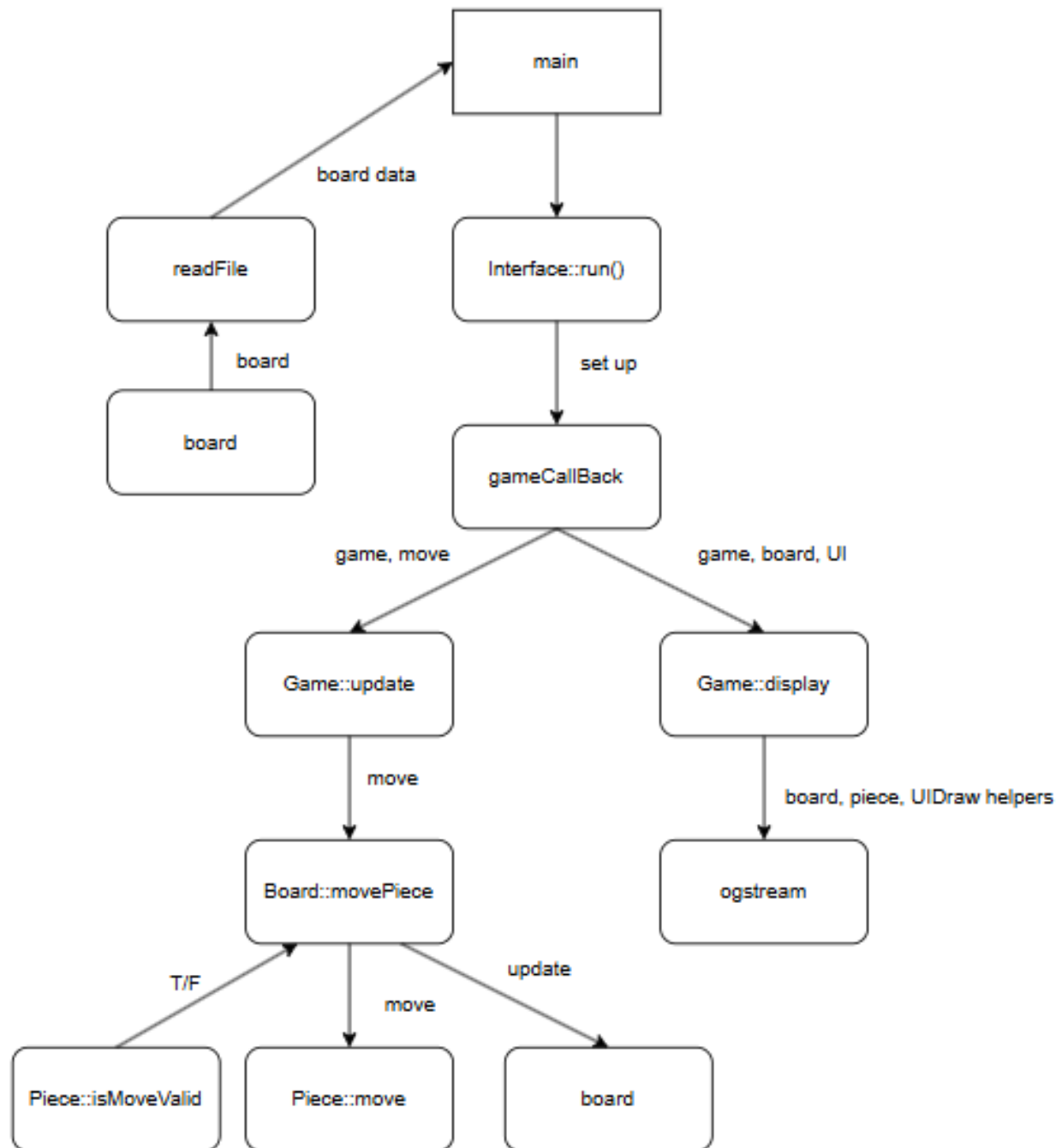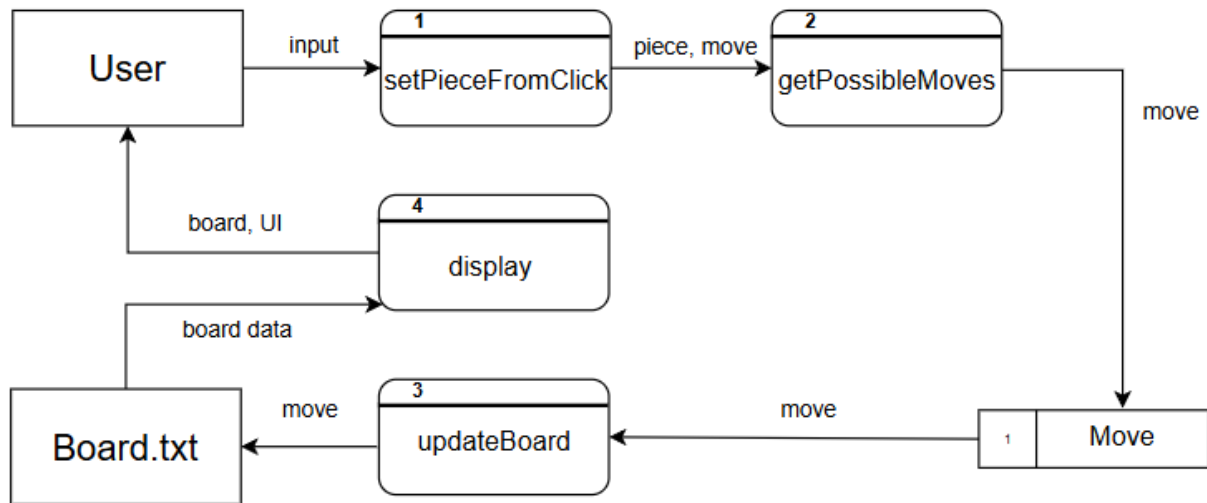# Lab 01 : Chess Reverse Engineer

