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import java.util.*;
import java.lang.*;
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public class CipherGame5 {
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    public static void main(String[] args) {
        // TODO Auto-generated method stub
        ArrayList<String> list2 = new ArrayList<String>(); // .....declare a list and typer of list
        Scanner input = new Scanner(System.in); // .....scanner for input
        Random random = new Random(); // .....random used for random generation
        Date date = new Date(); // .....did not use date in the end
        long score = 1000, begin = System.currentTimeMillis(); // .....used to calculate the score and get the
time
        boolean countdown = true; // .....helps to initiate the countdown for the score
        int normalModeRandom, userGameModeChoice = 0, randomParagrahPick, test = 0, count = 0; //.....declared
global integers
        String randomSentence1, randomSentence2, randomSentence3, help = "help", reset = "reset", normalMode = "Normal",
            testMode = "Test", userInput; // .....will use later to form paragraphs
        String alphabetUpper[] = { "A", "B", "C", "D", "E", "F", "G", "H", "I", "J", "K", "L", "M", "N", "O", "P", "Q",
            "R", "S", "T", "U", "V", "W", "X", "Y", "Z" }; // declared array with the alphabet in upper case
        char alphabetLower[] = { 'a', 'b', 'c', 'd', 'e', 'f', 'g', 'h', 'i', 'j', 'k', 'l', 'm', 'n', 'o', 'p', 'q',
            'r', 's', 't', 'u', 'v', 'w', 'x', 'y', 'z', }; // declared array with the alphabet in lower case
        String paragraph[] = new String[10]; //..... array of paragraphs

        paragraph[0] = "A kid finds a magical lamp. He rubs the lamp, and a genie appears and says, ♦What is your first wish?♦ The ki
d says, ♦I wish I were rich!♦ The genie replies, ♦It is done! What is your second wish, Rich?";
        paragraph[1] = "Three friends stranded on a deserted island find a magic lamp. Inside it is a genie who agrees to grant each f
riend one wish.♦I want to go home,♦ says the first friend. The genie grants her wish.♦I want to go home, too,♦ says the second frie
nd. And the genie sends her back home.♦I♦m lonely,♦ says the third friend. ♦I sure wish my friends were back here.";
        paragraph[2] = "While leaving a grocery store, a customer dropped a bag of flour. A Scout ran to pick it up.♦Don♦t bother, yo
ung man,♦ said the customer. ♦It♦s self-rising.♦";
        paragraph[3] = "A photon walks into a hotel. The desk clerk says, ♦Can we help you with your luggage?♦ The photon says, ♦No,
thanks. I♦m traveling light.♦";
        paragraph[4] = "A man was driving down the road when a policeman stopped him. The officer looked in the back of the man♦s truc
k and said, ♦Why are these penguins in your truck?♦ The man replied, ♦These are my penguins. They belong to me.♦ ♦You need to take
them to the zoo,♦ the policeman said. The next day, the officer saw the same guy driving down the road. He pulled him over again. He s
aw the penguins were still in the truck, but they were wearing sunglasses this time. ♦I thought I told you to take these penguins to t
he zoo!♦ the officer said. ♦I did,♦ the man replied. ♦And today I♦m taking them to the beach.\"";
        paragraph[5] = "A guy is sitting at home when he hears a knock at the door. He opens the door and sees a snail on the porch. H
e picks up the snail and throws it as far as he can.A year later, there♦s another knock at the door. He opens it and sees the same sna
il. The snail says, ♦What was that all about?♦";
        paragraph[6] = "What is red and smells like blue paint? Red paint!!!";
        paragraph[7] = "What♦s brown and sticky? not surprising its a stick!";
        paragraph[8] = "How did the hipster burn his mouth? He ate pizza not so cool";
        paragraph[9] = "How does NASA organize a party? Usually they go and planet!";

