BSC – HGP – Project Go
UI Design Document & Report

1. Division of Work

Student Name1: AILTON S. MACHADO JUNIOR Student Number1: 3029396
Student Name2: Student Number2:
Student Name3: Student Number3:
Please complete the sections below with regard to the estimate of the division of work between the two partners
If the work was split in the range of 45% to 55% per partner, then that is fine and simply say "Work was evenly divided". If this was not the case, then state with a summary sentence. This is the important statement of this file.

Division of work: work was evenly divided
ALL THE WORK WAS DONE BY ONE STUDENT

Code repository log (if applicable)

Paste here

Percentage of work completed by each partner on each class / task

Some areas require more work than others so this is only for reference. An average of these values will not be calculated.

Filename / Task	Student Name 1	Student Name 2	Student Name 3
GoBoard	100%		
Filename 2	100%		
System design	100%		
Git hub repository	-		
Learning rules of draughts	100%		

2. UI Design

Submission: Edit this template and submit it as part of your submission.

Length: Should be 4 pages approx. Word count is flexible, but all decisions should be clarified.

To achieve good marks in this item ensure that this document is well structured and addresses each of the following headings and subheading. The explanation of each UI Design Choice should be clear, precise and show substantial consideration has been made, references are welcome. All decisions should be explained regardless of how basic they are. Do not cut and paste justification from the internet (plagiarism) or notes but include references and explanations in your own words where appropriate.

Student Names: FirstName LastName

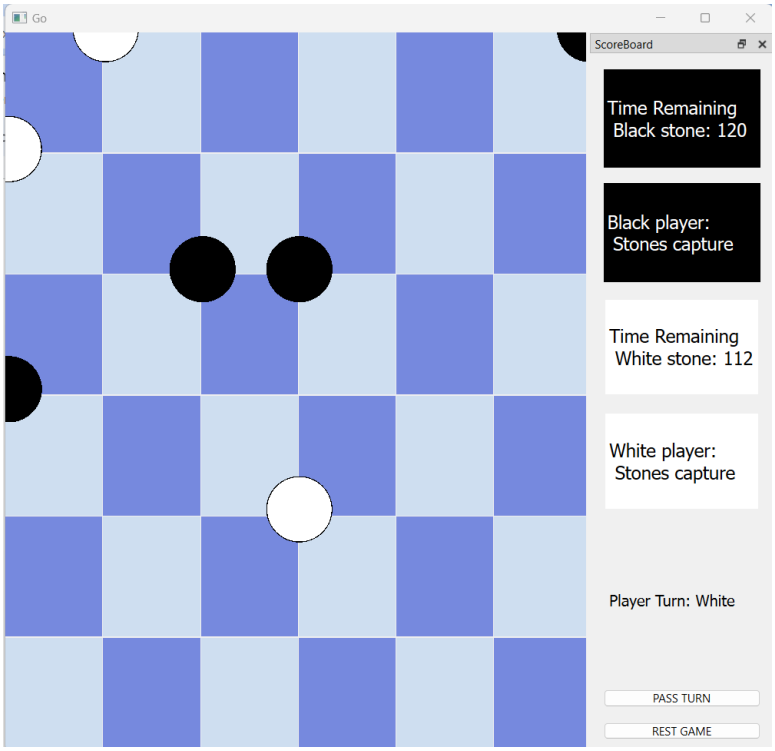
- Include multiple screen shots of the application each focusing on a different component clearly labelled
- Clearly indicate what is working and what is not.
- Discuss each component under the following headings
  - Location: e.g. The button was placed in the bottom right to as it is the default location to confirm and action
  - Colour: The colour scheme was chosen to avoid the main form of colour blindness and produce high contrast for the visually impaired.
  - Size:
  - Style:
  - Etc.

