Test Plan for Seeded Project (Blackjack: Team 1)

Team 3

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**Main Page System**

Main Page 001

Description: When the game starts the Main Page loads

Severity: Critical

Instructions:

1. Navigate to the location of the jar file
2. Run the command “java -jar SeededGameRunnable.jar”

Results:

1. The Main page should show up in the terminal with a welcome Menu
2. The options for the game should be displayed

Main Page 002

Description: Navigate to Rules

Severity: Workaround

Instruction:

1. Choose Menu option 1 (Rules)
2. Press Enter

Results:

1. The correct rules are displayed on the screen.
2. Main menu is displayed again.

Main Page 003

Description: Navigate to Game

Severity: Critical

Instruction:

1. Choose Menu option 2 (Game)
2. Press Enter

Results:

1. The game begins
2. It prompts the user for a bet

Main Page 004

Description: Navigate to Settings

Severity: Important

Instruction:

1. Choose Menu option 3 (Settings)
2. Press Enter

Results:

1. The Settings Menu System opens

Main Page 005

Description: Exit the game

Severity: Workaround

Instruction:

1. Choose Menu option 4 (Exit)
2. Press Enter

Results:

1. The game quits

Main Page 006

Description: Invalid string input

Severity: Workaround

Instruction:

1. On the Menu type invalid input like “Hello” and “How are you?”
2. Press Enter

Results:

1. The menu prints out “Invalid Input”

Main Page 007

Description: Invalid Number input

Severity: Workaround

Instruction:

1. Choose Menu option that is invalid number like 5 or -1
2. Press Enter

Results:

1. The menu prints out “ Invalid input”

**Settings System**

Settings 001

Description: Change difficulty levels in settings

Severity: Important

Instructions:

1. Go to settings
2. Type “difficulty (level)” where (level) is 0, 1, 2, or 3

Results:

1. The system loads the appropriate AI difficulty based on the user’s

selection

Settings 002

Description: Change number of AI in settings

Severity: Important

Instructions:

1. Go to settings
2. Type “cpu (number)” where (number) is between 1 and 5

Results:

1. When a game loads the appropriate number of AI based on the user’s

Selection are put into the game

Settings 003

Description: Change starting chip amount

Severity: Critical

Instructions:

1. Go to settings
2. Type “chips (amount)” where (amount) is the number of chips you want to start with

Results:

1. The game resets the amount of chips when the game is started

Settings 004

Description: Return to main menu

Severity: Critical

Instructions:

1. Go to settings
2. Type “return”

Results:

1. The system reloads the main page

Settings 005

Description: Change difficulty levels with a number out of the bounds

Severity: Workaround

Instructions:

1. Go to settings
2. Type “difficulty (level)” where (level) is a number that is not 0, 1, 2, or 3

Results:

1. The program outputs “I'm sorry, that wasn’t a proper difficulty setting (-1 < difficulty < 4)”
2. The instructions prompt for changing settings is reprinted

Settings 006

Description: Change difficulty levels with a string

Severity: Workaround

Instructions:

1. Go to settings
2. Type “difficulty (level)” where (level) is a string (“medium”, “hard”, “easy”, “level”)

Results:

1. The program outputs “I'm sorry, that’s not a proper command.”
2. The instructions prompt for changing settings is reprinted

Settings 007

Description: Set starting chip amount to a value out of bounds

Severity: Workaround

Instructions:

1. Go to settings
2. Type “chip (amount)” where (amount) is out of bounds for the number of chips you want to start with

Results:

1. The program outputs “I'm sorry, that wasn’t a proper chip amount (0 < amount < 10,000,000)”
2. The instructions prompt for changing settings is reprinted

Settings 008

Description: Set starting chip amount to a string value

Severity: Workaround

Instructions:

1. Go to settings
2. Type “chip (amount)” where (amount) is a string (“one”, “two”, “over 9000”)

Results:

1. The program outputs “I'm sorry, that wasn’t a proper chip amount (0 < amount < 10,000,000)”
2. The instructions prompt for changing settings is reprinted

