

**Project Stage 0: Initial Design (Recorded as Project 14)**

*For this stage of the project, you must work in groups of 2 or 3.*

Create **class diagrams** that include all of the necessary fields and methods for each class that you will need to implement the Bible Reader Application. The following exercise may help you determine what classes you will need:

1. Make a list of nouns and related verbs from the description above. Focus on the Specifications and Considerations, but also keep in mind the Complications.
2. Make CRC cards (See chapter 13 of *OFWJ*) for each class (noun).
3. Write down all of the scenarios that you can think of (Write down a very brief but complete description of each scenario so you can repeat it if necessary).
4. Talk through each scenario and add details to the CRC cards as you go. You may add CRC cards if new classes seem necessary.
5. Design the details of the classes by working through the scenarios again. Specify the fields and methods for each class, being as specific as possible.
6. Draw a relationship diagram for the major classes.
7. Evaluate your design and make adjustments. It may be helpful to go through some of the scenarios again.

You should spend more than a just a few minutes on this stage of the project. The more time you spend thinking about the design of your code the less time you will spend implementing, debugging, fixing, and refactoring your code.

Make sure to include the names of both/all group members on your assignment. Print out your diagrams and bring them to class on the due date.

Focus your efforts on designing how you will store a Bible (What data structures and classes will you need to use? What methods make sense to have on a Bible class?) and how you will store multiple versions of the Bible (You need some sort of collection of Bibles. How will they be stored? How will you get results? What methods makes sense?) and spend less time thinking about the GUI.