N.B. Clearly mention any additional features here either visual or functional so that appropriate marks are awarded

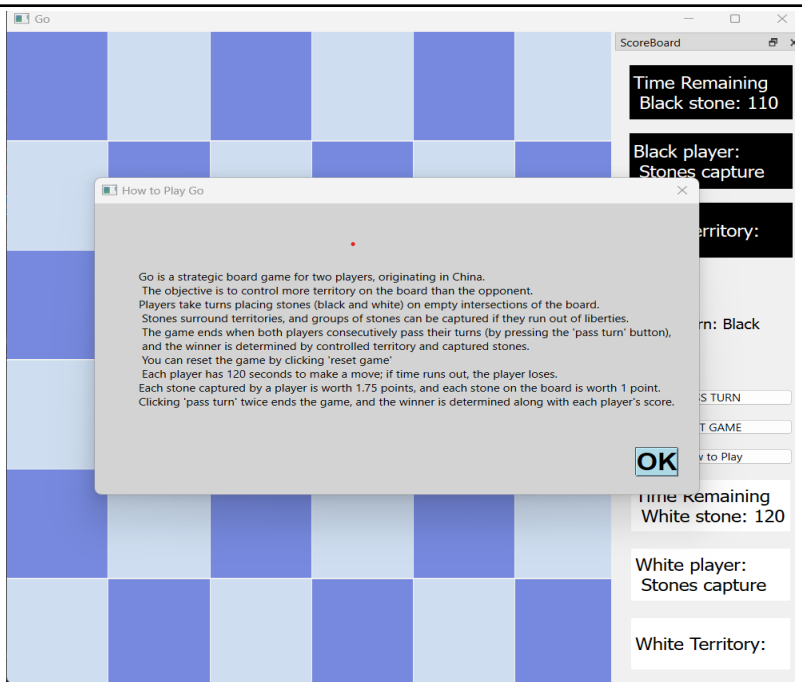
3. Screen Shots of Working/Not Working Features

N.B. Be sure to comment what is working and not working for each of the tasks. The boxes should be expanded to contain the content.

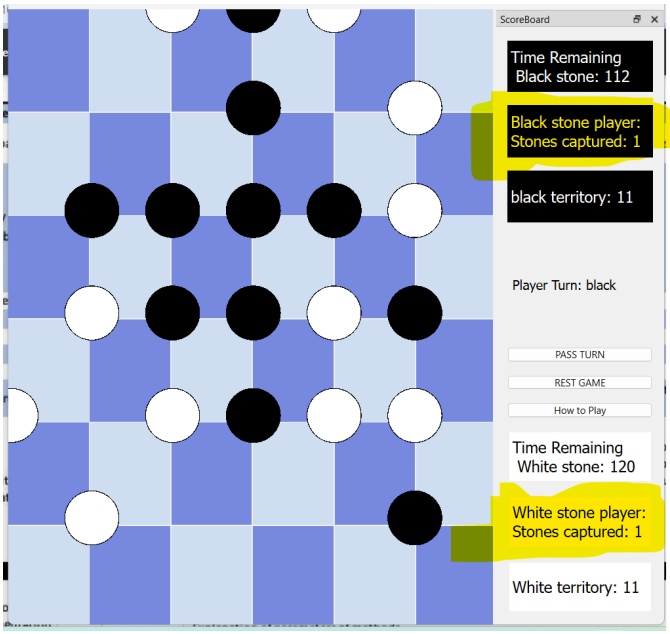
All code should be testable where possible and error message should be displayed to show where code has failed.

Task 1 (1 image with description + what is working/not working)
Board generated and working fine but there is a bug when place a stone around the board. 

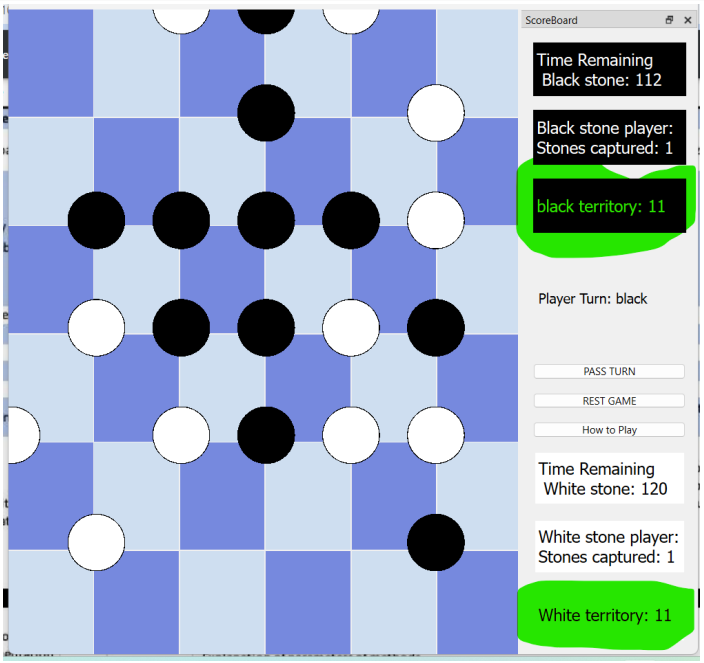
Task 2 (6 images of working Menus/buttons/Labels including description + what is working/not working)



