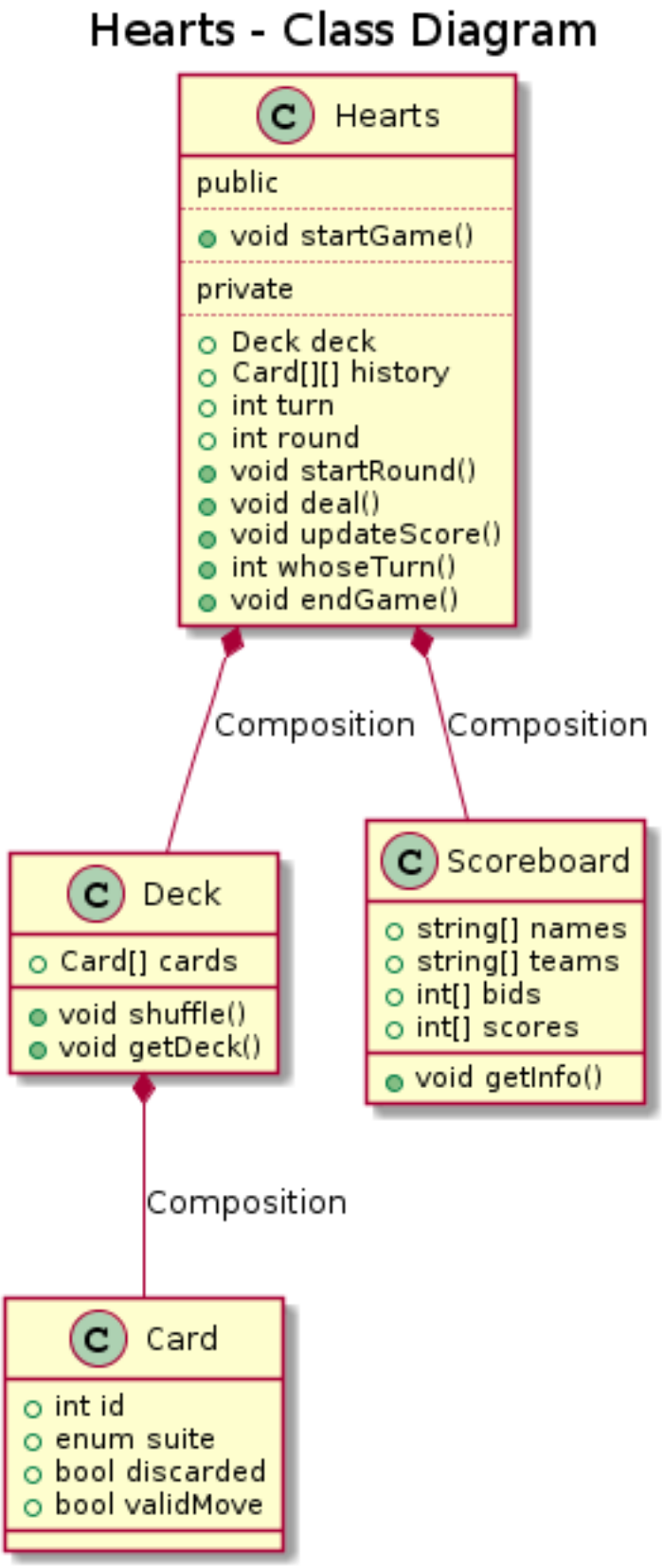
SDD -Hearts Low Level Design

Brandon Smith, Nieka Gutenberger, Joseph Coppin, Ryan Frazier, Trevor Jewkes

November 2, 2016



Hearts Low Level Design Diagram

1 Hearts Class

1.1 std::string suite(int i)

converts enum ints to string of suit

1.2 std::vector ⟨Card⟩ initializeDeck()

creates deck of cards taken from Card.cpp

1.3 std::string makename(int n)

converts Player + int into Player names

1.4 std::vector⟨Player⟩ creatPlayers(int p)

Creats a vector of Players to play the game.

1.5 std::string value(int i)

1.6 void displayCards(std::vector⟨Card⟩ & hand)

displays the deck for screen purposes.

1.7 void dealCards(std::vector⟨Player⟩ & players, std::vector⟨Card⟩ & Deck)

1.8 int findTwoOfClubs(std::vector⟨Player⟩ & p)

looks through each hand to find the 2 of clubs

1.9 Card getCardsToPass(std::vector⟨Card⟩ & h, std::string p)

gets and stores cards for passing

1.10 int fixPass(int r, int p, int c)

1.11 void assignPassedCards(std::vector⟨Player⟩ & p, std::vector⟨Card⟩ & h, int r)

takes the passed cards and redistributes based on round

1.12 int passCards(std::vector⟨Player⟩ & p, int round)

function for passing cards at beginging of round

1.13 int scoretrick(std::vector⟨Card⟩ & center, std::vector⟨Player⟩ & players, int& turn)

1.14 void displayroundScores(std::vector⟨Player⟩ p)

1.15 void displayScores(std::vector⟨Player⟩ p)

1.16 bool allhearts(std::vector⟨Card⟩ h)

checks to see if a players hand is all hearts.

1.17 bool noLeadSuit(Suit s, std::vector⟨Card⟩ h)

compares hand against the lead suit

1.18 bool validateMove(Player& p, bool& broken, std::vector⟨Card⟩ Center, Card move, int t, int i)

1.19 Card getmove(Player& p, bool& b, std::vector⟨Card⟩ c, int t, int i)

1.20 void updateScore(std::vector⟨Player⟩ & p)

adds round score to Score

1.21 bool playRound(std::vector⟨Player⟩ & players, std::vector⟨std::vector⟨Card⟩ ⟩& history, int round)

1.22 void startGame(std::vector⟨Player⟩ & players, std::vector⟨std::vector⟨Card⟩ ⟩& history)

uses players and calls round until game is over

1.23 void play_Hearts(int num)