Settings 009

Description: Change number of AI in settings with a number out of bounds

Severity: Workaround

Instructions:

1. Go to settings
2. Type “cpu (number)” where (number) is not between 1 and 5

Results:

1. The prompt replies with “I'm sorry, that wasn’t a proper number of CPUs (0 < number < 6)”

Settings 010

Description: Type a command that is not allowed in settings

Severity: Important

Instructions:

1. Go to settings
2. Type <non-existent command> level/amount/cpu

Results:

1. The prompt replies with “I'm sorry, that’s not a proper command.”

**User Gameplay System**

User Gameplay 001

Description: Cards initially dealt

Severity: Critical

Instructions:

1. Go to Start Game
2. Enter the number of chips you want to bet

Results:

1. System gives each player 2 cards

User Gameplay 002

Description: Hit to get another card

Severity: Critical

Instructions:

1. Go to Start Game
2. Enter the number of chips you want to bet
3. Type 1 to hit to get another card

Results:

1. The system deals another card

User Gameplay 003

Description: Quit game check

Severity: Workaround

Instructions:

1. Go to Start Game
2. Enter the number of chips you want to bet
3. Type 4

Results:

1. The system asks if you really want to quit the game.

User Gameplay 004

Description: Don’t quit game

Severity: Workaround

Instructions:

1. Go to Start Game
2. Enter the number of chips you want to bet
3. Type 4
4. Type “No”

Results:

1. The system continues the game

User Gameplay 005

Description: Quit game

Severity: Workaround

Instructions:

1. Go to Start Game
2. Enter the number of chips you want to bet
3. Type 4
4. Type “Yes”

Results:

1. The system removes the user from the game

User Gameplay 006

Description: User runs out of chips

Severity: Important

Instructions:

1. Play until you run out of chips

Results:

1. The system acknowledges the player’s defeat and gives the user a new

chip count of 500

User Gameplay 007

Description: User wins

Severity: Important

Instructions:

1. Win a game

Results:

1. The system says how many chips you’ve won.
2. Chip number increases by amount.

User Gameplay 008

Description: User End of game

Severity: Important

Instructions:

1. End a game of Blackjack
2. Choose 1, 2, or 3 to play another game, return to main menu, or quit respectively

Results:

1. The system loads the correct page accordingly

User Gameplay 009

Description: User loses by busting

Severity: Critical

Instructions:

1. The user’s cards go over 21

Results:

1. The system says you can’t hit after you’ve busted
2. The system tells you you’ve lost at the end of the game
3. The user loses the chips that they bet

User Gameplay 010

Description: User loses by CPU having greater score

Severity: Important

Instructions:

1. The CPU has card score closer but under 21 than user

Results:

1. The CPU wins the round
2. The system tells you you’ve lost at the end of the game
3. The user loses the chips they bet

User Gameplay 011

Description: Chips bet out of bounds

Severity: Critical

Instructions:

1. Start game
2. Place a chip bet that is less than 1
3. Place another chip bet that is more than 500

Results:

1. The system tells you can’t bet that amount and asks for a different number

User Gameplay 012

Description: Chips bet in bounds edge

Severity: Important

Instructions:

1. Start game
2. Place a chip bet at 1
3. Place a chip bet at 500

Results:

1. The system allows you to continue to play
2. Chips count is updated appropriately

User Gameplay 013

Description: Chips bet in bounds

Severity: Critical

Instructions:

1. Start game
2. Place a chip bet from 2 to 499

Results:

1. The system allows you to continue to play
2. Chips count is updated appropriately

User Gameplay 014

Description: Betting against yourself

Severity: Workaround

Instructions:

1. The system asks if you want to bet against yourself
2. You choose yes
3. You choose the amount you want to bet

Results:

1. The system allows you to bet against yourself

User Gameplay 015

Description: Tie game

Severity: Important

Instructions:

1. Win a game at the same time as a CPU

Results:

1. The system splits winnings between the user and CPU
2. The user receives half the of total chips that were bet

User Gameplay 016

Description: All users bust

Severity: Important

Instructions:

1. Hit until you have over 21 cards
2. The other CPUs and dealer bust as well

Results:

