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## Separating Interface from Implementation

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## What do we Separate?

- Every program we have written so far has been in one file (projectName.cpp)
- One of the principles of Software Engineering is to separate the interface from the implementation

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## Separation

- The class declaration in a header file (.h)
- The definitions of the class member functions in a source file (.cpp)
- The main program in a source file (.cpp)

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## Splitting the Time Program

- How would we split the Time program we worked on last time into different files?

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## Another Example

- Let's investigate Fig6.9 = Fig6.11

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## Default Arguments

- You can set default arguments to constructors
- In the class definition, the constructor prototype will be
  - `Time( int = 0, int = 0, int = 0);`
- The function definition will be

```
Time::Time( int hr, min, int sec)
{
    setTime( hr, min, sec );
}
```

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## Constructors

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- By having default arguments in the constructor, we can now create objects of the Time class as follows:

```
Time t1;  
Time t2( 9 );  
Time t3( 9, 25 );  
Time t4( 9, 25, 30 );  
Time t5( 45, 90, 72 );
```