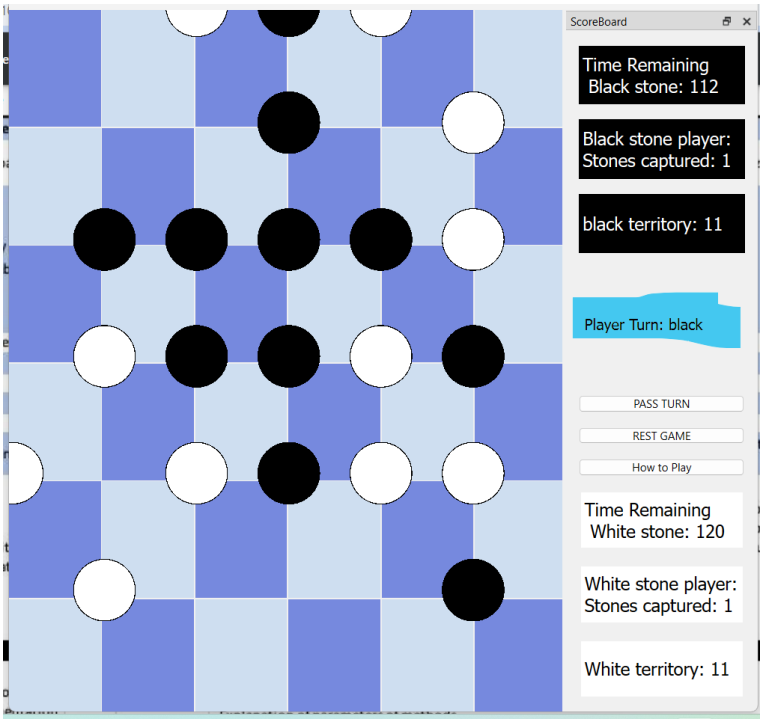
How to play button is working fine. It open a pop up with a message box explaining how to play.



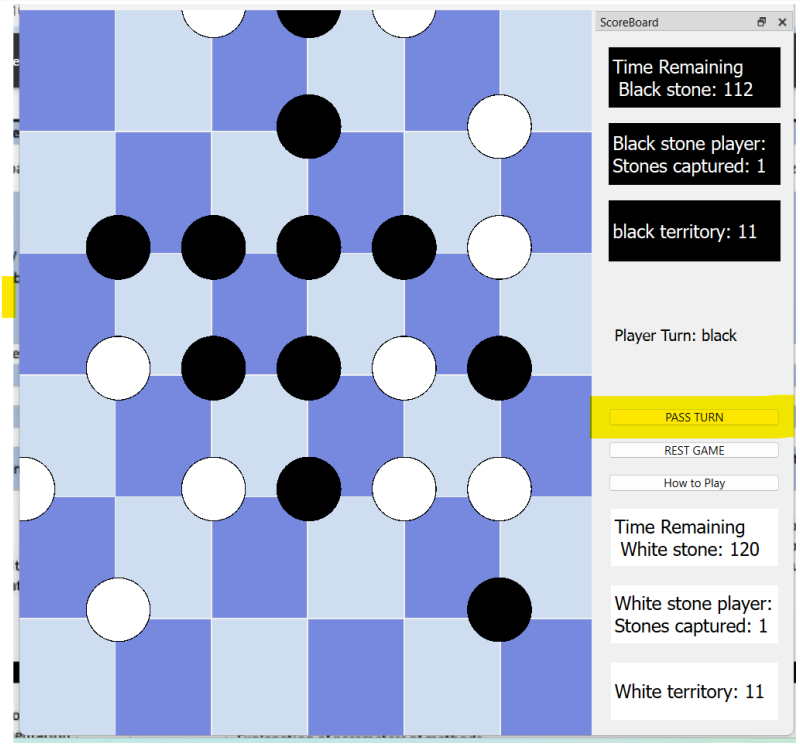
stones capture is working fine.



