instruction to run test:

- test files are loaded in "load" folder
- open file ReadGameState.java
 (src\main\java\project\rummy\game\GameReader\ReadGameState.java)
- enter the test file name (.json) in line 21 of the above file where FileReader is called
 "Object object = jsonParser.parse(new FileReader("load/file name.json")) "
- open file TileRummyApplication.java
 (src\main\java\project\rummy\main\TileRummyApplication.java)
- make sure that line 57 is **uncommented** "gane = gameStore1.initializeGame()"
- make sure that line 58 is **commented** "// gane = gameStore.initializeGame()"
- to run the application: run the file TileRummyApplication.java

Test case 1: to test part 1, 2, 3, 4, 5, 6, 7,8, 10a, 11a, 15a - DONE

Scenario 4a1, 8a: Human plays ONE RUN for 30 points

Turn: 0

Current player: **Human**

Status: ICE_BROKEN

Tile drawn:

Table:

Deck: 48 tiles

Human: [R6, R7, R8, R9, B3, B7, B10, G6, G7, G12, O3, O5, O8, O10]

Player 1: [R3, R6, R9, B2, B5, B6, B11, B12, G2, G11, O3, O4, O4, O11]

Player 2: [R2, R2, R3, R4, B1, B9, G6, G7, G8, O3, O5, O7, O9, O13]

Player 3: [R8, R12, B1, B4, B5, B8, G1, G4, G5, G8, G12, O1, O2, O12]

- ⇒ Human plays [R6, R7, R8, R9]
- ⇒ Updated table [R6, R7, R8, R9]
- ⇒ Update human's han [B3 ,B7 ,B10, G6, G7, G12, O3, O5, O8, O10]

Scenario 4a2, 8b, 10a: Player 1 plays ONE SET for more than 30 points

Player 1 can play 1 meld on its first turn

Turn: 1

Current player: Player 1

Status: ICE_BROKEN

Tile drawn:

Table: [R6, R7, R8, R9]

Deck: 48 tiles

Human: [B3, B7, B10, G6, G7, G12, O3, O5, O8, O10

Player 1: [R3, R6, R9, B2, B5, B6, B11, B12, G2 G11, O3, O4, O4, O11]

Player 2: [R2, R2, R3, R4, B1, B9, G6, G7, G8, O3, O5, O7, O9, O13]

Player 3: [R8, R12, B1, B4, B5, B8, G1, G4, G5, G8, G12, O1, O2, O12]

- ⇒ Player 1 plays **[B11, G11, O11]**
- ⇒ Updated Table [R6, R7, R8, R9] [B11, G11, O11]
- ⇒ Updated Player 1's hand [R3, R6, R9, B2, B5, B6, B12, G2, O3, O4, O4]

Scenario 4b1, 8c: Player 2 plays several RUNs for 30 points

Turn: 2

Current player: Player 2

Status: ICE_BROKEN

Tile drawn:

Table: [R6, R7, R8, R9] [B11, G11, O11]

Deck: 48 tiles

Human: [B3, B7, B10, G6, G7, G12, O3, O5, O7, O10]

Player 1: [R3, R6, R9, B2, B5, B6, B12, G2, O2, O4, O4]

Player 2: [R2, R2, R3, R4, B1, B9, G6, G7, G8, O3, O5, O7, O9, O13]

Player 3: [R8, R12, B1, B4, B5, B8, G1, G4, G5, G8, G12, O1, O2, O12]

- ⇒ Player 2 plays [**R2**, **R3**, **R4**] [**G6**, **G7**, **G8**]
- ⇒ Updated table [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [G6, G7, G8]
- ⇒ Updated Player 2's hand [R2, B1, B9, O3, O5, O7, O9, O13]

Scenario 4b2, 8d, 11a: Player 3 plays several SETs of more than 30 points

Turn: 3

Current player: Player 3

Status: ICE_BROKEN

Tile drawn:

Table: [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [G6, G7, G8]

