

# Coding Conventions: The Hungarian Notation

The Hungarian notation is a language-independent programming naming convention wherein the name of an object designates its type and usage. The Hungarian notation has primarily been popularised by Microsoft and their corresponding usage of it in their APIs, articles, code samples and reference documentation sets. It works by adding a prefix to the identifier name; this prefix indicates the identifier's type.

Hungarian notation was the brainchild of Charles Simonyi while at Xerox. The notation was commonly used at Xerox PARC (Palo Alto Research Centre) and later widely implemented at Microsoft, the company Simonyi joined after leaving Xerox.

There are many advantages to using Hungarian notation, one of them is that you can, for instance, look at a variable name and instantly know its type, without having to look it up – thus easing the process of reading code written by someone else. Hungarian notation is also very useful where large development teams are involved since it offers a well structured naming convention, forcing everyone involved to program in a unified manner. The notation applies to variable names, types, constants, parameters, functions and classes.

## Using Hungarian Notation

Table A.1 lists some of the prefix codes used in Hungarian notation.

Table A.1 – Hungarian Notation Prefix Codes

Prefix Code	Description
ch	Character.
s	String.
w	Word.
l	Long.
n	Number type (either int or short).
i	Integer.
fn	Function pointer.
b	BYTE.
st	Pointer to a string.
sz	Pointer to a 0 byte terminated string
lp	Long pointer.
p	Pointer.
d	Difference between instances.
c	Count of instances.
f	Boolean flag.

## Hungarian Notation and Functions

Functions don't use the Hungarian notation prefixes or underscores, the first letter of each sub-name is capitalised and the function name begins with a capital letter. Here are some examples:

```
int 2DPointSum(int ix1, int iy1, int ix2, int iy2)
void *ClearBuffers(void)
```

Notice the function parameters following the same naming convention as standard variables.

## Hungarian Notation and Classes

All class names are prefixed with a capital C and the first letter of each sub-name is capitalised.

```
class CMatrixMath
{
};
```

## Hungarian Notation and Variables

The prefix codes given in table A.1 are used extensively in the naming of variables. Again, as with the naming of classes and functions, each sub-name of a variable starts with a capital letter:

```
int *lpiTempValue; //32-bit pointer to an integer
char *szString; //pointer to a 0 byte terminated string
```

## Final word on the Hungarian Notation

A coding convention is a personal choice and many of us develop our very own style as we go along, the Hungarian notation is no exception. It was developed by Charles Simonyi and got adopted because it worked. Also, the Hungarian notation shouldn't be seen as the Holy Grail of programming conventions, it is just one of the many standards out there. The only important thing with regard to a coding convention is consistency.