10. LUG'AT HAQIDA TUSHINCHA VA U BILAN ISHLASH



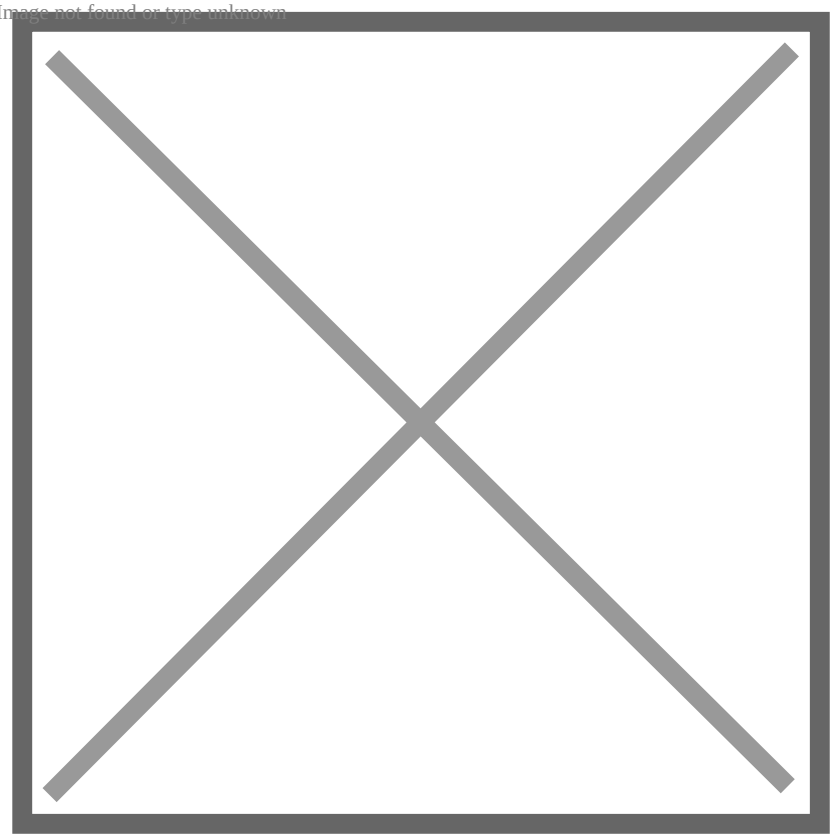
Lug’at Pathon dasturlash tilining turi hisoblanadi va u ikki qismdan tashkil topgan: kalit so'z va izoh (yoki tarjima). Lug’atlar {} qavsda keltiriladi. Sodda lug’atga misol keltiramiz:

talaba={’familiya’:’Aliyev’,’ismi’:’Salim’}

Bu yerda sodda talaba lug’atini yaratdik. Lug’atimiz ikki qismdan tashkil topgan. ‘familiya’ va ‘ismi’ lug’atning kalit so’zi hamda mos ravishda ‘Aliyev’ va ‘Salim’ kalit so’zlarning qiymati hisoblanadi. Kalit so'z va qiymat orasi ikki nuqta (:) bilan, lug'atdagi har bir juftlik esa vergul (,) bilan ajratiladi.

Pytonda lug'at *kalit so'z-qiymat* juftliklarining yi'ginidisi ekan. Lug'atdagi biror qiymatni ko'rish uchun unga kalit so'z orqali murojat qilamiz:

