Book Class Diagram

The purpose of this document is to define a book class. A few notes on decisions that were made in defining this class. The Publisher class Book class relationship is defined as aggregation. This is appropriate because while a book has a Publisher, the Publisher as an entity may exist independent of the Book. This also guided my decision to use encapsulation in the Publisher class as it is likely that it may be used as an independent entity. The Part, Chapter and Section classes each have composition relationships as it is not likely that any of these entities exist without the other because these entities will not be instantiated independently thus, I allowed them to have public attributes. To facilitate the page calculation each unit is able to report it total pages via its own total pages function. A section will call total_pages to get an int that is likely pages.length(). that will report the number of pages in the section. For chapter, a call total_pages will represent a call to the total_pages function of each of its sections the total_pages function returns this sum. This process is repeated for Part with its Chapters and Book with its Parts.