

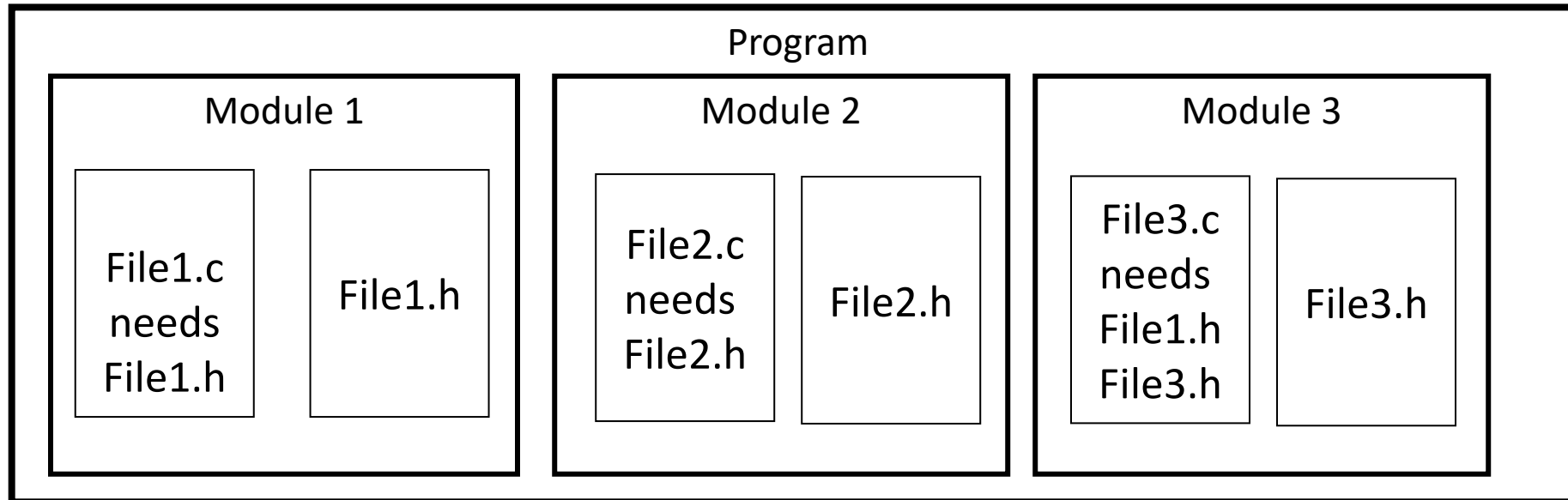
Programming in Large and Division of the Program

Divisions of Program

- A program may include one or more modules, and each module may contain one or more of the following type of files:
 - Implementation files
 - Example: myfile.c
 - Interface files
 - Example: myfile.h
- Interface part of a program normally contains:
 - Function prototypes
 - Constants
 - Definition of abstract data types, such as structures (will be discussed in detail in ENSF 337), and C++ classes (will be discussed later)
 - Other Preprocessor directives: such as `#include` statements
 - Macros (will be discussed in detail)
 - Etc.
- Implementation part of a program normally contains:
 - Definition (implementation) of functions

Divisions of Programs

- Large programs are normally divided into several modules:
 - To divide the program into more manageable unit
 - To help the development process –different developers work on each module
 - To divide the program into more cohesive units



Divisions of Programs - Example

- C-Preprocessor can be used to prevent multiple inclusion of the header files.
- Example

```
// File1.h
```

```
#ifndef XYZ    // ifndef and define will be discussed in  
              // the set of slides on conditional compilation
```

```
#define XYZ  
    // function prototypes  
    // constants  
    // user defined data types such as structs, enum, etc.  
#endif
```