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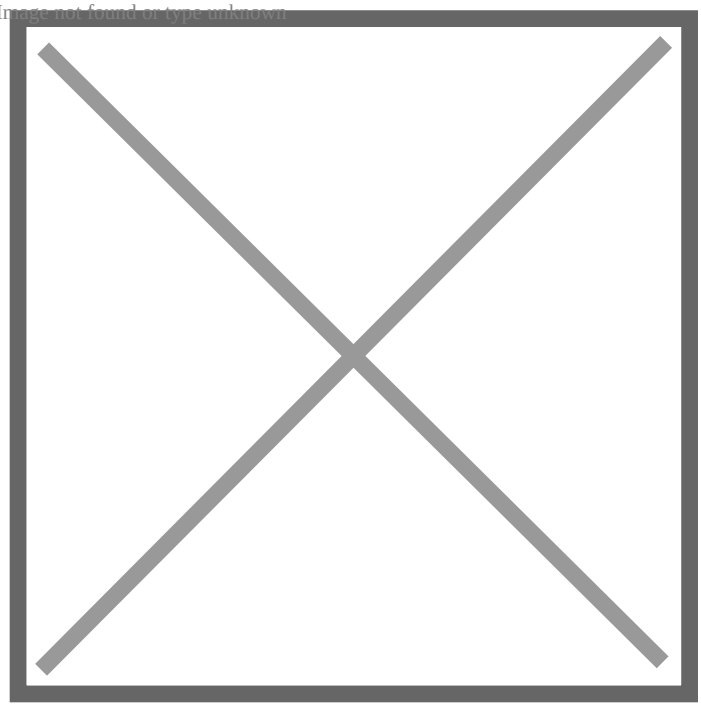


Aliyev

Salim

Lug'atdagi qiymatlar son (int, float), matn (string), ro'yxat (list, tuple) va hatto boshqa lug'at ham bo'lishi mumkin. Lug'aga yangi kalit so'z va qiymatlar qo'shishimiz ham mumkin. Yuqoridagi talaba nomli lu'gatga yana 3 ta yangi, yosh, kurs va fakultet nomli, kalit so'zlar va qiymatlar qo'shamiz:

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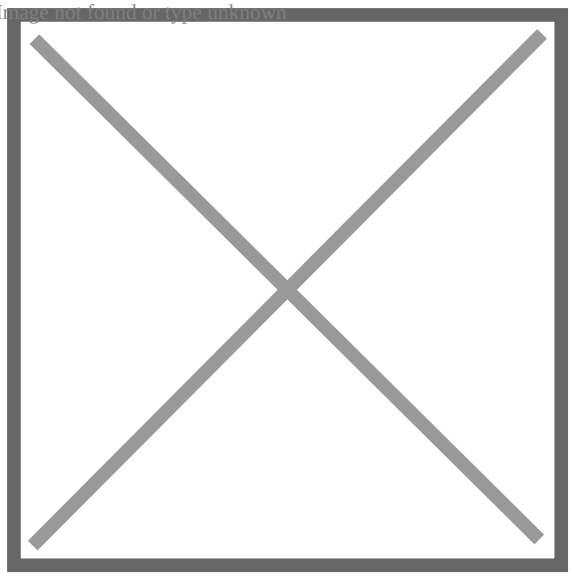
{'familiya': 'Aliyev', 'ismi':
18, 'kurs': 1, 'fakultet': 'an

Ba'zida dastur boshida bo'sh lug'at yaratib, dastur davomida lug'atga yangi ma'lumotlar kiritib borish talab qilinishi mumkin. Bunday holatda bo'sh lug'at quyidagicha yaratiladi:

talaba_0={}

dastur davomida lug’at qiymati kiritiladi.

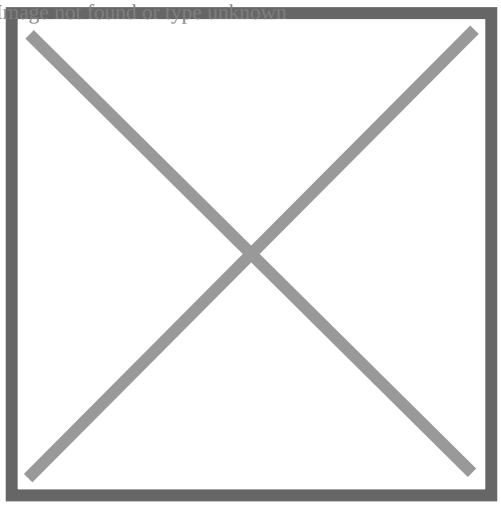
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{'familiya': 'Saidov Olim', 'yosh': 20
3, 'fakultet': 'aniq fanlar'}

