above example has a value 5, then & A holds the address of memory cell A. The variable which holds the address is called pointer variable.
- int \* ptr means that a variable ptr is a pointer to a memory cell which can hold the int data type.
- \* ptr is used for the value stored in a memory cell pointed to by the pointer ptr. It is called de-referencing the pointer.

The output of the above program is the address of memory cell A and value 5.

void \* ptr.

Here ptr can point to any data type.