Structure Chart

Data Flow Diagram

Class Diagrams

uiInteract

- initialize(title: const char*) : void
- initialized : bool
- timePeriod : double
- nextTick : unsigned long
- posHover : int
- posSelect : int
- posSelectPrev : int
- widthScreen : int
- heightScreen : int
- p : void*
- callBack : (*)(Interface*, void*)

+ Interface()
+ Interface(title: const char*)
+ run(cb: (*)(Interface*, void*), p: void*) : void
+ isTimeToDraw() : bool
+ setNextDrawTime() : void
+ getNextTick() : unsigned long
+ setFramesPerSecond(value: double) : void
+ frameRate() : double
+ getSquareWidth() : double
+ getSquareHeight() : double
+ setScreen(width: int, height: int) : void
+ positionFromXY(x: int, y: int) : int
+ getSelectPosition() : int
+ getHoverPosition() : int
+ getPreviousPosition() : int
+ setSelectPosition(pos: int) : void
+ clearSelectPosition() : void
+ clearPreviousPosition() : void
+ setHoverPosition(pos: int) : void

uiDraw

\# x : int
\# y : int
- drawPiece(x: int, y: int, black: bool, rectangle[]: Rect, num: int) : void
- drawText(x: int, y: int, text: char*) : void
- Rect

+ ogstream()
+ ogstream(position: int)
+ ~ogstream()
+ flush() : void
+ setPosition(x: int, y: int) : void
+ drawKing(position: int, black: bool) : void
+ drawQueen(position: int, black: bool) : void
+ drawRook(position: int, black: bool) : void
+ drawPawn(position: int, black: bool) : void
+ drawBishop(position: int, black: bool) : void
+ drawKnight(position: int, black: bool) : void
+ drawBoard() : void
+ drawSelected(position: int) : void
+ drawHover(position: int) : void
+ drawPossible(position: int) : void

chess

+ isNotWhite(board: char*, col: int, row: int) : bool
+ isWhite(board: char*, col: int, row: int) : bool
+ isNotBlack(board: char*, col: int, row: int) : bool
+ isBlack(board: char*, col: int, row: int) : bool
+ getPossibleMoves(board: char*, location: int) : set<int>
+ draw(board: char*, ui: Interface&, possible: set<int>) : void
+ move(board: char*, posFrom: int, posTo: int) : bool
+ callBack(pUI: Interface*, p: void*) : void
+ parse(textMove: string, posFrom: int&, posTo: int&) : void
+ readFile(fileName: char*, board: char*) : void
+ main(...) : int