C++ Programming

Pointers and Const

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Pointers to constant

```
int val1 = 20;
int val2 = 30;

// The data type is const int, so pointer must be const int*
const int val3 = 40;

// 1) Pointer to constant
const int* ptr1 = &val1;
//*ptr = 20;    CAN'T change data it points to

// But can change pointer value itself.
// Notice also val3 is const int
ptr1 = &val3;
```

Constant Pointers

```
int val1 = 20;
int val2 = 30;

// The data type is const int, so pointer must be const int*
const int val3 = 40;

// 2) Constant pointers
int * const ptr2 = &val2;
*ptr2 = 11;      // Ok
//ptr2 = &val2; // NO Pointer itself is constant

// CAN'T. val3 is const int, and we must use const int*
//int * const ptr3 = &val3;
```

Constant pointer to constant

```
int val1 = 20;
int val2 = 30;

// The data type is const int, so pointer must be const int*
const int val3 = 40;

// 3) Const pointers to const
const int * const ptr4 = &val1;
//*ptr4 = 10;       // can't change data it points to
//ptr4 = &val3;     // can't change its value
```

"Acquire knowledge and impart it to the people."

"Seek knowledge from the Cradle to the Grave."