Planning

## Task Breakdown

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

* Complete Mandelbrot related lab activity
  + Complete the server related lab tasks
  + Understand how to get the zoom level and x, y position from URL
  + Understand how the Mandelbrot set is calculated
* Get the files and know what they contain
  + mandelbrot.h
  + pixelColor.h
  + mandelbrot.c
  + pixelColor.c
  + server.c
* Write Initial Planing
* Completing Functions
  + escapeSteps
  + escapeGrid
  + pixelColoe
  + drawMandelbrot
  + routeRequest
* Progress blog writing (daily)
* Testing and Debugging
* Create special colour for the Mandelbrot
* Polish
* Write Final reflections

| **What needs doing?** | **What does it involve?** | **How long will it take?** | **Who's going to do it?** |
| --- | --- | --- | --- |
| Completing Lab Work Parsing | Understanding how to determine the position and zoom level of pictures and | 1 hours | Zhou Yingzhi  Kim |
| Get the files (5 in total) | Understanding what we need to do for each file and what each function required | 30 minutes | Zhou Yingzhi  Kim |
| Completing functions escapeSteps | Determine how many steps required to escape the Mandelbrot set | 1 hour | Zhou Yingzhi |
| Completing functions escapleGrid | Fill a grid with the number of steps each pixel took to escape the Mandelbrot set | 2 hours | Zhou Yingzhi |
| Completing functions drawMandelbrot | Draw a single Mandelbrot tile by calculating and colouring each of the pixels in the tile | 2 hours | Zhou Yingzhi |
| Completing functions pixelColor | Convert a number (of steps taken to escape the Mandelbrot set) to a colour | 1 hour | Zhou Yingzhi  Kim |
| Completing functions routeRequest | Get the request from the browser to get the coordinates needed to be display | 1 hour | Kim |
| Progress blog writing | Writing progress blog on technical portion how team working and project management | Daily | Zhou Yingzhi  Kim |
| Combine functions together | To get the final program | 3 hours | Zhou Yingzhi  Kim |
| Testing and debugging | Ensure the corrections and style of code. Assert as much as tests if possible | Daily (after combining files together) | Zhou Yingzhi  Kim |
| Create wonderful colour | Colouring Mandelbrot | 1 hour | Zhou Yingzhi  Kim |
| ... |  |  |  |
| ... |  |  |  |

## 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):

## Learning from experience: Assignment 0

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

* From the experience of assignment 0, I found that the program is perfectly not only if it passes the auto test, we need to assert many unit test to ensure the code works in every condition. For assignment 0, I submit it after it pass all the auto test, I thought it’s good enough but the score I got was far from full mark. So, testing and debugging is important for the performing of program.
* Making a good plan is very important, compared with assignment 0, assignment 1 is a big and tough work and it’s impossible to finish it within one day. So, a good planning can make sure that everything going in the right way and we won’t leave everything until the due day.

## 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?

* I think is the time management. We just start the assignment at the end of week 7 which means there only one week left for us to complete the whole task. I am worry about the time is not enough for us.
* When I stuck in some part of code, I always felt panic and spend serval hours trying to fix it which it’s really a time consuming. This time, I will put the wrong part aside and I come back to fix it maybe a few hour later or send it to my partner which avoid consuming too much time.

## Getting help

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

* Email tutors for help
* Attending help sessions
* Discussing with lab partner and ask my friends