LotteryNumbers

Filip Wieland

October 11, 2012

1 Purpose

The purpose of ths application is to aid the process of betting on lottery numbers. It has to generate six random numbers in range from 1 to 49 inclusive which must not repeat.

2 Method

My method is to use an ArrayList to store numbers from 1 to 49, then six times get a number at a random index and delete the number at that index to fully simulate the lottery behaviour.

3 Program description

3.1 Module Module1

This area contains global variables.

ballNumbers An ArrayList of numbers 1 to 49.

3.2 Main()

The program entry point will contain the main loop which will prompt the user to either generate a new set of random numbers or to exit the application.

1. Declare variable runloop of type Boolean, set it to True.
2. Repeat until runloop is False:
   (a) Call subroutine GenerateSixNumbers() → Generates the random numbers and prints them.
   (b) Ask the user for action (key press):
   (c) If the key pressed is N:
      i. Continue loop
   (d) If the key pressed is Q:
      i. Set runloop to False so that the loop would stop.
   (e) If the key pressed is unrecognised:

i. Inform the user of this fact.
ii. Do not generate new random numbers on next iteration.

3. Say "Goodbye"; exit program.

3.3 GenerateSixNumbers()

This subroutine will repopulate the BallNumbers ArrayList, then, for six times, it will take a number at a random index and remove it from ballNumbers. It will then add it to an array of random numbers and call PrintFormatted() with that array in order to print the numbers to console.

1. Reinitialise ballNumbers
2. Populate ballNumbers with numbers 1 to 49
3. Declare a variable lottery_numbers which is an array of six integers.
4. Repeat six times:
   (a) Get a random number between 0 and (Max index of BallNumbers) and store it into variable idx
   (b) Get a number from ballNumbers at index idx and store it into variable num
   (c) Remove the value at index idx from ballNumbers
   (d) Append num into array lottery_numbers.
5. Call subroutine PrintFormatted(with argument lottery_numbers) → Prints the generated numbers nicely.

3.4 PrintFormatted(an array of integers)

This subroutine accepts an array of integers called (variable called numbers) and prints them to the console separated by tabs.

1. Declare variable printnum of type String
2. Repeat for each element in numbers:
   (a) Convert the element to string, append a tab to said string, and append all that to printnum.
3. Print printnum to console.

4 Operation

After you run the program, six numbers will be generated, and you will be able to either generate new six or quit the program. After each generation you will be presented this choice.