# Final Program

New Attempt

**Due** Dec 10, 2021 by 8:30pm **Points** 100 **Submitting** a file upload **Attempts** 1
**Allowed Attempts** 1

```
/**
 * 30 TOTAL POINTS class TwoAlternatingThreads
 *
 * Design a class that will start TWO alternating threads (10 POINTS) demonstrating control as they ALTERNATE output to the console (10 POINTS).
 * Two threads MUST take turns alternating the output of all the letters of the alphabet (10 POINTS) (LOWERCASE and UPPERCASE) to console (aAbBcCdD... etc.).
 * POINT SUMMARY:
 * 10 POINTS: Output ENTIRE alphabet upper case and lower case to console
 * 10 POINTS: Start TWO Threads to EACH perform ENTIRE alphabet output to console
 * 10 POINTS: Control TWO Threads so they PERFECTLY ALTERNATE output to console
 *
 * 20 POINTS DEDUCTION IF LATE OR INCORRECT Submission to Canvas, specifically:

 *
 *     1. Submit completed program (in zip compressed eclipse workspace) to Canvas On-time,
 *  2. Program MUST BE Executable,
 *  3. Eclipse workspace MUST BE correctly named and zip compressed
 *   (e.g. named like 'workspace_2021_9_dan_peters_final' and zipped as 'workspace_2021_9_dan_peters_final.zip'),
 *  4. Console output MUST BE cut and pasted at end of main() method as comment.
 *
 * @author danielgmp
 *
 */



/**
 * 70 TOTAL POINTS: Design a WeightLossClubFinal class to demonstrate
 *
 * The People's Weight Club
 *
 * 1. Create AbstractPerson class with the following abstract methods:
 *
        int getId();
```

```
        void setId(int id);
        int getAge();
        String getName();
        int getWeightLbs();
        void setWeightLbs(int weightLbs);
        int getWeightLossLbs();
        void setWeightLossLbs(int weightLossLbs);
 *
 * 2. Create an AbstractClub class with the following abstract methods:
 *
    *
     * Add a person
     *
     * @param p    person to add
     *
    void add(AbstractPerson p);

    *
     * Sort and output to Console all members.
     *
     * @param compare    Comparator for sorting members
     * @param action    Consumer Action for output to Console
     *
    void sortAndShow(Comparator compare, Consumer<AbstractPerson> action);

    *
     * Get the pounds lost by each member
     * @return
     *
    List<Integer> getWeightLossStats();
 *
 * 3. 10 POINTS: Derive Person class from AbstractPerson class;
 *
 * 4. 10 POINTS: Derive WeightLossClub from AbstractClub class;
 * 5. 10 POINTS: Create Persons from the following CSV data (Parse CSV String ONLY, NO FILE IO
CODE NEEDED):
 *
                "1,25,Jim,311,11"
                "2,21,Sam,315,15"
                "3,17,Dan,314,14"
                "4,19,Bob,312,12"
                "5,16,Ann,310,10"
                "6,23,Eve,313,13"
```

```
 *
 * 6. 40 POINTS: Add each person to club and complete the demo method (MUST DO THE FOLLOWING IN THIS ORDER):
 *
 *          5 POINTS: Show ALL Member info (Person state) sorted by name       (0 points if not sorted by name)
 *          5 POINTS: Show ALL Member info (Person state) sorted by WeightLoss (0 points if not sorted by weight loss)
 *
 *          10 POINTS: GRAPH Current Weight Loss (5 points if not graphed, 0 points if not sorted ascending and descending)
 *          10 POINTS: GRAPH Projected 1  month Weight Loss where everyone loses 10 additional Lbs (5 points if not graphed, 0 points if not sorted ascending and descending)
 *          10 POINTS: GRAPH Projected 12 month Weight Loss where everyone loses additional 10 times current weight loss Lbs (5 points if not graphed, 0 points if not sorted ascending and descending)
 *
 * NOTE:
 *
 * The following are three EXAMPLES of HOW YOUR CODE MUST show GRAPH of Weight Loss of 3,4 and 5 Lbs on console
 3 ***
 4 ****
 5 *****
 *
 *
 *
 * @author dpeters
 *
 */
```