**Iteration 1 Requirements to be addressed in your test plan**

(The test plan consists of a set of games defined using JUnit tests and/or file input)

Minimal Testable Requirements (for up to 69) and requirements for up to an A

1. The game supports a human player, p1 (Strategy 1), p2 (Strategy 2) and p3 (Strategy 3)

- The UI displays the initial 14 tiles of each player

- The hand of each player should be organized by color

and, for each color, in ascending order of value.

2. Human player plays first, then p1, then p2, then p3

- UI displays whose turn it is

3. The UI allows the human player to select from its hand titles/melds to play onto the table

4. A player requires at least 30 points to play its initial meld(s)

(Ideally, this must be tried for each player, but minimally for at least one)

4a1: player plays one meld of 30 points

4a2: player plays one meld for more than 30 points

4b1: player plays several melds adding up to 30 points

4b2: player plays several melds for more than 30 points

4c: player wins on first turn

Since we assume only legal moves:

* do not worry about trying with less than 30 points
* do not test a player attempting to use tiles of the table the first time that player plays melds.

5. The UI allows the human player to refer to melds on the table to enable reuse of tiles of

the table

6. The current player draws 1 tile if this player cannot (or chooses not to) play

- UI displays who is the current player and what tile is drawn

7. When a meld is played on the table

- the UI reports “pi played tiles” if p1, or p2, or p3 is the current player

- the new hand of the current player is displayed

- the melds on the table are delimited (e.g., with {}) from each other

- the meld just played on the table is highlighted (e.g., with \*)

8. current player can play: (ideally must be tested for each possible player, minimally for one)

8a: a single run

8b: a single set

8c: several runs

8d: several sets

8e: a mix of runs and sets

9. current player can play: (ideally must be tested for each possible player, minimally for 1)

9a: a tile to add to a run on the table

9b: a tile to add to a set on the table

9c: several tiles to add to a run on the table

(Just one of the many cases is sufficient)

9d: a meld that uses a card from an existing run on the table

9e: a meld that uses a card from an existing set on the table

9f: several tiles to add to several melds on the table

9g: a meld that requires the reorganization of several melds of the table

10: p1 plays as many melds as it can, as soon as it can:

10a: p1 can play one meld on its first turn

10b: p1 can play several melds on its first turn

10c: p1 can play one meld on a subsequent turn

10d: p1 can play several melds on a subsequent turn

10e: p1 draws on first turn

10f: p1 draws on a subsequent turn

11. p3 plays its initial 30+ points as soon as it can

-11a: p3 can play 30+ points on its first turn

-11b: p3 plays 30+ points on subsequent turn

12: p3 plays all its tiles if it can win

-12a: p3 wins not using the tiles of the table on its last turn

-12b: p3 wins using some tiles of the table on its last turn

13. another player has 3 fewer tiles than p3, in which case p3 plays all the tiles it can

that require use of tiles on the table

-13a: p3 has no tile to play despite another player having 3 fewer tiles

(UI states “p3 could play but has not tile to play”)

-13b: because another player has 3 fewer tiles, p3 plays all the tiles it can that involve

using tiles on the table

(Please note: for 13.b, if you do not code reuse tiles on the table,

then UI states “p3 would reuse table” but, given no reuse is available

p3 instead draws a tile)

14. no other player having 3 fewer tiles than p3, p3 draws

15. p2 doesn't play it's initial 30+ points unless someone else has already done so

-15a: someone has played its 30+ points and p2 can play 30+ points and thus does so

-15b: someone has played its 30+ points but p2 can’t play 30+ points and draws

16. p2 plays all its tiles if it can win

-16a: p2 wins not using the tiles of the table on its last turn

-16b: p2 wins using some tiles of the table on its last turn

17. after playing its initial 30+ points, in a subsequent turn in which p2 cannot win

-17a: it can play one or more tiles that require use of tiles of the table

-17b: it cannot play at least one tile that requires use of tiles of the table and thus draws

18. TDD tests are available for game logic (to be shown in the repository)

19. Strategies are organized using the Strategy or Template Method pattern

- must have the appropriate supertype and subtypes

20. p3 observes other players (that communicate to it their current number of tiles)

(requires reqs 13a, 13.b and 14 to work correctly)

**extra requirement for A+**

21. Strategy 4 is demoed to somehow take into account what’s on the table to evaluate the likelihood of receiving certain cards.