1. The winnings go to the dealer
2. The user loses the chips they bet

User Gameplay 017

Description: Stand for User

Severity: Critical

Instructions:

1. User decides to stand during their turn

Results:

1. The user is skipped for their turn and round is finished

User Gameplay 018

Description: Consecutive Hits

Severity: Important

Instructions:

1. Go to Start Game
2. Enter the number of chips you want to bet
3. Type 1 to hit to get another card
4. Type 1 again to get another card

Results:

1. The system deals another card after each hit

User Gameplay 019

Description: Quit in middle of game

Severity: Important

Instructions:

1. Go to Start Game
2. Enter the number of chips you want to bet
3. Choose 4 to quit the game
4. Start another game

Results:

1. Verify that the number of starting chips has been reset

User Gameplay 020

Description: Chip amount after consecutive games

Severity: Important

Instructions:

1. Go to Start Game
2. Enter the number of chips you want to bet
3. Play the game without quitting until you’ve won or lost
4. Start another game

Results:

1. Verify that the number of starting chips accounts for the previous games’ loss or winnings

User Gameplay 021

Description: Gameplay after consecutive games

Severity: Critical

Instructions:

1. Go to Start Game
2. Enter the number of chips you want to bet
3. Play the game without quitting until you’ve won or lost
4. Start another game
5. Run through the above tests again

Results:

1. The gameplay tests above all pass

User Gameplay 022

Description: Hit after stay

Severity: Important

Instructions:

1. Go to Start Game
2. Enter the number of chips you want to bet
3. Choose option 2 to stay
4. Choose option 1 to hit

Results:

1. The cpu does nothing to the user’s cards in the first round
2. Then in the second round it deals you a card

**AI Gameplay System**

AI Gameplay 001

Description: AI stops at 21 or close to 21

Severity: Critical

Instructions:

1. Start a Game
2. Play a round of Blackjack against any number of AI’s

Results:

1. The AI’s score at the end of the game is near 21 (+/- 4)
2. The AI does not keep hitting after they bust or stop when their score is low

AI Gameplay 002

Description: AIs are given cards

Severity: Critical

Instructions:

1. Start a Game
2. Play a few rounds, either hitting or staying

Results:

1. The AIs are dealt new cards when they choose to hit

**Aesthetics System**

Aesthetics 001

Description: The cards have different symbols

Severity: Workaround

Instructions:

1. Load and start a new game

Results:

1. When playing the game, the symbols for the cards are appropriate (there are only 4 6s of hearts or 4 3s of diamonds

Aesthetics 002

Description: Card images

Severity: Critical

Instructions:

1. Go to Start Game
2. Enter the number of chips you want to bet

Results:

1. The system deals cards that look like normal playing cards

Aesthetics 003

Description: Read input at correct times

Severity: Workaround

Instructions:

1. Start the Game

Results:

1. The input should only be read in when the user types in enter

**Higher Order Testing**

Higher Order Tests 001

Description: Numerous copies running

Severity: Workaround

Instructions:

1. Run 10 copies of the program at once

Results:

1. The programs running respond with no delays

Higher Order Tests 002

Description: Different Operating Systems

Severity: Critical

Instructions:

1. Run the program on OS X, Linux, and Windows operating systems

Results:

1. The program runs successfully in all the different operating systems

Higher Order Tests 003

Description: Different JVM Versions

Severity: Critical

Instructions:

1. Run the program on different JVM versions

Results:

1. The program runs successfully on the different JVM versions

Higher Order Tests 004

Description: Program runs for long periods of time

Severity: Critical

Instructions:

1. Leave the program running for 45 minutes

Results:

1. The program continues to run smoothly

Higher Order Tests 005

Description: Usability Testing

Severity: Critical

Instructions:

1. Have various non computer science students try to use the program

Results:

1. They shouldn’t have difficulty in understanding how the program works

Higher Order Tests 006

Description: Security testing

Severity: Important

Instructions:

1. Run a java decompiler on the program

Results:

1. The program won’t decompile properly or at all, so the source code cannot be seen