Deck: 48 tiles

Human: [B3, B7, B10, G6, G7, G12, O3, O5, O8, O10]

Player 1: [R3, R6, R9, B2, B5, B6, B12, G2, O3, O4, O4]

Player 2: [R2, B1, B9, O3, O5, O7, O9, O13]

Player 3: [R8, R12, B1, B4, B5, B8, G1, G4, G5, G8, G12, O1, O2, O12]

- ⇒ Player 3 plays [R12, G12, O12] [R8, B8, G8]
- ⇒ Updated table [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [G6, G7, G8][R12, G12, O12] [R8, B8, G8]
- ⇒ Updated Player 3's hand [B1, B4, B5, G2, G4, G5, O1, O2]

Test Case 2: DONE

Scenario 4c, 8e: Human wins on first turn with a mix of RUN and SET (new game)

Turn: 0

Current player: Human

Status: ICE_BROKEN

Tile drawn:

Deck: 48 tiles

Table:

Human: [R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, B11, G11, O11]

Player 1: [R3, R6, R9, B1, B2, B5, B6, B11, B12, B13, G11, O2, O4, O4, O11]

Player 2: [R1, R7, B1, B9, G2, G3, G11, O3, O5, O7, O8, O9]

Player 3: [R8, R12, B4, B5, B6, B8, G1, G4, G5, G8, G12, O1, O2, O12]

Human plays [R1, R2, R3, R4, R5, R6, R7, R8, R9, R1] [R11, B11, G11, O11]

Test case 3: to test 9 c, d, e, f,g - DONE

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

Turn: 8

Current player: **Human**

Status: START

Tile drawn:

Table: [R1, R2, R3, R4] [B4, B5, B6, B7] [G4, G5, G6, G7]

Deck: 40 tiles

Human: [R1, R7, R8, R13, B1, B10, G4, G7, G11, O1, O2, O4, O11]

Player 1:[R3, R7, R9, B1, B3, B8, B11, B12, G11, G13, O1, O4, O8]

Player 2: [R2, R4, R5, R12, B2, B7, B10, G1, G6, G10, G12, O3, O11]

Player 3: [R5, R8, R11, R13, B2, B3, G2, G9, G10, O2, O5, O8, O10]

⇒ Human plays [O4]

□ Updated table: [R1, R2, R3][B5, B6, B7] [G5, G6, G7][R4, B4, G4, O4]

□ Updated Human hand [R1, R7, R8, R13, B5, B10, G4, G7, G11, O1, O2, O11]

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

Turn: 9

Current player: Player 1

Status: **START**

Tile drawn:

Table: [R1, R2, R3][B5, B6, B7] [G5, G6, G7][R4, B4, G4, O4]

Deck: 40 tiles

Human: [R1, R7, R8, R13, B1, B10, G4, G7, G11, O1, O2, O11]

Player 1: [R3, R7, R9, B1, B4, B8, B11, B12, G11, G13, O1, O8]

Player 2: [R2, R4, R5, R12, B2, B7, B10, G1, G6, G10, G12, O3, O11]

Player 3: [R5, R8, R11, R13, B2, B3, G2, G9, G10, O2, O5, O8, O10]

⇒ Player 1 plays [B8] [B4]

□ Updated table: [R1, R2, R3][B5, B6, B7, B8] [G5, G6, G7][B4, G4, O4] [O4, R4, B4]

⇒ Updated Player 1's hand [R3, R7, R9, B1, B3, B11, B12, G11, G13, O1, O8]

Scenario 9c: Several tiles to add to a run on the table

Turn: 10

Current player: Player 2

Status: **START**

Tile drawn:

Table: [R1, R2, R3][B5, B6, B7, B8] [G5, G6, G7][R4, B4, G4, O4]

Deck: 40 tiles

Human: [R1, R7, R8, R13, B1, B10, G4, G7, G11, O1, O2, O11]

Player 1: [R3, R7, R9, B1, B3, B11, B12, G11, G13, O1, O8]