Biror kalit so'zga tegishli qiymatni o'zgartirish esa quyidgachia amalga oshiriladi:

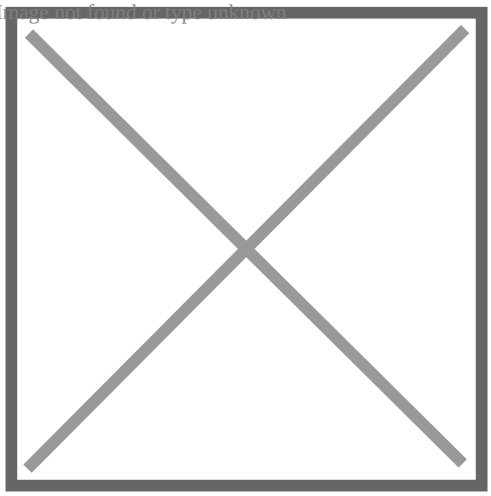
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{'familiya': 'Saidov Olim', 'yosh': 19
3, 'fakultet': 'aniq fanlar'}

Kalit so’z va qiymatini ochirish uchun del operatoridan foydalanamiz:

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{'familiya': 'Saidov Olim', 'yosh': 20
3}

Uzun lug'atlarni bir necha qatorga bo'lib yozishimiz ham mumkin. Yuqoridagi lug’atni quydagi ko’rinishda yozish mumkin:

talaba_0={

'familiya': 'Saidov Olim',

'yosh': 20,

'kurs': 3,

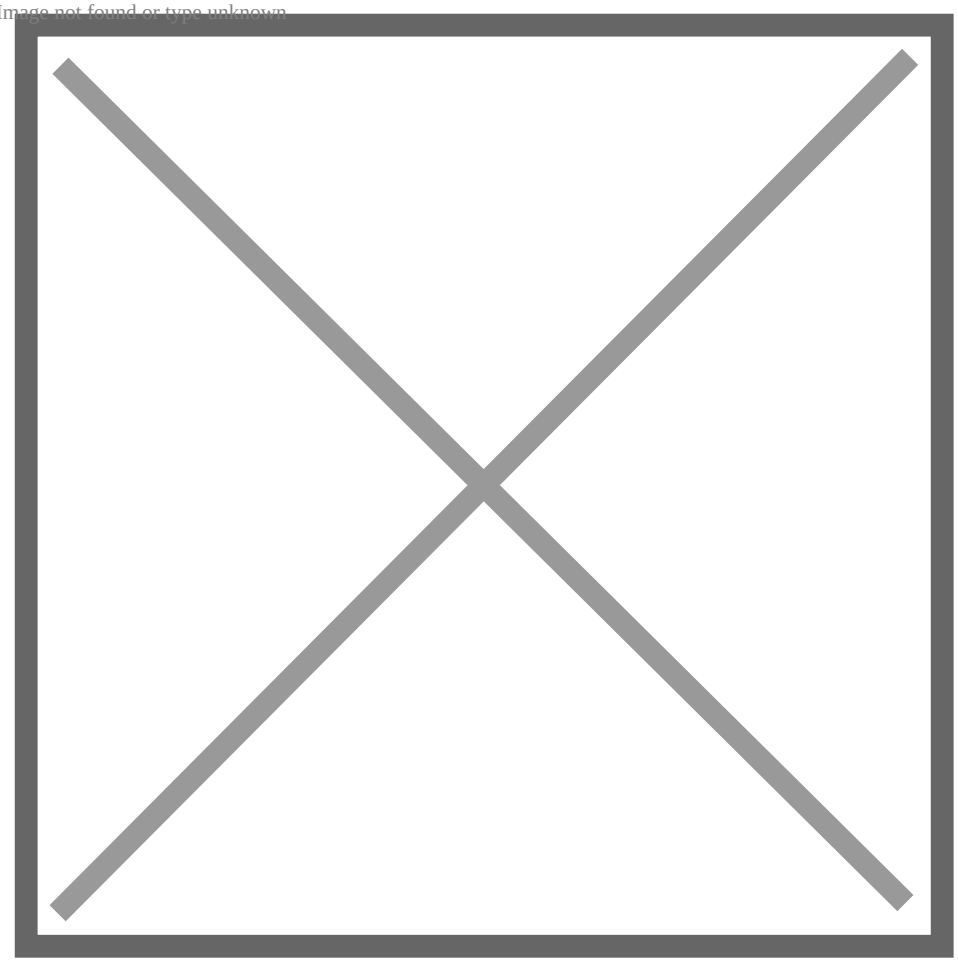
'fakultet': 'aniq fanlar'