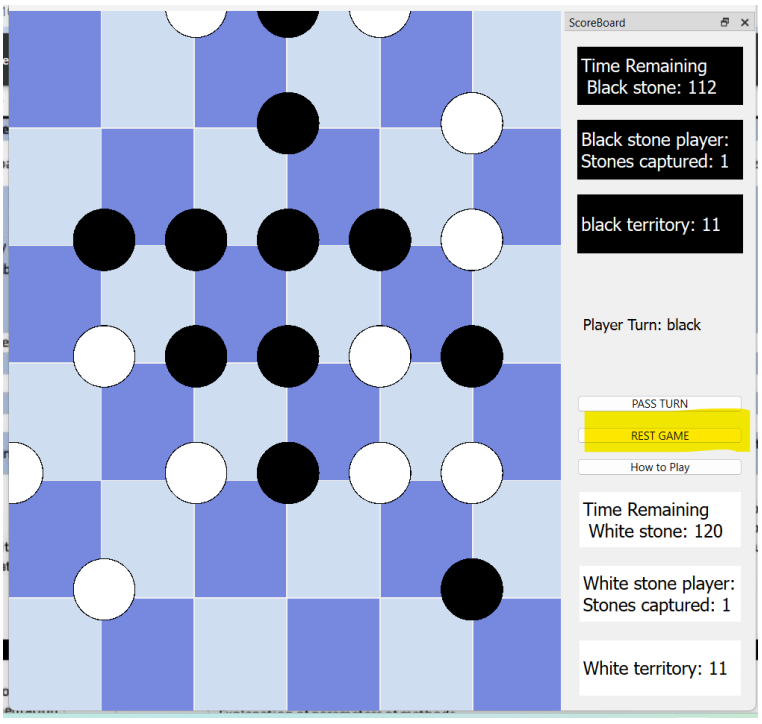
Territory lbl is working fine.



Player turn is working fine.



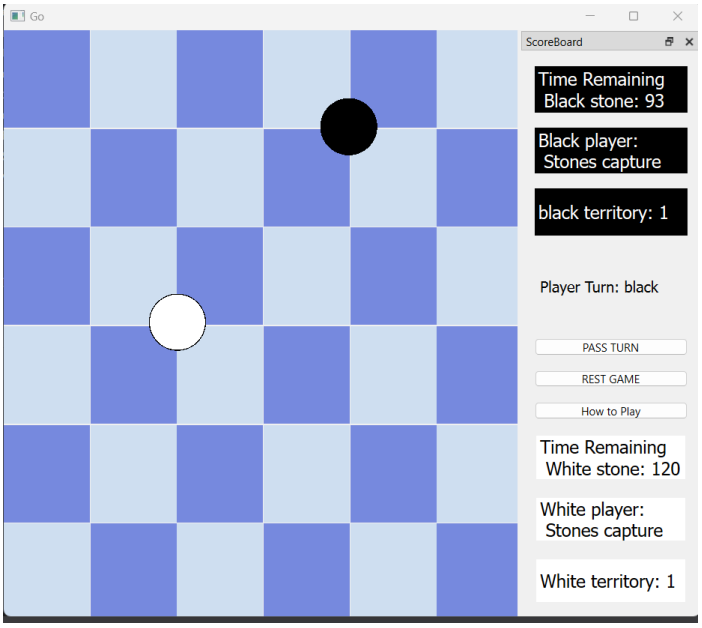
Pass button is working fine.

