Assignment Number 2

75 Points

Prerequisites: Completion of Assignment 1

References: Text chapter 3

Skills Required:

1. Loops
2. If statements
3. Random numbers

Task Specifications:

1. Create an application that plays the dice game called “Ship, Captain, and Crew.” You only need to simulate one complete play of the game.
2. The game is played with 5 dice.
   1. The game consists of at least one roll, and a maximum of 3 rolls.
   2. A “roll” means that the game simulates the outcome of throwing at least one die, and as many as five dice. The outcome of the roll is the set of new random numbers generated.
   3. The first roll is always five dice.
   4. The optional second and third rolls simulate the throwing of variable numbers of dice based on a rule that you encode into your program.
3. On the optional second and third rolls, your program will show the user how many dice will be rolled, based on the rules of the game. The user will choose to proceed with the optional rolls, or to stop the game.
4. The object of the game is to roll a “6” (the ship), a “5” (the captain), and a “4” (the crew). If, within three rolls, a player accumulates each of the three required dice, then the other two dice are added together to form a score. The goal is to have the highest possible score after (at most) 3 rolls.
5. The player must roll a “6” before (or in the same roll as) a “5”. And the “5” must come before (or at the same time as) the “4”
6. Display the results after each roll.
7. Your program will evaluate each dice roll, and keep the ship, captain, and crew as they are rolled. So, subsequent rolls may have fewer dice.
8. If, on the first or second roll, the player gets all three required dice: 6, 5, and 4 – they can choose to stop the game and keep their current score.
9. When the game ends, your program will display the result. The result is the score if the player has accumulated the ship, captain, and crew. Otherwise the result is zero.

Evaluation Criteria

1. All tasks must be completed to receive credit for this assignment
2. Program should not crash if the user enters incorrect data