## Class diagrams

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| --- |
| Entry |
| \_content : string  \_date : string  \_question : string |
| DisplayPrompt() : void |

|  |
| --- |
| Journal |
| \_name : string  \_entries : List<entry>  \_fileName : string |
| AddEntry() : void  DisplayEntries() : void  Save() : void  Load() : List<entyr> |

|  |
| --- |
| PromptGenerator |
| \_prompts : List< > |
| GetPrompt() : string |

## Review the Program Specification

Refer to the [Journal program specification](https://byui-cse.github.io/cse210-course-2023/unit02/develop.html). As a team, review the program requirements and how it is supposed to work.

1. What does the program do?
   1. Prompt users to write in their journals
2. What user inputs does it have?
   1. Menu allowing users to choose options
      1. Load a journal
      2. Save a journal entry
      3. Take in a new entry
3. What output does it produce?
   1. Display journal entries
   2. Prompts (Need to be at least 5)
      1. What is a positive event that happened today?
      2. How did it impact your decisions and outlook after it occurred?
      3. Who did you help today?
      4. Who is the most interesting person I interacted with today?
      5. What was the strongest emotion you felt today.
4. How does the program end?
   1. Saving
      1. Autosave
      2. Manual save

## Determine the Classes

The first step in designing a program like this is to think about the classes you will need. When thinking about classes, it is often helpful to consider the strong nouns in the program description.

1. What are good candidates for classes in this program?
   1. Journal
   2. Entries
   3. Prompt Generator
2. What are the primary responsibilities of each class?
   1. Journal
      1. Adding entries
      2. Displaying entries
      3. Saving to a file
      4. Loading to a file
   2. Entries
      1. Store the entries along with the date and prompt used
   3. Prompt Generator
      1. Hold the prompts and randomly select one for the user to write about.

## Define class attributes

Now that you have defined the classes, their responsibilities, and their behaviors, the next step is to determine what attributes the class should have, or what variables it needs to store.

1. What attributes does this class need to fulfill its behaviors? (In other words, what variables should this class *store*?)
   1. Journal
      1. <List> entries
      2. <String> name
      3. <String> fileName
   2. Entries
      1. <String> entry
      2. <String> question
      3. <String> date
   3. Prompt Generator
      1. <List> prompts