Player 2: [R2, R4, R5, R12, B2, B7, B10, G1, G6, G10, G12, O3, O11

Player 3: [R5, R8, R11, R13, B2, B3, G2, G9, G10, O2, O5, O8, O10]

- ⇒ Player 2 plays [R4] [R5]
- □ Updated table: [R1, R2, R3, R4, R5][B5, B6, B7, B8] [G5, G6, G7][R4, B4, G4, O4]
- ⇒ Updated Player 2's hand [R2, R12, B2, B7, B10, G1, G6, G10, G12, O3, O11]

Scenario 9e: A meld that uses a card from an existing RUN on the table

Turn: **11**

Current player: Player 3

Status: **START**

Tile drawn:

Table: [R1, R2, R3, R4, R5][B5, B6, B7, B8] [G5, G6, G7][R4, B4, G4, O4]

Deck: 40 tiles

Human: [R1, R7, R8, R13, B1, B10, G4, G7, G11, O1, O2, O11]

Player 1: [R3, R7, R9, B1, B3, B11, B12, G11, G13, O1, O8]

Player 2: [R2, R12, B2, B7, B10, G1, G6, G10, G12, O3, O11]

Player 3: [R5, R8, R11, R13, B2, B3, G2, G9, G10, O2, O5, O8, O10]

- ⇒ Player 3 plays [R8] [O8]
- ⇒ Updated table: [R1, R2, R3, R4, R5][B5, B6, B7] [G5, G6, G7][R4, B4, G4, O4] [R8, B8, O8]
- ⇒ Updated Player 3's hand :[R5, R11, R13, B2, B3, G2, G9, G10, O2, O5, O10]

Scenario 9d: A meld that uses a card from an existing SET on the table

Turn: 12

Current player: Human

Status: **START**

Tile drawn:

Table: [R1, R2, R3, R4, R5][B5, B6, B7] [G5, G6, G7][R4, B4, G4, O4] [R8, B8, O8

Deck: 40 tiles

Human: [R1, R7, R8, R13, B1, B10, G4, G7, G11, O1, O2, O11]

Player 1: [R3, R7, R9, B1, B3, B11, B12,G11, G13, O1, O8]

Player 2: [R2, R12, B2, B7, B10, G1, G6, G10, G12, O3, O11]

Player 3: [R5, R11, R13, B2, B3, G2, G9, G10, O2, O4, O10]

- ⇒ Player Human plays [B1] [O1]
- ⇒ Updated table: [R1, R2, R3, R4, R5][B5, B6, B7] [G5, G6, G7][R4, B4, G4, O4] [R8, B8, O8] [R1, B1, O1]
- ⇒ Updated Human's hand : [R1, R7, R8, R13, B10, G4, G7, G11, O2, O11]

Test case 4: to test 9a, 9b

Scenario 9a: A tile to add to a RUN on the table

Turn: 8

Current player: **Human**

Status: **START**

Tile drawn:

Table: [R1, R2, R3, R4, R5] [R8, B8, O8]

Deck : 44 tiles

Human: [R1, R6, R11, B2, B10, B10, G3, G13, G13, O6, O7, O8, O10]

Player 1: [R3, R7, R9, B1, B3, B11, B12, G1, G2, G7, G8, O1, O9, O13]

Player 2: [R2, R9, R12, B2, B7, B10, G1, G3, G6, G10, G12, O3, O5, O9]

Player 3: [R4, R5, R6, R7, R11, R13, B6, B13, G2, G9, G10, O2, O4, O10]

- ⇒ Player Human plays [R6]
- ⇒ Updated table: [R1, R2, R3, R4, R5, R6] [R8, B8, O8]

⇒ Updated Human's hand: [R1, R11, B2, B10, B10, G3, G13, G113, O6, O7, O8, O10]

Scenario 9b: A tile to add to a SET on the table

Turn: 8

Current player: Player1

Status: START

Tile drawn:

Table: [R1, R2, R3, R4, R5, R6] [R8, B8, O8]

Deck: 44 tiles

Human: [R1, R11, B2, B10, B10, G3, G13, G113, O6, O7, O8, O10]

