PREPROCESSING : file inclusion, macros, conditional inclusion, pragmas

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FILE INCLUSION

You use the '#include' preprocessing directive to include header files. The entire contents of the specified file is inserted in place of the file inclusion statement. The following are some examples:

```
#include <iostream.h>
#include <stdlib.h>
#include "myHeader.h"
```

The '<>' brackets identify standard libraries which are part of the compiler and follow implementation-defined rules to find the file. The double-quote brackets define local files (usually within the directory or sub-directories that your project file is located in).

MACROS

Macros use the '#define' preprocessing directive to substitute any occurrence of the macro 'name' with the identified text in the macro definition. Examples include:

```
#define MAX_CHARS 255
#define ERROR_STR "\pError, try again."
#define MAX(A,B)   ( (A)>(B) ? (A) : (B) )
```

CONDITIONAL INCLUSION

You can use conditional inclusion preprocessing directives to define or include items which are compiler or operating system specific.

```
#ifndef OS
#define OS MAC
#endif

#if OS == MAC
   #define SYS_HEADER "MacOS.h"
#elif OS == WIN
   #define SYS_HEADER "Win.h"
#elif OS = WIN95
   #define SYS_HEADER "Win95.h"
#elif OS = UNIX
   #define SYS_HEADER "Unix.h"
#endif
#include SYS_HEADER
```

PRAGMA DIRECTIVES

Pragma directives are compiler-specific and therefore, tend to be less portable. The format for THINK C pragma directives is:

```
#pragma [SC] pragma_directive [pragma_args]
```

If you specify SC, the directive must be recognized by Symantec C/C++ compilers. Some examples of THINK C pragma directives include:

```
#pragma [SC] align [1/2/4]              // sets byte alignments within
                                        // structures.

#pragma [SC] message "text"             // prints text while compiling.

#pragma [SC] once                       // when included in a header file,
                                        // file is included only once even
                                        // if #include directives include
                                        // it multiple times.

#pragma [SC] options align=power     // equivalent to align 4 directive.
#pragma [SC] options align=native

#pragma [SC] options align=mac68k    // equivalent to align 2 directive.

#pragma [SC] options align=reset     // default alignment.

#pragma [SC] template class<args>    // produces instantiations of a
                                        // template.

#pragma [SC] template_access code    // code type can be public, extern,
                                        // or static.
```