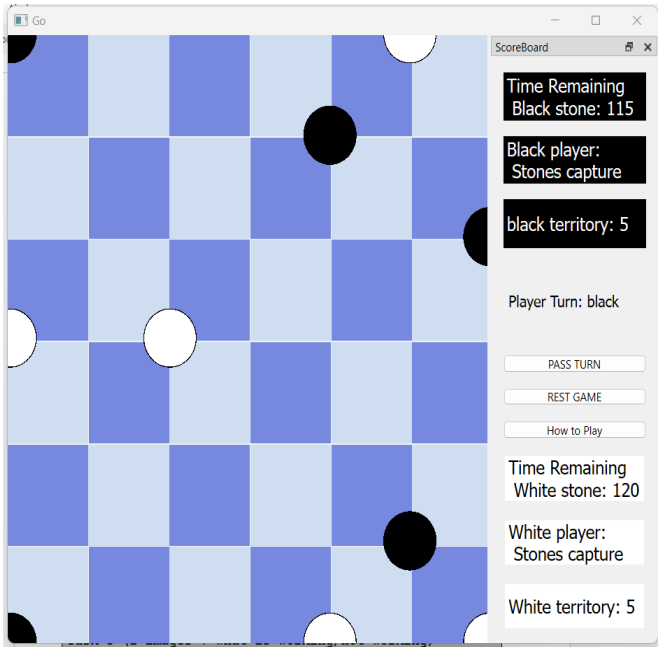


Reset button is not working properly. It does reset the array and the draw board but when this button is clicked it somehow affect the logic of the game and make the game do not remove any stone.

Task 3 (2 images + what is working/not working)

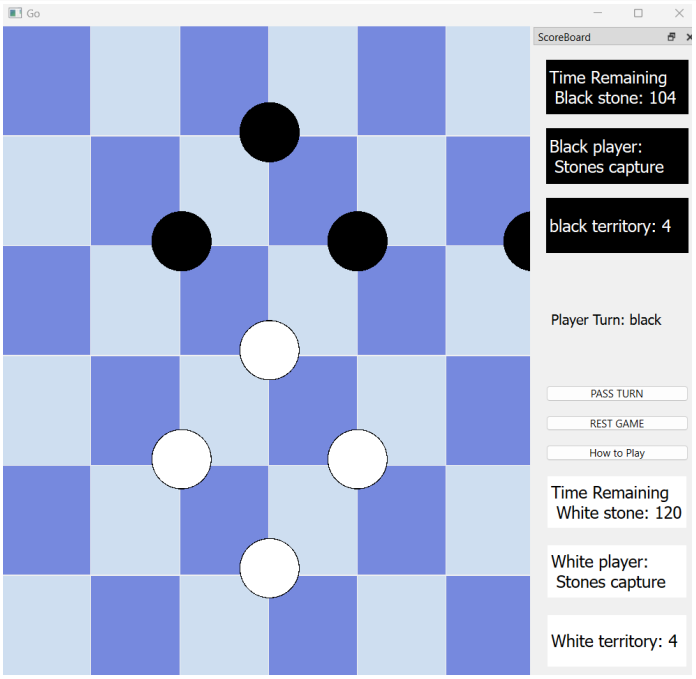
By clicking anywhere in the board the stone will be placed, also methods to handle if a stone is already placed and methods to check the rules before placing a stone is done and working fine But if any stone is placed in the corners or in the extremity in the board the ellipse (stone) is cut it off, just like showing in the second image bellow.





Task 4 (2 images + what is working/not working)

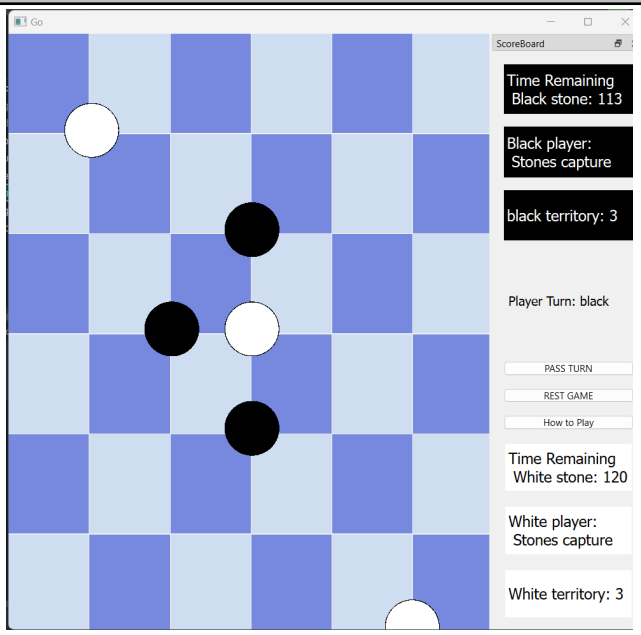
The suicide rule is working fine.



Task 5 (2 images + what is working/not working)

KO rule is not working.