        do {

            System.out.println("Would you Like to play in normal Mode or test Mode" + "\n1.Normal ( type Normal )"
                + "\n2.Test ( type Test )");
            userInput = input.next(); //.....user input for user choice
```

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    } while ((!userInput.equalsIgnoreCase(normalMode)) && (!userInput.equalsIgnoreCase(testMode))); //.....
if the 2 given choices dont match then it keeps looping
    if (userInput.equalsIgnoreCase(normalMode)) { //..... normal mode
        randomParagrahPick = random.nextInt(10); //.....chooses random paragraph
        char char1[] = paragraph[randomParagrahPick].toCharArray(); //.....1st array used to store random p
aragraph
        char char2[] = char1.clone(); //..... 2-nd array clones the first array and is used as a reset
        int randomLetterArray[] = new int[26]; //.....used to generate cipher alphabet
        int randomLetter = 0; //..... letter used for array
        for (int i = 0; i < randomLetterArray.length; i++) { //..... loop to populate the array
            randomLetter = random.nextInt(26);
            randomLetterArray[i] = randomLetter; // change random letters for loop
        }

        for (int i = 0; i < randomLetterArray.length; i++) { //.....second and 3rd loop checks for duplicat
es and if they are found replaces them
            for (int j = 0; j < i; j++) {
                if (randomLetterArray[j] == randomLetterArray[i]) {
                    randomLetter = random.nextInt(26);
                    randomLetterArray[i] = randomLetter;
                    j = 0;
                }
            }
        }
        for (int i = 0; i < char1.length; i++) { // //.....Cipher alphabet is created
            if (char2[i] == 'A' || char2[i] == 'a') { //..... all letters of this kind will be replaced fro
m shufled array
                char2[i] = alphabetLower[randomLetterArray[0]];
            } else if (char2[i] == 'B' || char2[i] == 'b') { //..... all letters of this kind will be replac
ed from shufled array
                char2[i] = alphabetLower[randomLetterArray[1]];
            } else if (char2[i] == 'C' || char2[i] == 'c') { //..... all letters of this kind will be replac
ed from shufled array
                char2[i] = alphabetLower[randomLetterArray[2]];
            } else if (char2[i] == 'D' || char2[i] == 'd') { //..... all letters of this kind will be replac
ed from shufled array
                char2[i] = alphabetLower[randomLetterArray[3]];
            } else if (char2[i] == 'E' || char2[i] == 'e') { //..... all letters of this kind will be replac
ed from shufled array
                char2[i] = alphabetLower[randomLetterArray[4]];
            } else if (char2[i] == 'F' || char2[i] == 'f') { //..... all letters of this kind will be replac
ed from shufled array
                char2[i] = alphabetLower[randomLetterArray[5]];
            } else if (char2[i] == 'G' || char2[i] == 'g') { //..... all letters of this kind will be replac
ed from shufled array
                char2[i] = alphabetLower[randomLetterArray[6]];
            } else if (char2[i] == 'H' || char2[i] == 'h') { //..... all letters of this kind will be replac
ed from shufled array
                char2[i] = alphabetLower[randomLetterArray[7]];
            } else if (char2[i] == 'I' || char2[i] == 'i') { //..... all letters of this kind will be replac
ed from shufled array
                char2[i] = alphabetLower[randomLetterArray[8]];
            }
        }
    }
}

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        } else if (char2[i] == 'G' || char2[i] == 'g') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[9]];
        } else if (char2[i] == 'K' || char2[i] == 'k') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[10]];
        } else if (char2[i] == 'L' || char2[i] == 'l') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[11]];
        } else if (char2[i] == 'M' || char2[i] == 'm') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[12]];
        } else if (char2[i] == 'N' || char2[i] == 'n') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[13]];
        } else if (char2[i] == 'O' || char2[i] == 'o') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[14]];
        } else if (char2[i] == 'P' || char2[i] == 'p') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[15]];
        } else if (char2[i] == 'Q' || char2[i] == 'q') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[16]];
        } else if (char2[i] == 'R' || char2[i] == 'r') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[17]];