}

1. .get() METODI

Biz shu vaqtgacha lug'atdagi qiymatlarni ko'rish uchun to'g'ridan-to'g'ri kalit so'z orqali murojat qilayotgan edik.

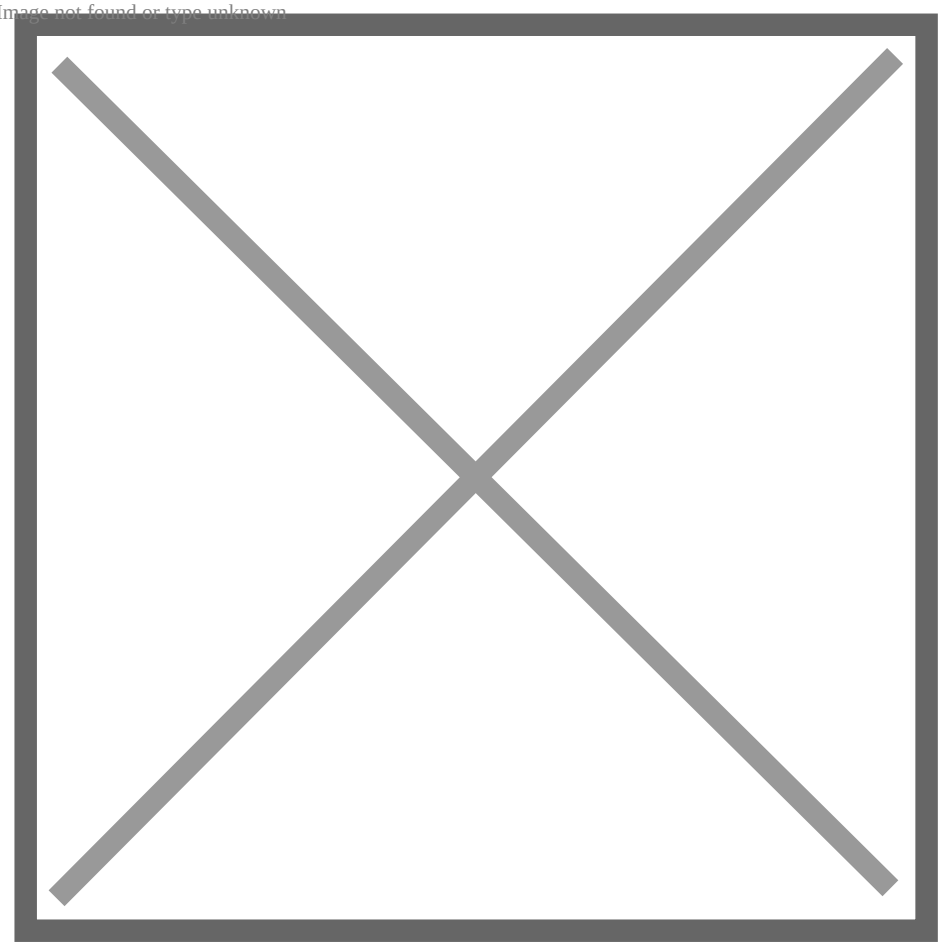
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Aniq va
talabasi

Bu usulning kamchiligi shundaki, agar lug'atda siz so'ragan kalit topilmasa, dastur **KeyError** xatoligi bilan to'xtab qoladi.