Player 1: [R3, R7, R9, B1, B3, B11, B12, G1, G2, G7, G8, O1, O9, O13]

Player 2: [R2, R9, R12, B2, B7, B10, G1, G3, G6, G10, G12, O3, O5, O9]

Player 3: [R4, R5, R6, R7, R11, R13, B6, B13, G2, G9, G10, O2, O4, O10]

⇒ Player 1 plays [G8] [B1, G1, O1] [R3] [R7] [R9]

⇒ Updated table: [R1, R2, R3] [R3, R4, R5, R6] [R7, R8, R9] [B8, G8, O8] [B1, G1, O1]

□ Updated Player 1's hand: [B3, B12, G2, G7, O9, O13]

Test case 5: to test part 10b

Turn: 1

Current player: Player 1

Status: ICE_BROKEN

Tile drawn:

Table: [R6, R7, R8, R9]

Deck: 48 tiles

Human: [B3,B7,B10, G6, G7, G12, O3, O5, O7, O10]

Player 1: [R3, R6, R9, B4, B5, B6, B11, B12, G2, G11, O2, O4, O4, O11]

Player 2: [R2, R2, R3, R4, B1, B9, G6, G7, G8, O3, O5, O7, O9, O13]

Player 3: [R8, R12, B1, B4, B8, B13, G1, G4, G5, G8, G12, O1, O2, O12]

Player 1 plays [B11, G11, O11] [B4, B5, B6]

Updated Table [R6, R7, R8, R9] [B11, G11, O11] [B4, B5, B6] Updated Player 1's hand [R3, R6, R9, B12, G2, O2, O4, O4]

Test case 6: to test part 10c

Turn: 9

Current player: Player 1

Status: **START**

Tile drawn:

Table: [R1, R2, R3, R4, R5][B5, B6, B7]

Deck : **39** tiles

Human: [R1, R7, R8, B1, B5, B10, G4, G7, G11, O1, O2, O3, O11]

Player 1: [R2, R7, R9, B1, B3, B11, B12,G11, G13, O1, O8, O11]

Player 2: [R2, R12, B2, B7, B10, G1, G6, G10, G12, O3]

Player 3: [R5, R11, R13, B2, B3, G2, G9, G10, O2, O4, O10]

⇒ Player 1 plays **[B11, G11, O11]**

⇒ Updated table: [R1, R2, R3, R4, R5][B5, B6, B7] [B11, G11, O11]

⇒ Updated Player 1's hand : [R3, R7, R9, B1, B3, B12, G13, O1, O8]

Test case 7: to test part 10d

Turn: 9

Current player: Player 1

Status: **START**

Tile drawn:

Table: [R1, R2, R3, R4, R5][B5, B6, B7]

Deck: 39 tiles

Human: [R1, R7, R8, B1, B5, B10, G4, G7, G11, O1, O2, O3, O11]

Player 1: [R3, R7, R9, B1, B8, B11, B12,G11, G13, O1, O8, O11]

Player 2: [R2, R12, B2, B7, B10, G1, G6, G10, G12, O3]

Player 3: [R5, R11, R13, B2, B3, G2, G9, G10, O2, O4, O10]

⇒ Player 1 plays [R3] [B8] [B11, G11, O11]

- ⇒ Updated table: [B11, G11, O11] [R1, R2, R3] [R3, R4, R5] [B5, B6, B7, B8]
- ⇒ Updated Player 1's hand : [R7, R9, B1, B12, G13, O1, O8]

Test case 8: to test part 11b, 13a, 14b, 17b

Turn: 3

Current player: Player 3

Status: ICE_BROKEN

Tile drawn: R12

Table: [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [G6, G7, G8]

Deck: 47 tiles

Human: [B3, B7, B10, G6, G7, G12, O3, O5, O7, O10]

Player 1: [R3, R6, R9, B2, B5, B6, B12, G2, O2, O4, O4]

Player 2: [R2, B1, B9, O3, O5, O7, O9, O13]