Task 6 (2 images + what is working/not working)

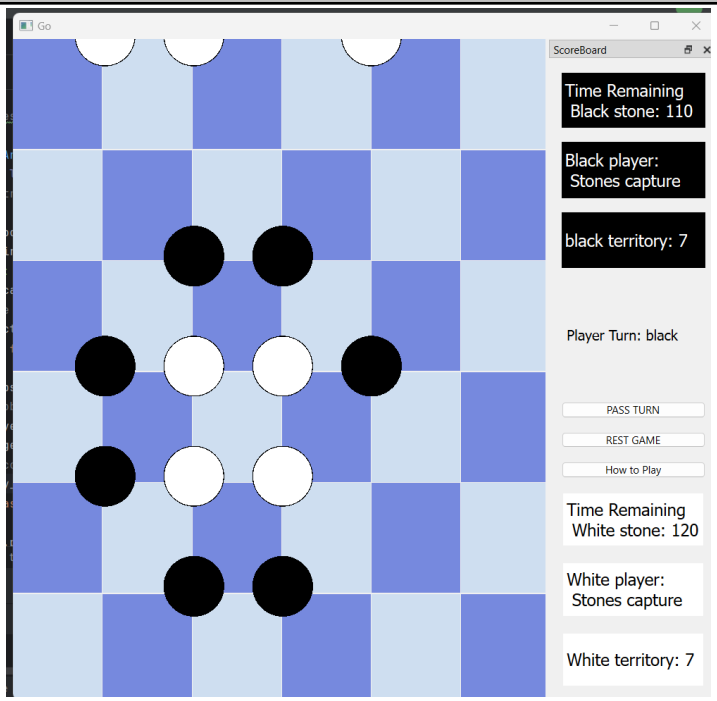


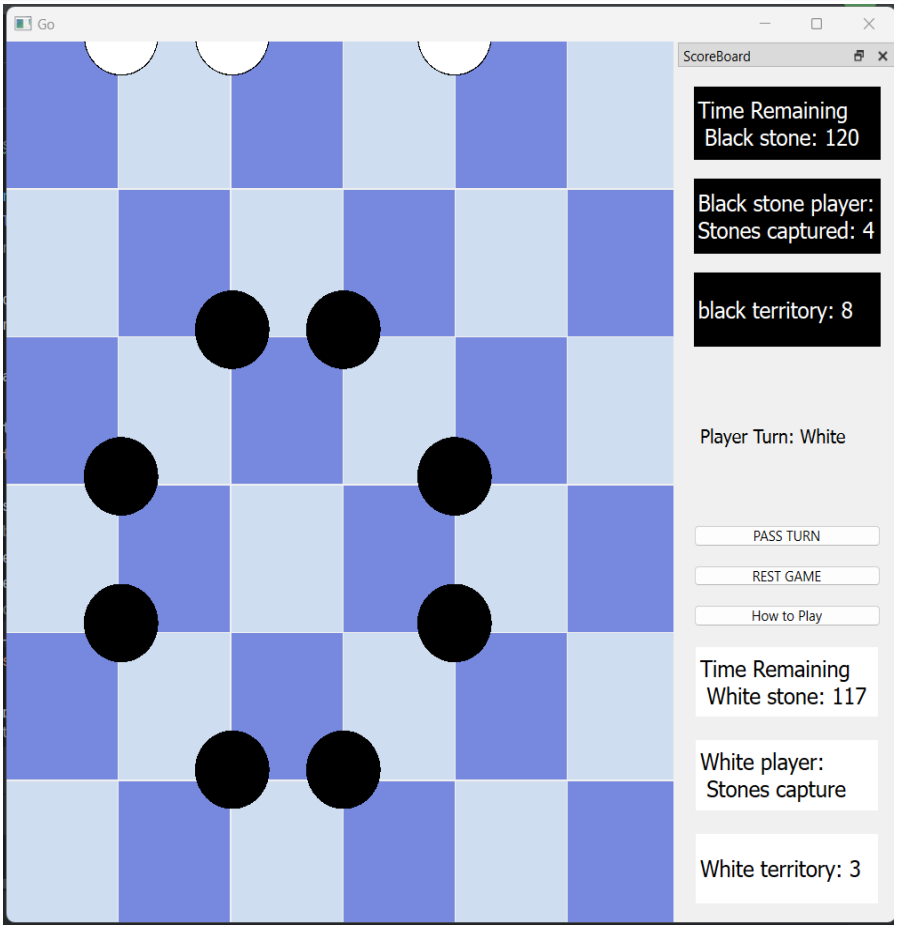
```
# it must clear elipses drawed and update arrays in case true
1 usage
def clearElipseUpdateArrays(self, boardArray_int, coordsToRemove):
    scoreForCapture = len(coordsToRemove)
    # In case return true, means there's a stone surrunded
    try:
        for pair in coordsToRemove:
            y, x = pair
            print(f"y: {y}, x: {x}")
            target_location = (x - 1, y - 1)
            # if stone is surround, remove the ellipse
            target_dict = next(
                (item for item in self.ellipseLocations if item.get('location') == target_location), None)

            self.ellipseLocations.remove(target_dict)
            # update object array with 0 where it is surrounded
            stone_player = 2
            self.changeStoneElementInArrayObject(y, x, stone_player)
            # update copy array with 0 where it is surrounded
            boardArray_int[y][x] = 0
```