        } else if (char2[i] == 'S' || char2[i] == 's') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[18]];
        } else if (char2[i] == 'T' || char2[i] == 't') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[19]];
        } else if (char2[i] == 'U' || char2[i] == 'u') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[20]];
        } else if (char2[i] == 'V' || char2[i] == 'v') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[21]];
        } else if (char2[i] == 'W' || char2[i] == 'w') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[22]];
        } else if (char2[i] == 'X' || char2[i] == 'x') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[23]];
        } else if (char2[i] == 'Y' || char2[i] == 'y') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[24]];
        } else if (char2[i] == 'Z' || char2[i] == 'z') {///  
ed from shufled array  
            char2[i] = alphabetLower[randomLetterArray[25]];
        }
    }
}

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char char3[] = char1.clone();// .....used to compare arrays for game result
for (int i = 0; i < char1.length; i++) {
    char3[i] = Character.toUpperCase(char1[i]);// ..... Transform to uppercase to match array 4 for
requirements
}
char char4[] = char2.clone();// .....The actual array used from user to guess
do {
    System.out.println(
        "-----");
    System.out.println("CIPHER");
    System.out.println(
        "-----");
    System.out.println(
        "*Instructions* - Hello user try to decrypt the message below by replasing the letters one"
        + "\nletter at a time this is done by tying 2 letters, first type the letter you want to replace and "
        + "\nthen the letter you want to replace it with for example if you want to replace all the letters \"
i\""
        + "\n with the letter \"k\" just type \"ik\" Type \"HELP\" to get help with a random selection and "
        + "\ntype \"RESET\" to reset your sentence back to its original state");
    System.out.println(
        "-----");
    System.out.println("CIPHER ---- SCORE ( " + score + " )");
    System.out.println(
        "-----");
    int counter = 0;
    for (int i = 0; i < char1.length; i++) {
        int paragraphBrake = counter % 110;
        counter++;
        System.out.print(char4[i]);
        if (paragraphBrake > 80) {
            if (char2[i] == ' ' && paragraphBrake > 80) {
                System.out.println("");
                counter = 0;
            }
        }
    }
    test++;
    System.out.println("");
    userInput = input.next();
    if (countdown == true) {
        begin = System.currentTimeMillis();
    }
    long finish = System.currentTimeMillis();
    score = 1000 - ((finish - begin) / 1000);
    if (userInput.equalsIgnoreCase(reset)) { // resets the array back to its original
        for (int i = 0; i < char1.length; i++) {
            char4[i] = char2[i];
        }
    } else if (userInput.equalsIgnoreCase(help)) {
        while (count < 5) {
            randomLetter = random.nextInt(char1.length);
            char uncoded = char3[randomLetter], coded = char4[randomLetter];
            for (int i = 0; i < char1.length; i++) {
                if (char4[i] == coded) {

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        char4[i] = uncoded;
    }
    }
    count++;
    System.out.println(count);
    System.out.println(randomLetter);
    System.out.println(char1.length);
    break;
}
} else {
    char char5[] = userInput.toCharArray();
    char inputLower = Character.toLowerCase(char5[0]);
    char inputUpper = Character.toUpperCase(char5[0]);
    char outputUpper = Character.toUpperCase(char5[1]);
    for (int i = 0; i < char1.length; i++) {

        if (char4[i] == inputLower || char4[i] == inputUpper) {
            char4[i] = outputUpper;
        }

    }

    }

    countdown = false;
} while ((!Arrays.equals(char4, char3))); // while the 2 arrays don't match the game continues
System.out.println(
    "-----");
System.out.println("CIPHER----- YOU WON !!! ----- SCORE ( " + score + " )");
System.out.println(
    "-----");
} else if ((userInput.equalsIgnoreCase(testMode))) {
    int paragraphChoice;
    do {
        System.out.println(
            "-----");
        System.out.println("*** TEST MENU *** PLEASE CHOOSE A PARAGRAPH TO TEST 1-10 ");
        System.out.println(
            "-----");
        for (int i = 0; i < paragraph.length; i++) {
            System.out.println "[" + (i + 1) + "]" + " " + paragraph[i].substring(0, 50) + "...";
        }