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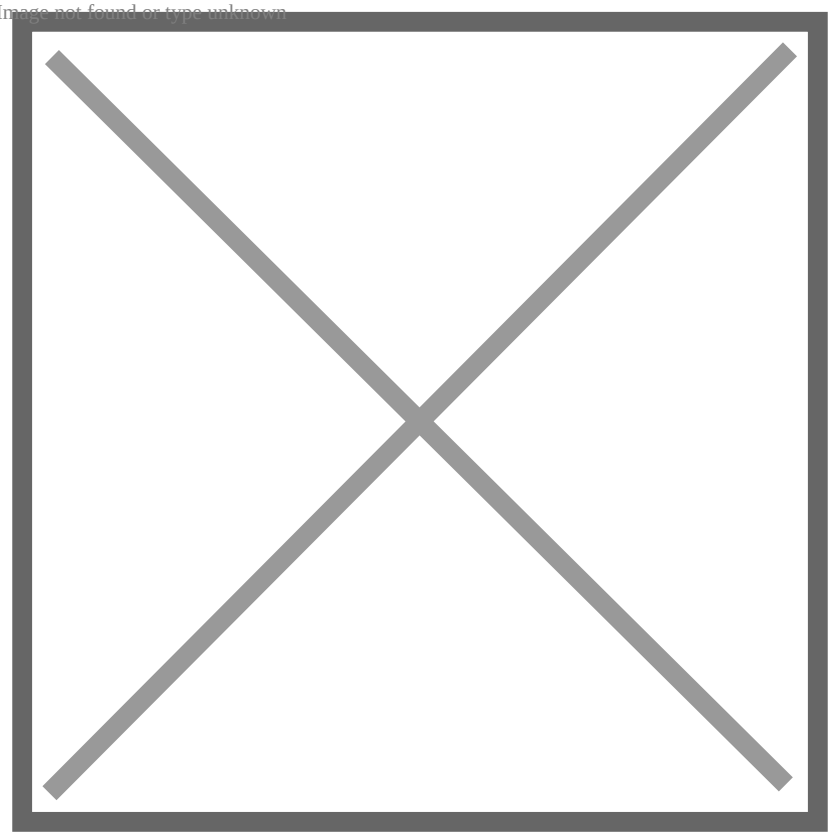
talaba=tala

KeyError: 'is

Lug'atda 'ism' kalit so'zi bo'lmagani uchun, yuqoridagi kod **KeyError** degan xatoni qaytardi. KeyError ham Run time error qatoriga kiradi.

Bunday xatoni kelib chiqmasligi uchun get() metodi yordamida lug'atga murojat qilish va mavjud bolmagan kalitning o'rniga biror xabar qaytarish mumlik.

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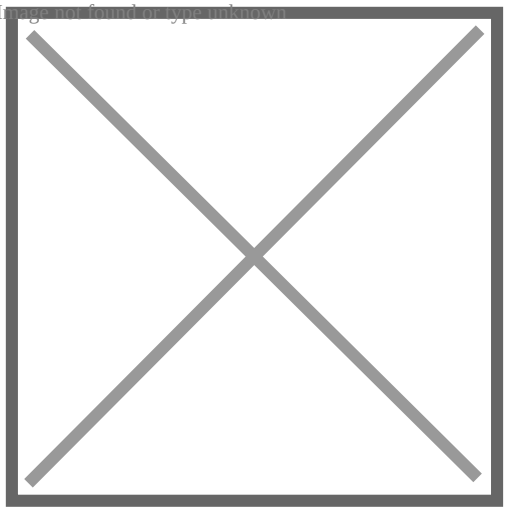


Bunday ism mav

2. .items() METODI

Ushbu metod yordamida lug'at ichidagi barcha kalit-qiymat juftliklarini ko'rishimiz mumkin.

