152113022 VERİ YAPILARI LABORATUVARI LAB LAB WORK 11

24 December 2024

Objectives: unordered set, unordered multiset, multimap

Question 1. Ask the user to enter some text. This entered text can consist of a sentence or a single word; there is no specific length limit. After receiving the text from the user, write the code that finds the unique characters in this text. Print the characters you find on the screen.

Example Output:

```
Metin giriniz: Hello, how are you? Is everything ok?
Metindeki benzersiz karakterler: h H e l w o a r y u I s v t i n g k
```

Question 2. Write a program that keeps track of books borrowed from a school library. Ask the user to enter the book name and barcode number. Books and barcodes can be entered until the user enters "q". After entering "q", ask the user for the barcode number of a book and print the barcode number of the book and the number of times that book has been borrowed on the screen.

Hint! Ask the user to enter the book name and barcode number. Store the barcode numbers in unordered_multiset.

Example Output:

```
Kitap adi giriniz (Cikmak icin 'q' giriniz): sefiller
Barkod numarasi giriniz: 124
Kitap adi giriniz (Cikmak icin 'q' giriniz): sefiller
Barkod numarasi giriniz: 124
Kitap adi giriniz (Cikmak icin 'q' giriniz): sefiller
Barkod numarasi giriniz: 124
Kitap adi giriniz (Cikmak icin 'q' giriniz): sefiller
Barkod numarasi giriniz: 124
Kitap adi giriniz (Cikmak icin 'q' giriniz): vadideki-zambak
Barkod numarasi giriniz: 125
Kitap adi giriniz (Cikmak icin 'q' giriniz): vadideki-zambak
Barkod numarasi giriniz: 125
Kitap adi giriniz (Cikmak icin 'q' giriniz): q
Bir kitabin barkod numarasini giriniz: 124
124 barkod numarali kitap 3 kez odunc alinmistir.
```

Question 3. Write a grade tracking program for a school. The program must use a data structure to record each student's name and exam scores. At this point, decide which data structure is more appropriate.

The user must enter a student name and the student's grade. Check the "q" entry to finish entering the student name and grade.

Then ask the user to enter a quiz grade range. Print the names and grades of the students with grades in this range on the screen.

Example Output:

```
Microsoft Visual Studio Hata Ayıklama Konsolu
Ogrenci adi giriniz (Cikmak icin 'q' giriniz): Merve
Notu giriniz: 85
Ogrenci adi giriniz (Cikmak icin 'q' giriniz): Fatma
Notu giriniz: 95
Ogrenci adi giriniz (Cikmak icin 'q' giriniz): Sıla
Notu giriniz: 88
Ogrenci adi giriniz (Cikmak icin 'q' giriniz): Ali
Notu giriniz: 82
Ogrenci adi giriniz (Cikmak icin 'q' giriniz): Ahmet
Notu giriniz: 93
Ogrenci adi giriniz (Cikmak icin 'q' giriniz): Mehmet
Notu giriniz: 90
Ogrenci adi giriniz (Cikmak icin 'q' giriniz): Cemile
Notu giriniz: 80
Ogrenci adi giriniz (Cikmak icin 'q' giriniz): q
Not araligini giriniz (alt sinir ve ust sinir): 88 99
Not araligi 88 ile 99 arasindaki ogrenciler:
Ahmet - 93
Fatma - 95
Mehmet - 90
Sıla - 88
```

Good Lucks!