Going to Boston – Assignment 3 – Weronika Wawrzyniak 17643904

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| Requirement | Positive outcome | Output |
| Roll the three dice and take the highest number from each roll | x | "Your dices are: 2, 5, 1 and max is 5" |
| Each time you roll you lose a die | x | "Your dices are: 2, 5, 1 and max is 5"  "Your dices are: 1, 3 and max is 3"  "Your dice is: 4 and is a max" |
| Total up the three dice, the player with the highest value wins that round | X  (but only in match play mode) | "Weronika: Your dices are: 2, 5, 1 and max is 5"  "Your dices are: 1, 3 and max is 3"  "Your dice is: 4 and is a max"  "Mark : Your dices are: 1, 5, 2 and max is 5"  "Your dices are: 6, 3 and max is 6"  "Your dice is: 6 and is a max"  "Mark won this round! Yuppie! Mark now has 1 wins." |
| ‘Match play’: Players win a point each round. The first to 5 wins the game | x | "Weronika won this round! Yuppie! Weronika now has 5 wins." "------------------ Weronika won the game! Congratz! ------------------ " |
| ‘Score play’: Players add up their total after each round. The player with the highest score after 5 rounds wins the game | x | "~~~~~~~~~ Round 5! ~~~~~~~~"  …  "------------------ Weronika won the game!------------------ " |
| Two players | x | -Output: "1 Player or 2 players?"  -In 1 Player mode the player plays against the computer |
| Game allows, for example, restarting of the game when it is finished, | x | "Would you like to start again or quit?" |

Success paths (Following program instructions)

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| Task | Input | Output |
| 1 Player or 2 Players? | 1 | Match play or Score play? |
| 1 Player or 2 Players? | 2 | Match play or Score play? |
| Match play or Score play? | Match play | ~~~~~~~~~ Round 1! ~~~~~~~~ |
| Match play or Score play? | Score play | ~~~~~~~~~ Round 1! ~~~~~~~~ |
| Would you like to start again or quit? | Start again | 1 Player or 2 Players? |
| Would you like to start again or quit? | Quit | Program closes |

Failure paths

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| Task | Input integer | Output | Input string | Output |
| 1 Player or 2 Players? | Boundary value: 0 | You were supposed to enter integer 1 or 2!  Would you like to start again or quit? | "one" | You were supposed to enter integer 1 or 2!  Would you like to start again or quit? |
| Match Play or Score Play? | 1 | You have to choose between Match play and Score play.  Would you like to start again or quit? | "first" | You have to choose between Match play and Score play.  Would you like to start again or quit? |
| Would you like to start again or quit? | 1 | You have to choose between start again and quit.  Do you want to quit? Enter yes or no | "restart" | You have to choose between start again and quit.  Do you want to quit? Enter yes or no. |

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| Task | Expected result | Result |
| Choosing number of players | Input 1: String answerPlayers is parsed to int and set to 1. If loop for condition answerPlayers==1 enables user to choose game mode.  Input 2: String answerPlayers is parsed to int and set to 2. If loop for condition answerPlayers==2 enables user to choose game mode  Input other than 1 or 2: Console prints out warning that user needs to enter integer 1 or 2 and asks if player wants to start again or quit. | As expected |
| Choosing game mode | User is asked to choose between Match play and Score play.  Input Match play for answerPlayers==1: String answerPlay sets to Match play and by using if statement the code uses MatchGame method from Game class to start Match play.  Input Score play for answerPlayers==2: String answerPlay sets to Score play and by using if statement the code uses scoreGame method from Game class to start Score play.  Input Match play for answerPlayers==2: String answerPlay sets to Match play and by using if statement the code uses MatchGame2players method from Game class to start Match play for two players.  Input Score play for answerPlayers==2: String answerPlay sets to Score play and by using if statement the code uses scoreGame2players method from Game class to start Score play for 2 players.  Input mAtcH PlAY or SCORe pLay: Thanks to Readline().ToLower() program ignores size of letters and everything runs properly.  Input other than match play or score play: Thanks to exception handling the program outputs acceptable inputs and asks if players wants to start again or quit. | As expected, but with undesirable input, the exception handling was put in an incorrect place and not only did not display e.Message, but also stopped program. Changing exception's place in the code solved the problem. |
| Match game | In while loop with conditions meeting match game conditions number of round is displayed. Then program uses playGame method from class Play, which by using method throws from class Die displays Players' rolls and max from each roll. In next step it uses playGame2 method from class Play which does the same thing as playGame. At the end it uses Compare method from class Game to compare scores and outputs who won this round. Round number increases. When the while loop breaks, the winner is displayed by if statements comparing number of wins.  [For 2 Players method used are matchGame2Players are playGame and playGame3] | As expected |
| Score Play | While loop which meets conditions of score play the rounds number is displayed. Then it uses method playGame from class Play and adds score from playGame to scoresum and displays it. In next step the same this happends for player2 using playGame2 method and scoresum2 variable. When while loop breaks, the program uses CompareScores method from the same class to compare final scores and display the winner.  [For 2 Players method used are scoreGame2Players and playGame3] | As expected. |
| Roll | In Die class in methods throws, throws2 and throws2Players program uses collection List to store number randoms for each roll. After 3,2,1 rolls it displays number and calculates the max by using Math.Max. Methods return the sum of maximums. | As expected. |
| Quit or restart | After finishing the game player is asked wether he wants to start again or quit.  Input Start again:String answerRestart is set to start again and asnwerRestart is also set as a do while condition. WhenanswerRestart is start again, the loop continues.  Input quit: String answerRestart is set to quit and Thank you for playing is displayed. Then the program breaks.  Input for example STArt agAIn or QUiT:Thanks to ReadLine().ToLower() program ignores different size of letters.  Input other than start again or quit: Thanks to exception handling the program displays thhan player need to choose between start again or quit and asks if player wants to quit. Answering yes displays Thank you message and closes the program. Play again continues the loop. | As expected. |

Match play while loop Score play whie loop do while Main loop

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