First step – write clearly understandable param names. Add XML description for param use.

Limit param numbers – studies shown 7 is the max. Minimum possible params and no more.

Object params.

Logical param order:

Start with param acted on or that are key

Param required for operation

Flags in order of importance.

Optional

Named arguments – We can use the name of the param in the args to make the args more readable in the following pattern:

Vendor.AddProduct( Product, quantity: 12, includeAddress: true )

When using named params, order no longer matters. Not all have to be named. The named have to come after unnamed. Use them when needed for clarity.

Defining enumerated params – enum is a set of named constants. Replace ambiguous Boolean params with enums so when the arg is passed the name is understood better.

Optional Params – same as C++. Default is in the signature. Can use named arguments to avoid optional param orders.

Ref and Out – ways of passing back multiple params from a method.

Ref – public bool PlaceOrder(Product product, int quantity, ref string order)

The ref keyword means data will be passed back from the method into the order string.

Ref – public bool PlaceOrder(Product product, int quantity, out string order)

The out keyword allows the same to happen

Whats the difference?

Defualt is to pass by value. Ref passes the reference of the param (passes the variable). Out passes a value as an output. A reference variable must be initialised before its passed. An output must be set in the method.

In most cases it’s better to return an object if multiple values need to be returned than use ref and out keywords due to readability.

Do use ref when method expects an incoming value. Do use out when a method doesn’t expect an incoming value.

FAQ

1. What is the difference between a param and an arg?

A param is part of the method signature. An arg is what replaces the param at runtime.

1. What is a named arg and when should it be used?

A named arg is a syntax used as a method call to make it clear what the value is used for in the arg list.

1. How is an optional param defined?

With a default value used in the method signature

1. Whats the difference between passing an arg by value vs by ref?

A ref passes the variable so that any changes made to the variable are kept after the method finishes. By value only passes the value of the variable.

1. What is the difference between ref and out?

Ref requires a variable to be initialised and the method may change it’s value. Out doesn’t require a variable to be initialised and has to change the value of the variable.