**The Design Document – Programming – Project 2**

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| Game Genre |

The Blackjack genre is of a Strategy Card Game. The game was first referenced in1601 and 1602. The best game I found I could reference my project was Casino Blackjack which can be bought on Steam.

The differences between my game and Casino Blackjack are:

* My Game will not have Betting while Casino Blackjack Does
* The visual difference is stark as well, my game will mainly be text based while Casino Blackjack has a lot of assets (images) for visual aid and player enjoyment.
* The variables can be changed in Casino Blackjack for the likes of the card values, 2 of spades would normally be 2 points but in casino Blackjack the player is free to change the value to 10 or 0.
* Casino Blackjack also offers a bot multiplayer option which will not be available in my game.

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| Game Features |

These are the list of features that my game will have:

* There will be the start screen which will have a button for the player to press and start the game.
* When the game starts, the player and the dealer will have 2 cards in the beginning of the game.
* There will be 2 buttons, ‘Hit’ or ‘Stand’ that the player can press.
* The ‘Hit’ button will grant the player another card, if the player goes over 21 points then its game over, if the player gets 21 points exactly he / she automatically wins or if the player gets under 21 points then he / she can decide to hit / stand again.
* When the player clicks the stand button, the dealer begins to draw cards if his total amount of points from his already existing cards were lower than the players points then the dealer will keep drawing until an optimal result or defeat (over 21).
* If the dealer gets over 21 points then the dealer automatically loses, if the player gets over 21 points then the player automatically loses.
* There will be a game over screen and a button that’s says ‘Restart’ that the player can click and start the game over again.
* The player cards will be laid out on the bottom of the screen while the dealers cards will be laid down on the top of the screen

**Extra Functionality:**

* There will be a background Sprite
* Betting will be included into the game.
* There will be a deck of Cards

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| Game Story Boards |

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| **Main Menu** | **Game Screen** |
| |  | | --- | | Please enter your name: |   Once finished press Enter to start game | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | Points: 0 |  |  |  |  |   Points: 0  Dealer  “Player Name”  Hit  Stand |
| **Game screen extra cards** | **Loose Screen** |
| |  |  |  |  |  | | --- | --- | --- | --- | --- | | Ace of Hearts | 7 of Spades | Jack of Spades |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | Queen of Diamonds  Points: 21 | 9 of Clubs |  |  |  |   Dealer  Points: 19  “Player Name”  Hit  Stand | |  | | --- | | “Player Name” Looses |   Press Enter to Replay the Game |
| **Win Screen** | **Game Screen with pressed buttons** |
| |  | | --- | | “Player Name” Wins! |   Press Enter to Replay the Game | |  |  |  |  |  | | --- | --- | --- | --- | --- | |  |  |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | Points: 0 |  |  |  |  |   Points: 0  Dealer  “Player Name”  Hit  Stand |

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| **Game Class Diagram** |

Class Game {

**//Data Members**

**sf::RenderWindow** window;

**sf::Font** m\_font;

**sf::Text** m\_message; // text to write on the screen

**sf::Texture** backGroundTexture; //green for optional

**sf::Sprite** backGroundSprite;

**Player** player; //Object Declaration

**Dealer** dealer; // Object Declaration

**Cards** cards; // Object Declaration

**//Methods**

Game ();

**Void** loadContent ();

**Void** run ();

**Void** update ();

**Void** render ();

**Void** hit();

**Void** stand();

**Void** checkPoints();

};

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| **Card Class Diagram** |

Class Cards {

**//Data Members**

**Sf::text** card; //Stores the value and the name of the card

**Int** cardNumber; //1 – 13;

**Int** cardSuit; //1 – 4;

**String** faceCards[3]; //will be initialized to jack , queen and king;

**Sf::vector2f** cardPosition();

**//Methods**

Cards (); //used to initialize the cards;

**String** getCard(); //This is used when the player wishes to draw a card from the deck

**Sf::vector2f** setCardPos();

};

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| **Player Class Diagram** |

Class Player {

**//Data Members**

**Int** playerPoints;

**Sf::text** playerName;

**String** playerCards[5]; //This is to store the player cards received

**//Methods**

Player();

**Void** setPlayerName(); //lets the player set their name

**Void** setPlayerCards(); //Adds the new card to the player total cards

};

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| **Dealer Class Diagram** |

Class Dealer {

**//Data Members**

**Int** dealerPoints;

**String** dealerCards;

**Int** dealerScore;

**//Methods**

Dealer();

**Void** setDealerCards(); //Adds the new card to the player total cards

};