Player 3: [R8, B1, B4, B5, B8, G1, G4, G5, G8, G12, O1, O2, O10, O12]

- ⇒ Player 3 plays
- ⇒ Updated table [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [G6, G7, G8]
- ⇒ Updated Player 3's hand [R8, R12, B1, B4, B5, B8, G1, G4, G5, G8, G12, O1, O2, O10, O12]

Turn: 4

Current player: Human

Status: **START**

Tile drawn:

Table : [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [G6, G7, G8]

Deck: 47 tiles

Human: [B3,B7,B10, G6, G7, G12, O3, O5, O7, O10]

Player 1: [R3, R6, R9, B2, B5, B6, B12, G2, O2, O4, O4]

Player 2: [R2, B1, B9, O3, O5, O7, O9, O13]

Player 3: [R8, R12, B1, B4, B5, B8, G1, G4, G5, G8, G12, O1, O2, O10, O12]

Player Human plays [B7, G7, O7]

- ⇒ Updated table [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [G6, G7, G8] [B7, G7, O7]
- ⇒ Updated Human's hand [B3, B10, G6, G12, O3, O5, O10]

Turn: 5

Current player: Player 1

Status: START

Tile drawn: R1

Table: [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [G6, G7, G8]

Deck : **46** tiles

Human: [B3, B10, G6, G12, O3, O5, O10]

Player 1: [R3, R6, R9, B5, B6, B12, G2, O2, O4, O4]

Player 2: [R2, B1, B9, O3, O5, O7, O9, O13]

Player 3: [R8, R12, B1, B4, B5, B8, G1, G4, G5, G8, G12, O1, O2, O10, O12]

⇒ Player 1 plays

⇒ Updated table [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [G6, G7, G8] [B7, G7, O7]

⇒ Updated Player 1's hand [R1, R3, R6, R9, B2, B5, B6, B12, G2, O2, O4, O4]

Turn: 6

Current player: Player 2

Status: START

Tile drawn: B10

Table: [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [G6, G7, G8] [B7, G7, O7]

Deck: 45 tiles

Human: [B3, B10, G6, G12, O3, O5, O10]

Player 1: [R1, R3, R6, R9, B2, B5, B6, B12, G2, O2, O4, O4]

Player 2: [R2, B1, B9, O3, O5, O7, O13]

Player 3: [R8, R12, B1, B4, B5, B8, G1, G4, G5, G8, G12, O1, O2, O10, O12]

- ⇒ Player 2 plays
- ⇒ Updated table [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [G6, G7, G8] [B7, G7, O7]
- ⇒ Updated Player 2's hand [R2, B1, B9, B10, O3, O5, O7, O9, O13]

Turn: 7

Current player: Player 3

Status: ICE BREAKING

Tile drawn:

Table: [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [G6, G7, G8] [B7, G7, O7]

Deck: 46 tiles

Human: [B3, B10, G6, G12, O3, O5, O10]

Player 1: [R1, R3, R6, R9, B2, B5, B6, B12, G2, O2, O4, O4]

Player 2: [R2, B1, B9, B10, O3, O5, O7, O9, O13]

Player 3: [R8, R12, B1, B4, B5, B8, G1, G4, G5, G8, G12, O1, O2, O10, O12]

⇒ Player 3 plays [R8, B8, G8]

⇒ Updated table [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [G6, G7, G8] [B7, G7, O7] [R8, B8, G8]

⇒ Updated Player 3's hand [R12, B1, B4, B5, G1, G4, G5, G12, O1, O2, O10, O12]

Test case 8-13b: to test part 13b

Turn: 2

Current player: Player 3

Status: **START**

Tile drawn:

Table: [B2, G2, O2][B11, G11, O11][R2, R3, R4][G6, G7, G8]

Deck: 30 tiles

Human: [R6, R7, R8, R9, B2, B3, B7, B10, G6, G7, G7, G12, O3, O5, O7, O10]

Player 1: [R3, R6, R9, B5, B6, B12, O4, O4]

