

Problem Domain:	Randomization & String Formatting
Mission Summary:	Display a "Random Quote"
Prerequisite:	Completion of "Python 1000" (available at Udemy.com)
Your Script Name:	PR20_RandomQuote.py
Solution Name:	PR20S_RandomQuote.py
Version:	1.0

## Synopsis

Classic multi-user operating systems allow users to view a "Message of The Day." In this exercise, we will create an application that will select and display a random message from a collection of famous quotations.

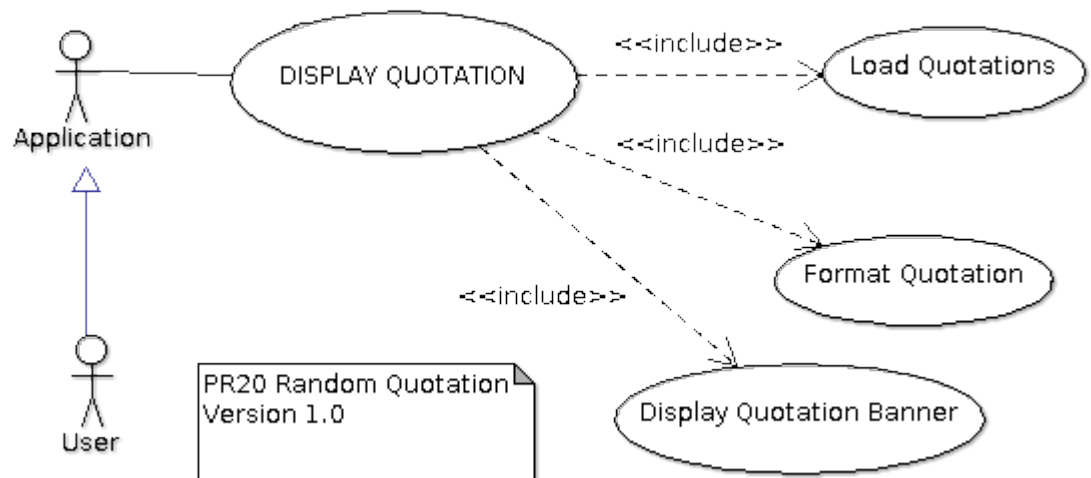
## Requirements

- 1) A script named PR20\_RandomQuote.py has been provided
  - A) The script contains a function that returns a collection of quotations
  - B) Each quotation contains two fields
- 2) Update the script to:
  - A) Convert any given quotation into a Dictionary
  - B) Dictionary keys are:
    - 1) Quote Key
    - 2) Author Key
  - C) Select and display
    - 1) Random quotation in a banner similar to the one created in Python 1000
    - 2) Format the quotation as required by "DISPLAY QUOTATION"
- 3) DISPLAY QUOTATION
  - A) In a 40 character "star boxed" banner, display the:
    - 1) Quotation Area
      - (a) "Word Wrap" quotation to fit within the banner area
      - (b) Use an overall 40-character wide area for the banner
      - (c) Banner height is to be determined by the number of "word wrapped" lines, *plus* the Author Area (below)
    - 2) Author Area
      - (a) The Author Area is to be placed on a new line
      - (b) The new line is located directly after the Quotation Area (above)
      - (c) The author's name is to be prefixed with three (3) Hyphens, and joined together by a single space
      - (d) The Author Area is to be left justified within, and at the bottom, of the banner
  - B) Center & display banner in the middle of the screen
- 4) The solution will display a randomly selected quotation banner upon activation
- 5) Routines should be written in such a way so as allows single-file re-use between other applications
- 6) BONUS
  - A) Update your "Word Wrap" operation to use a banner size from 20 to 60 characters wide, with a default width of 40
  - B) Add word-level space justifications to the displayed quotation so as to reduce the display of unevenly sized, or "jagged," lines
  - C) Select your own set of quotations from other sources. Additional quotations can be found <https://sourceforge.net/projects/mightymaxims>
  - D) Update any login activities to display a random quotation upon successful login

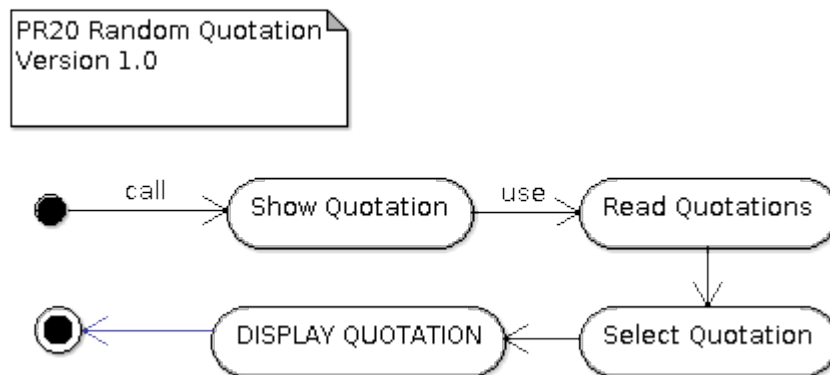
## Related Diagrams

The following is a graphical requirement overview.

- 1.) Included routines (below) should be written so as to be shared with other applications
- 2.) The Use Case supports two actor types:



- 3.) The main Activity Diagram depicts a graphical summary of the requirements, as well as a reasonably demonstrative operational overview:



## Developer Notes

Random numbers can be generated using Python's 'random' module.

See <https://docs.python.org/3/library/random.html> for more information.