        paragraphChoice = input.nextInt() - 1;
    } while (paragraphChoice > 10 || paragraphChoice < 0);

    char char1[] = paragraph[paragraphChoice].toCharArray();
    char char2[] = char1.clone();
    int randomLetterArray[] = new int[26];
    int randomLetter = 0;
    for (int i = 0; i < randomLetterArray.length; i++) {
        randomLetter = random.nextInt(26);
        randomLetterArray[i] = randomLetter; // change random letters for loop
    }

    for (int i = 0; i < randomLetterArray.length; i++) {

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        for (int j = 0; j < i; j++) {
            if (randomLetterArray[j] == randomLetterArray[i]) {
                randomLetter = random.nextInt(26);
                randomLetterArray[i] = randomLetter;
                j = 0;
            }
        }
    }
    for (int i = 0; i < char1.length; i++) { // //.....Cipher alphabet is created
        if (char2[i] == 'A' || char2[i] == 'a') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[0]];
        } else if (char2[i] == 'B' || char2[i] == 'b') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[1]];
        } else if (char2[i] == 'C' || char2[i] == 'c') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[2]];
        } else if (char2[i] == 'D' || char2[i] == 'd') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[3]];
        } else if (char2[i] == 'E' || char2[i] == 'e') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[4]];
        } else if (char2[i] == 'F' || char2[i] == 'f') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[5]];
        } else if (char2[i] == 'G' || char2[i] == 'g') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[6]];
        } else if (char2[i] == 'H' || char2[i] == 'h') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[7]];
        } else if (char2[i] == 'I' || char2[i] == 'i') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[8]];
        } else if (char2[i] == 'J' || char2[i] == 'j') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[9]];
        } else if (char2[i] == 'K' || char2[i] == 'k') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[10]];
        } else if (char2[i] == 'L' || char2[i] == 'l') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[11]];
        } else if (char2[i] == 'M' || char2[i] == 'm') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[12]];
        } else if (char2[i] == 'N' || char2[i] == 'n') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[13]];
        } else if (char2[i] == 'O' || char2[i] == 'o') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[14]];
        } else if (char2[i] == 'P' || char2[i] == 'p') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[15]];
        } else if (char2[i] == 'Q' || char2[i] == 'q') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[16]];
        } else if (char2[i] == 'R' || char2[i] == 'r') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[17]];
        } else if (char2[i] == 'S' || char2[i] == 's') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[18]];
        } else if (char2[i] == 'T' || char2[i] == 't') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[19]];
        } else if (char2[i] == 'U' || char2[i] == 'u') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[20]];
        } else if (char2[i] == 'V' || char2[i] == 'v') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[21]];
        } else if (char2[i] == 'W' || char2[i] == 'w') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[22]];
        } else if (char2[i] == 'X' || char2[i] == 'x') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[23]];
        } else if (char2[i] == 'Y' || char2[i] == 'y') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[24]];
        } else if (char2[i] == 'Z' || char2[i] == 'z') { //..... all letters of this kind will be replaced from shuffled array
            char2[i] = alphabetLower[randomLetterArray[25]];
        }
    }
}

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        char2[i] = alphabetLower[randomLetterArray[14]];
    } else if (char2[i] == 'P' || char2[i] == 'p') {//..... all letters of this kind will be replaced from shuffled array
        char2[i] = alphabetLower[randomLetterArray[15]];
    } else if (char2[i] == 'Q' || char2[i] == 'q') {//..... all letters of this kind will be replaced from shuffled array
        char2[i] = alphabetLower[randomLetterArray[16]];
    } else if (char2[i] == 'R' || char2[i] == 'r') {//..... all letters of this kind will be replaced from shuffled array
        char2[i] = alphabetLower[randomLetterArray[17]];
