

CAB403 Assignment report

a. Statement of completeness

- Task 1: Attempted. All is working other than:
 - It shows the username, time taken, games won and games played but it only shows the most recent game played and not all the other players.
- Task 2: N/A
- Task 3: N/A

b. Group members

John Layson: n9823239

Nathan Thai: n9823361

c. Contribution

- Each member contributed equally

d. Description of data structure used for representing playfield

- A struct is used to represent the tiles.
- Booleans such as revealed, is_mine, and flagged are stored to keep track of the state of the tile.
- Integers such as adjacent mines are stored to hold the number of adjacent mines surrounding a tile.

```
- #pragma pack(1)
typedef struct Tile
{
    int adjacent_mines;
    bool revealed;
    bool is_mine;
    bool flagged;
    int tile;
} indivTile;
#pragma pack(0)
```

e. Description of data structure used for leader board

- The leaderboard sends and receives data using send() and recv(). A **buffer** is used to hold the Username whereas the integers are converted from network byte to host bytes which are then stored in an **int** variable.

f. N/A

g. N/A

h. Instructions on how to compile

Server:

- Takes one parameter: port number
- gcc command
- gcc -o Server Server.c && ./Server 12345

Client:

- Takes 2 parameters: localhost and port number
- gcc command
- gcc -o Client Client.c && ./Client localhost 12345