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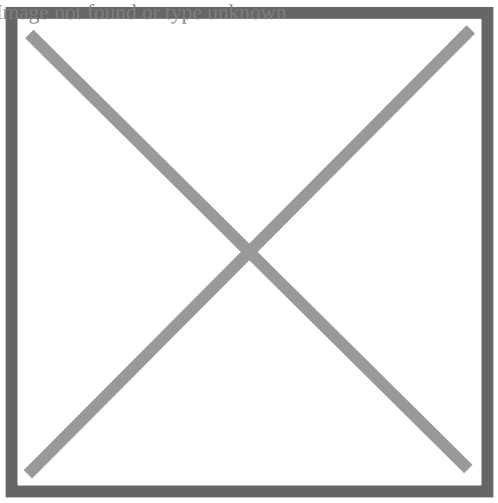


dict_items([('familiya', 'Saidov'), ('i
'Olim'), ('yosh', 20), ('kurs', 3), ('fa
'aniq fanlar')])

3. .keys() METODI

Agar lug'atdagi kalit so'zlarni ko'rish talab qilinsa, .keys() metodidan foydalanishimiz mumkin.

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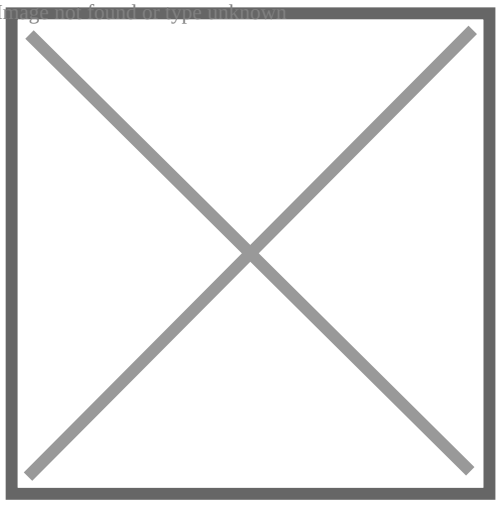


dict_keys(['familiya', 'ismi', 'yosh', '
'fakultet'])

4. .sorted() funksiya

Agar lug'at elementlarini alifbo bo'yicha chiqarish talab qilinsa, funktsiyasidan foydalanamiz.

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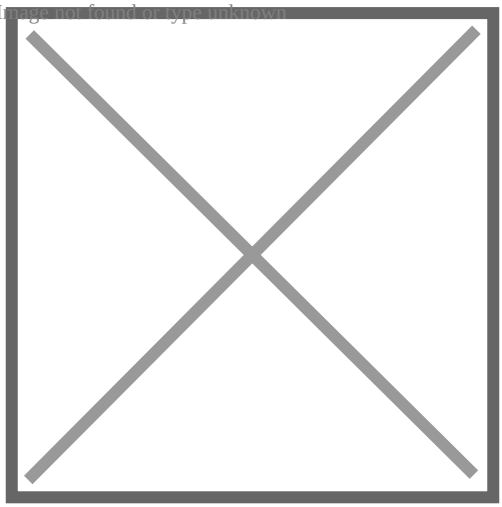


['fakultet', 'familiya', 'ismi', 'kurs', '

5. .values() METODI

Agar lug'atdagi qiymatlarni chiqarish talab qilinsa .values() metodidan foydalanishimiz mumkin.