Player 2: [R2, B1, B9, O3, O5, O7, O9, O13]

Player 3: [R5, R12, B1, B4, B5, B8, G1, G4, G5, G8, G12, O1, O2, O12]

- ⇒ Player 3 plays [R5, B5, G5][R12, G12, O12][B1, G1, O1]
- □ Updated table [B2, G2, O2][B11, G11, O11][R2, R3, R4][G6, G7, G8][R5, B5, G5][R12, G12, O12][B1, G1, O1]
- ⇒ **Explain:** Player 3 see that player 1 and 2 have less than 3 tiles ---> play everything he has

Test case 9: to test part 12a

Turn: 30

Current player: Player 3

Status: **START**

Tile drawn:

Table: [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4]

Deck: 30 tiles

Human: [B3, B10, G6, G12, O3, O5, O10]

Player 1: [R1, R3, R6, R9, B2, B5, B6, B12, G2, O2, O4, O4]

Player 2: [R2, B1, B9, B10, O3, O5, O7, O9, O13]

Player 3: [G6, G7, G8]

⇒ Player 3 plays **[G6, G7,G8]**

⇒ Updated table [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [B7, G7, O7] [R8, B8, G8][G6, G7, G8]

Test case 10: to test part 12b

Turn: 30

Current player: Player 3

Status: ICE_BROKEN

Tile drawn:

Table: [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [B7, G7, O7]

Deck: 30 tiles

Human: [B3, B10, G6, G12, O3, O5, O10]

Player 1: [R1, R3, R6, R9, B2, B5, B6, B12, G2, O2, O4, O4]

Player 2: [R2, B1, B9, B10, O3, O5, O7, O9, O13]

Player 3: [R10, R11]

⇒ Player 3 plays [R10, R11]

Test case 11: to test part 16a

Turn: 30

Current player: Player 3

Status: ICE_BROKEN

Tile drawn:

Table: [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [B7, G7, O7]

Deck: 30 tiles

Human: [B3, B10, G6, G12, O3, O5, O10]

Player 1: [R1, R3, R6, R9, B2, B5, B6, B12, G2, O2, O4, O4]

Player 2: [[G6, G7, G8]

Player 3: [R2, B1, B9, B10, O3, O5, O7, O9, O13]

⇒ Player 2 plays [**G6, G7, G8**] and wins

Test case 12: to test part 16b

Turn: 30

Current player: Player 3

Status: ICE_BROKEN

Tile drawn:

Table: [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [B7, G7, O7]

Deck: 30 tiles

Human: [B3, B10, G6, G12, O3, O5, O10]

Player 1: [R1, R3, R6, R9, B2, B5, B6, B12, G2, O2, O4, O4]

Player 2: [R10, R11]

Player 3: [R2, B1, B9, B10, O3, O5, O7, O9, O13]

⇒ Player 2 plays [R10, R11] and wins

Test case 13: to test part 14a

Turn: 30

Current player: Player 3

Status: ICE_BROKEN

Tile drawn:

Table: [R6, R7, R8, R9] [B11, G11, O11] [R2, R3, R4] [B7, G7, O7]

Deck: 30 tiles

Human: [R6, R7, B3, B7, B10, G6, G7, G12, O3, O5, O7, O10]

Player 1: [R3, R6, B2, B5, B6, B11, B12, G2 G11, O2, O4, O4, O11]

Player 2: [R2, R2, R3, R4, B1, B9, G6, G7, O3, O5, O7, O9, O13]

Player 3: [R5, B1, B4, B8, G1, G4, G5, G8, O2, O4]

⇒ Player 3 plays [R5]

⇒ Updated table [R6, R7, R8, R9, R10] [B11, G11, R11, O11] [R2, R3, R4] [B7, G7, O7] [R8, B8, G8][G6, G7, G8]

⇒

Test case 14: Not enough time ---> see TestCase14.json → for 15b

Test case 15: for 17a

Test case 16: for 17b

Test case 17: For Strat 4