ITEC 3150

Optional Assignment

Apple II Basic Programming

Build an Apple II Basic Program using tools described by Daniel Shiffman at [What was Coding Like 40 years ago?](https://www.youtube.com/watch?v=7r83N3c2kPw)

The program should work identically to the java program attached at the end of this document. You may use ChatGPT, if that helps!

You will need to present you work to the class when we return from spring break in a 3-5 minute presentation. Submit your source code to the D2L assignment area. NO EXPOSITIRY VIDEO is required.

Rubric

100 Program works as described and is demoed to the class. (If you neglect to compete the demo you will not receive a preplacement grade.

Your score will replace one lab activity grade.

The reference program:  
  
package org.example;  
  
import java.util.\*;  
  
public class RandomNameSelector {  
  
 public static void main(String[] args) {  
 Scanner scanner = new Scanner(System.*in*);  
 Random random = new Random();  
 List<String> names = new ArrayList<>();  
 List<Boolean> used = new ArrayList<>();  
 names.add("Bob"); used.add(false);  
 names.add("Pete"); used.add(false);  
 names.add("Mary"); used.add(false);  
  
 *prompt*();  
 label:  
 while (true) {  
 byte input = scanner.nextByte();  
 switch (input) {  
 case 'Q':  
 break label;  
 case 'U':  
 System.*out*.print("Enter a space-separated list of names: ");  
 String namesInput = scanner.nextLine();  
 names = List.*of*(namesInput.split(" "));  
 used = new ArrayList<Boolean>(Arrays.*asList*(new Boolean[10]));  
 break;  
 case 'L':  
 System.*out*.println("Name Eligible");  
 for (int i =0; i < names.size(); i++) {  
 System.*out*.printf("%-8s %b%n", names.get(i), !used.get(i));  
 }  
 break;  
 case 'R':  
 used = new ArrayList<Boolean>(Arrays.*asList*(new Boolean[10]));  
*// Collections.fill(used, Boolean.FALSE);* case 'P':  
 int index = *selectRandomName*(names, used, random);  
 if (index == -1) {  
 System.*out*.println("NO NAMES AVAILABLE");  
 } else {  
 String selectedName = names.get(index);  
 System.*out*.println("Selected name: " + selectedName);  
 used.set(index, true);  
 }  
 break;  
 default:  
 System.*out*.println("Unrecognized key");  
 break;  
 }  
 *prompt*();  
 }  
 }  
  
 private static void prompt() {  
 System.*out*.println("RANDOM NAME SELECTOR");  
 System.*out*.println("---------------------");  
 System.*out*.println("Press 'P' to pick a name");  
 System.*out*.println("Press 'L' to list");  
 System.*out*.println("Press 'U' to update the list");  
 System.*out*.println("Press 'R' to reset eligibilty");  
 System.*out*.println("Press 'Q' to quit");  
 System.*out*.println("Press any other key for a random name");  
 System.*out*.println("---------------------");  
 }  
  
 private static int selectRandomName(List<String> names, List<Boolean> used, Random random) {  
 int count = 0;  
 for (Boolean b : used) {  
 if (b) {  
 count++;  
 }  
 }  
 if (count == names.size()) {  
 return -1;  
 } else {  
 while (true) {  
 int index = random.nextInt(names.size());  
 if (!used.get(index)) {  
 return index;  
 }  
 }  
 }  
 }  
}