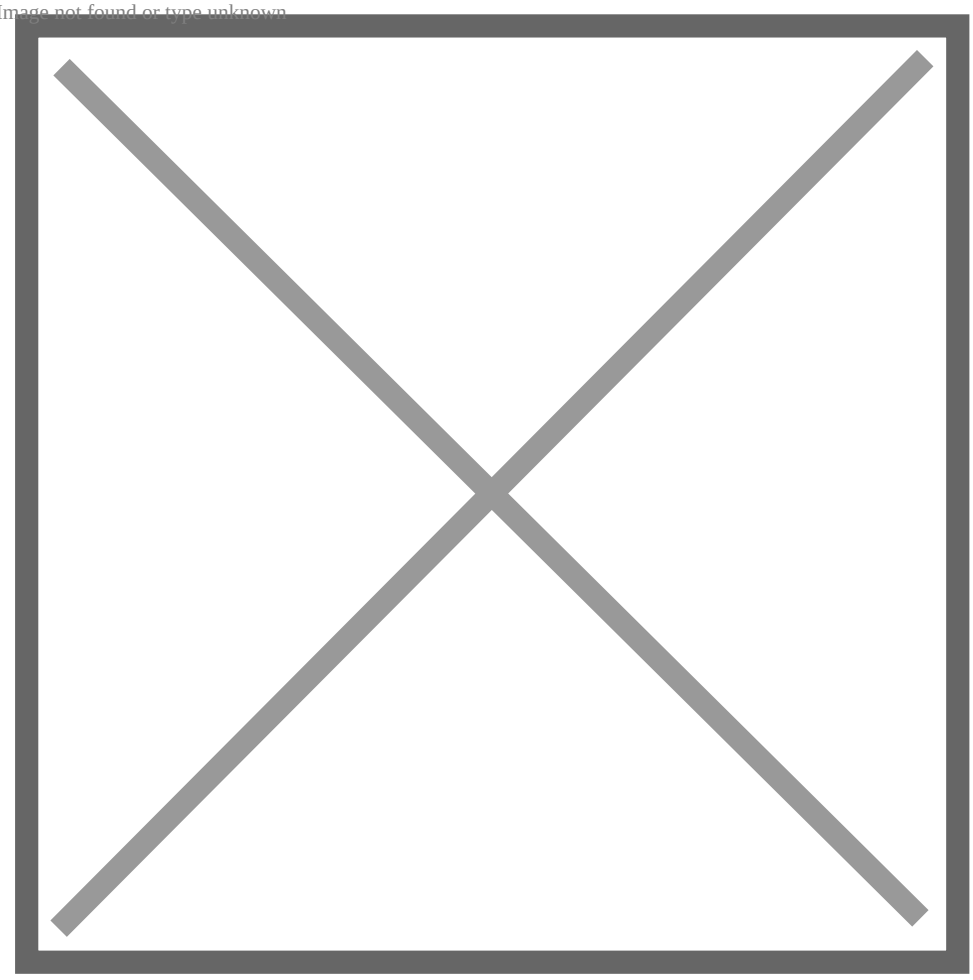
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dict_values(['Saidov', 'Olim', 20, 3, fanlar'])

Yuqoridagi usul bilan qiymatlarni chiqarganimizda, lug'atdagi barcha qiymatlar chiqib keladi. Agar, biror qiymat ko'p marta qaytarilsa, konsolga ham ko'p marta chiqib keladi.

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nokia 33

galaxy s

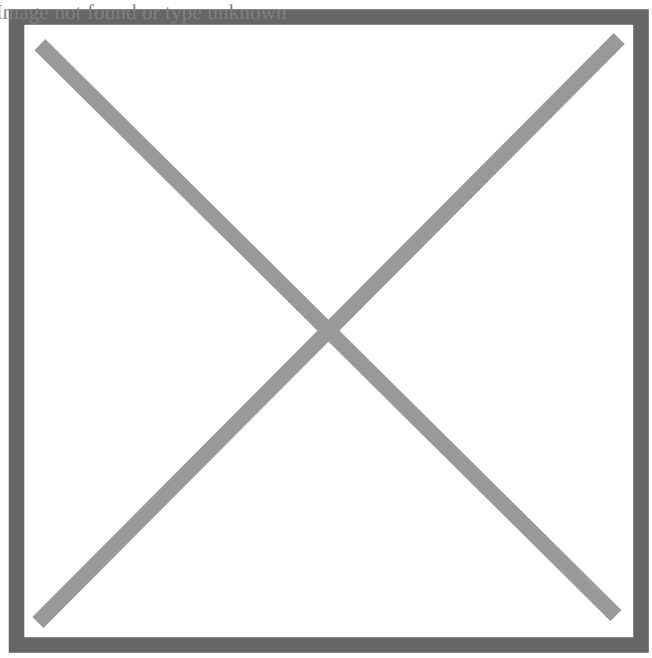
huawei p

iphone x

iphone x

6. **update()** metodi belgilangan kalit-qiymat juftlari bilan lug'atni yangilaydi