It working fine it is used to remove stones single or multiple.

Task 7 (2 images + what is working/not working)





Multiple stones capture is working fine. The code for that is the same as capture single stone.

Task 8 (2 images + what is working/not working)

```
@pyqtSlot(str)
def gameOver(self, msgTimesUp: str):
    # get final score
    self.finalScore()

    try:
        if msgTimesUp == 'black':
            gameOverMsg = "Black stone player, your time is up,\n you have loose"
        elif msgTimesUp == 'white':
            gameOverMsg = "White stone player, your time is up,\n you have loose"

        else:
            if self.white_final_score > self.black_final_score:
                gameOverMsg = (
                    f"Game over\n White stone player has won  \n score: White: {self.white_final_score}\n\n,     Black: {self.black_final_score}\n\n"
                    f"White has {self.scoreWhite} black pieces captured and\n"
                    f"Has won {self.board.white_territory_final} territory (pieces placed on the board)\n\n"
                    f"Black has {self.scoreBlack} white pieces captured and\n"
                    f"Has won {self.board.black_territory_final} territory (pieces placed on the board) ")
            elif self.white_final_score < self.black_final_score:
```

```
    elif self.white_final_score < self.black_final_score:
        gameOverMsg = (
            f"Game over\n Black stone player has won  \n score: White: {self.white_final_score}     Black: {self.black_final_score}\n\
            f"White has {self.scoreWhite} black pieces captured and\n"
            f"Has won {self.board.white_territory_final} territory (pieces placed on the board)\n\n"
            f"Black has {self.scoreBlack} white pieces captured and\n"
            f"Has won {self.board.black_territory_final} territory (pieces placed on the board) ")
    else:
        gameOverMsg = (
            f"Game over\n It is a draw \n score: white {self.white_final_score},   Black {self.black_final_score}\n\n"
            f"White has {self.scoreBlack} black pieces captured and"
            f"Has won {self.white_territory_final} territory (pieces placed on the board)\n\n"
            f"Black has {self.scoreWhite} white pieces captured and"
            f"Has won {self.black_territory_final} territory (pieces placed on the board)")
# create box msg
msg_box = QMessageBox(self)
msg_box.setWindowTitle("Game Over")
msg_box.setInformativeText(gameOverMsg)
msg_box.setStandardButtons(QMessageBox.StandardButton.Ok)
```

```
            f"Has won {self.black_territory_final} territory (pieces placed on the board) ")
    # create box msg
    msg_box = QMessageBox(self)
    msg_box.setWindowTitle("Game Over")
    msg_box.setInformativeText(gameOverMsg)
    msg_box.setStandardButtons(QMessageBox.StandardButton.Ok)

    # show box msg
    result = msg_box.exec()

    if result == QMessageBox.StandardButton.Ok:
        msg_box.close()

except Exception as e:
    print(e)
```

Task 9 (2 images + what is working/not working)

It was implemented 2 timers for each player. Each player has 120 seconds to place a stone if the time ran out the player loses the game. At the end of each turn the new timer started to count down for the next player.

