Task Breakdown

*First, identify the main components or steps that you think the assignment will involve.*

*Make sure to think about how well you broke the Mandelbrot task down into steps, and try to break this task down into as many small steps as possible, rather than just a few big steps.*

* contact group mates
* read through the games rules
* read carefully through the .h files.
* understand each function and their parameters in Game.h
* start working on testing the ADT (writing testGame.c)
  + test each function in Game.h works
  + how to make sure at start, has 4 players and each players hold 7 cards
  + how to test the direction? At first, it's clockwise, if the value of card is B, reversed.
  + how to write test to satisfied each rules when meet different card values
    - general rules (Discard a card with the same *value*, *color*, or *suit*as the card on the top of the discard pile or a card with a value of NULL)
    - particular rules
  + how to test the number of cards the player discard is right
  + how to test the end of one player
* completed helper function part of plan
* share own works with group mates and exchange opinions
* generate a basic set of tests about testing the ADT
* submit a basic set of tests as soon as possible and work on improving the tests
* write tests continually throughout the assignment period.

Testing the ADT

*What steps do you think will be involved in testing the ADT?*

*Don't forget to take into account****all****of the various aspects rather than just actually writing the code -- e.g. understanding the task, designing your solution, writing your code, debugging your code, etc.*

*(hint: you will need to write tests for each of the ADT functions)*

*\*not quite understand*

*? not sure the output value*

* test ***Game newGame()***
* test **destroyGame()**
* test ***numGards()****,* the number of cards in the initial deck.
* test **numOf Suit(),** the number of cards in the initial deck of a particular suit (5 different suit) should be 800/5 = 160
* test **numOfColor**, the number of cards in the initial deck of a particular colour (5 different colours) should be 160
* test **numOfValue**, the number of cards in the initial deck of a particular value (16 different values) should be 50
* (?)test **currentPlayer**, should return a value between (0 to 3), get those turn it is.
* (?)test **currentTurn**, get the current turn number of a player, (+1 after the player ends his turn)
* \*test **playerPoints** (score of a given player at end turn? So, the winner should have 0 score at the end? Cause they do not have card)
* (?)test **playDirection**, clockwise or anticlockwise (direction reversed when value **B**ackward is played)
* \*test **pastTurns**, no. of previous turns (previous turn in total? = currentTurn - 1)
* (?)test **turnMoves**, no. of move happened on a turn (**n**th turn). (if a turn consists of drawing cards, playing cards and ending the turn, the returned value == 3)
  + int turnMoves(Game game, int n); what n here means?
* \*test **pastMove**, get the specified move (\*playerMove **what action? What colour? What type of card?**) from the previous turn (the turn is given)
* (?)test **playerCardCount**, number of cards in a given player’s (n? number of player?) hand
* (?)test **handCardCount**, the number of cards in the current player’s own hand.
* test **handCard**, check the nth card from the current player’s hand.
* test **isValidMove**, check the move is valid or not. (base on the previous player move). Return 0(FALSE) or (!= FALSE)
* test **playMove**, play the given action (move) for the current player

Helper Functions

*What static functions (helper functions) do you think you will need to write, in order to write your tests?*

*(as an example: you might want to create a function that determines whether a player has a specific card in their hand, which would need to call various ADT functions to go through all of the cards in their hand, and then determine whether any of those match the card you're looking for)*

* write your answers here
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* ...
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* ...

Task Requirements

*For each of those components or steps above, work out what is involved/required, make an estimate of how long it will take, and decide who is going to do it (or whether you will work on it together):*

| **What needs doing?** | **What does it involve?** | **How long will it take?** | **Who's going to do it?** | **How will you know when it's finished?** |
| --- | --- | --- | --- | --- |
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Working in a group

**How will you keep in contact with each other?**

* write your answers here
* ...
* ...

**When / where / how will you have regular group meetings?**

* write your answers here
* ...
* ...

**How will you keep track of who's meant to be doing what?**

* write your answers here
* ...
* ...

**How will you keep track of what has been done so far?**

* write your answers here
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* ...

**How will you share source code with each other?**

* write your answers here
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* ...

**What potential conflicts could you have with the other group members, and how will you deal with those?**

* write your answers here
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* ...

**What will you do if you disagree with how something should work, or what approach to take to solve something?**

* write your answers here
* ...
* ...

Learning from experience: Assignment 0 and 1

*What did you learn from the process of completing the previous assignments? How could you take that into account during this assignment? What can you do now to prevent any mistakes or problems from happening again?*

*Think about: how well did you manage your time, how well did you stick to your plan, was your plan helpful, how did working with your partner for Mandelbrot go, did you learn any new technical skills, or have any insights into how to effectively write code and solve problems?*

* write your answers here
* ....
* ....

Identifying potential problems

*What problems might you encounter over the course of the assignment? What could go wrong? What do you need to plan around? What could you do to work around or overcome those problems?*

* write your answers here
* ...
* ...

Getting help

*What resources could you use to get help when you need it?*

* write your answers here
* ...
* ...