    } else if (char2[i] == 'S' || char2[i] == 's') {//..... all letters of this kind will be replaced from shuffled array
        char2[i] = alphabetLower[randomLetterArray[18]];
    } else if (char2[i] == 'T' || char2[i] == 't') {//..... all letters of this kind will be replaced from shuffled array
        char2[i] = alphabetLower[randomLetterArray[19]];
    } else if (char2[i] == 'U' || char2[i] == 'u') {//..... all letters of this kind will be replaced from shuffled array
        char2[i] = alphabetLower[randomLetterArray[20]];
    } else if (char2[i] == 'V' || char2[i] == 'v') {//..... all letters of this kind will be replaced from shuffled array
        char2[i] = alphabetLower[randomLetterArray[21]];
    } else if (char2[i] == 'W' || char2[i] == 'w') {//..... all letters of this kind will be replaced from shuffled array
        char2[i] = alphabetLower[randomLetterArray[22]];
    } else if (char2[i] == 'X' || char2[i] == 'x') {//..... all letters of this kind will be replaced from shuffled array
        char2[i] = alphabetLower[randomLetterArray[23]];
    } else if (char2[i] == 'Y' || char2[i] == 'y') {//..... all letters of this kind will be replaced from shuffled array
        char2[i] = alphabetLower[randomLetterArray[24]];
    } else if (char2[i] == 'Z' || char2[i] == 'z') {//..... all letters of this kind will be replaced from shuffled array
        char2[i] = alphabetLower[randomLetterArray[25]];
    }
}
char char3[] = char1.clone();
for (int i = 0; i < char1.length; i++) {
    char3[i] = Character.toUpperCase(char1[i]);
}
char char4[] = char2.clone();
do {
    System.out.println(
        "-----");
    System.out.println("CIPHER");
    System.out.println(
        "-----");
    System.out.println(
        "*Instructions* - Hello user try to decrypt the message below by replacing the letters one"
        + "\nletter at a time this is done by typing 2 letters, first type the letter you want to replace and "
        + "\nthen the letter you want to replace it with for example if you want to replace all the letters \"
i\"
        + "\n with the letter \"k\" just type \"ik\" Type \"HELP\" to get help with a random selection and "

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        + "\ntype \"RESET\" to reset your sentence back to its original state");
System.out.println(
    "-----");
System.out.println("CIPHER ---- SCORE ( " + score + " )");
System.out.println(char1);
System.out.println(char2);
System.out.println(char3);
System.out.println(char4);
System.out.println(
    "-----");
System.out.println(paragraph[paragraphChoice]);
System.out.println(
    "-----");
int counter = 0;
for (int i = 0; i < char1.length; i++) {
    int paragraphBrake = counter % 110;
    counter++;
    System.out.print(char4[i]);
    if (paragraphBrake > 80) {
        if (char2[i] == ' ' && paragraphBrake > 80) {
            System.out.println("");
            counter = 0;
        }
    }
}
test++;
System.out.println("");
userInput = input.next();
if (countdown == true) {
    begin = System.currentTimeMillis();
}
long finish = System.currentTimeMillis();
score = 1000 - ((finish - begin) / 1000);
if (userInput.equalsIgnoreCase(reset)) { // resets the array back to its original
    for (int i = 0; i < char1.length; i++) {
        char4[i] = char2[i];
    }
} else if (userInput.equalsIgnoreCase(help)) {
    while (count < 5) {
        randomLetter = random.nextInt(char1.length);
        char uncoded = char3[randomLetter], coded = char4[randomLetter];
        for (int i = 0; i < char1.length; i++) {
            if (char4[i] == coded) {
                char4[i] = uncoded;
            }
        }
        count++;
        System.out.println(count);
        System.out.println(randomLetter);
        System.out.println(char1.length);
        break;
    }
} else {
    char char5[] = userInput.toCharArray();

```



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        char inputLower = Character.toLowerCase(char5[0]);
        char inputUpper = Character.toUpperCase(char5[0]);
        char outputUpper = Character.toUpperCase(char5[1]);
        for (int i = 0; i < char1.length; i++) {

            if (char4[i] == inputLower || char4[i] == inputUpper) {
                char4[i] = outputUpper;
            }

        }

    }
    countdown = false;
} while (!Arrays.equals(char4, char3)); // while the 2 arrays don't match the game continues
System.out.println(
    "-----");
System.out.println("CIPHER----- YOU WON !!! ----- SCORE ( " + score + " )");
System.out.println(
    "-----");
}

}

}

```