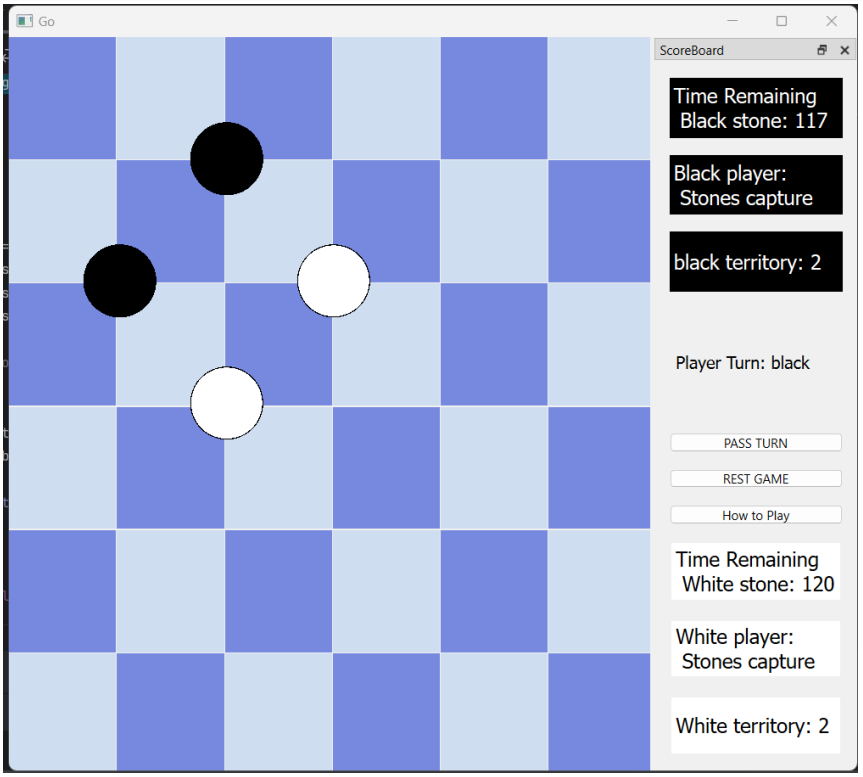
```
def timerEvent(self, event):
    try:
        # initiate timer for currently player turn
        if self.player_turn == 2:
            # verify count_turn_passed = 2, if it is means there was 2 passes turn in row (game ove
            self.counter -= 1
            self.counterWhite = self.counterWhite
            self.updateTimerSignal.emit(self.counter, self.counterWhite)
            # times up
            if self.counter <= 0:
                msgTimesUp = "black"
                self.gameOverSignal.emit(msgTimesUp)

        elif self.player_turn == 1:
            # verify count_turn_passed = 2, if it is means there was 2 passes turn in row (game ove
            self.counterWhite -= 1
            self.counter = self.counter
            self.updateTimerSignal.emit(self.counter, self.counterWhite)
            if self.counterWhite <= 0:
                msgTimesUp = "white"
                self.gameOverSignal.emit(msgTimesUp)
```

```
        elif self.player_turn == 1:
            # verify count_turn_passed = 2, if it is means there was 2 passes turn in row (game over)
            self.counterWhite -= 1
            self.counter = self.counter
            self.updateTimerSignal.emit(self.counter, self.counterWhite)
            if self.counterWhite <= 0:
                msgTimesUp = "white"
                self.gameOverSignal.emit(msgTimesUp)

        # 2 pass turn in row or time up, game over
        if self.count_turn_passed == 2 or Board.counter == 0:
            print("Game over")
            self.calculate_territory(self.boardArray_int)
            gameOVer = 'yes'
            # # call game over pop up
            self.gameOverSignal.emit(gameOVer)
    except Exception as e:
        print(e)
```

Task 10 (2 images + what is working/not working)



I have tried to do as simple as possible to avoid the user getting distracted during the game. Labels with background colour white and black were used to match with the stones colour (black and white) that makes it instinctive to know where to look to check his own score, territory captured and timer. The label "player Turn" and buttons was neutral (no background colour) to be the concentrate between black and white stone information, that's why those labels and buttons were placed in the middle. I have tried to keep stone black and white because it is more usual stone colour in the real world GO game.

Task 11 (2 images + what is working/not working)

NO APLIED

Task 12 (2 images + what is working/not working)

NO APLIED