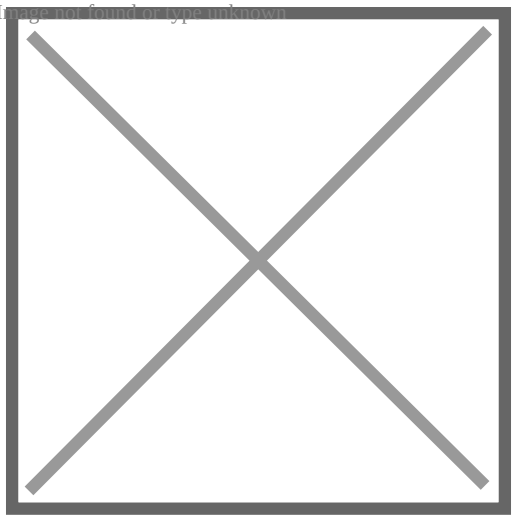
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{'nom': 'Python asoslari', 'mua
'M.Mamarajabov', 'yil': 2021, '
'nashriyot_nom': 'Sharq'}

8. pop() metodi belgilangan kalit yordamida element o'chiriladi

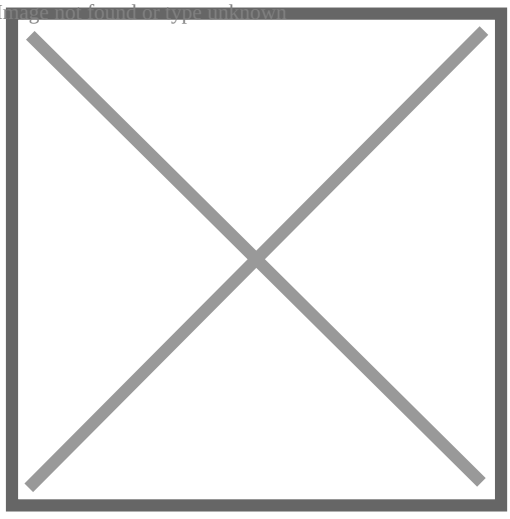
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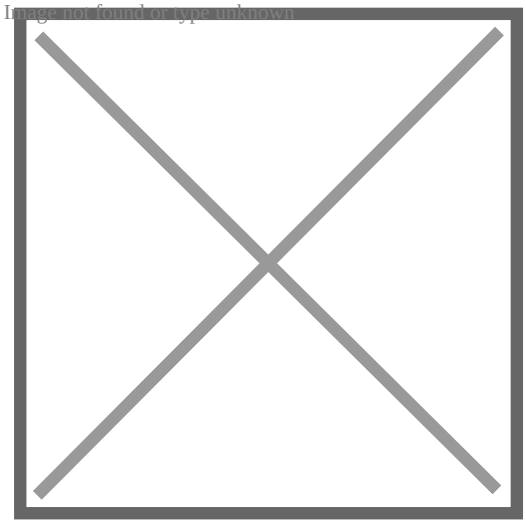
9. popitem() metodi oxirgi kiritilgan kalit-qiymat juftligini olib tashlaydi

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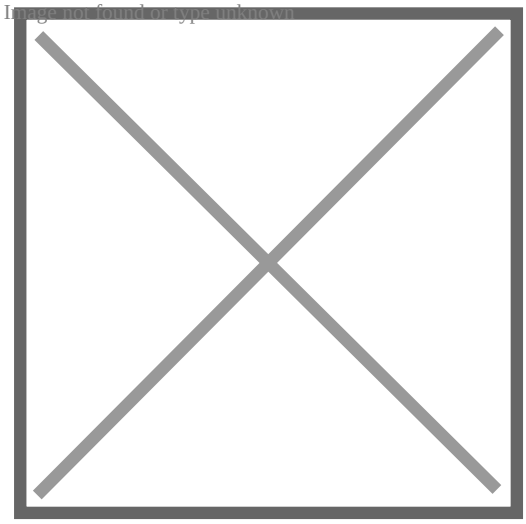
{'nom': 'Python asoslari', 'muallif':
'M.Mamarajabov', 'yil': 2021}

10. clear() metodi lug'atdan barcha elementlarni olib tashlaydi



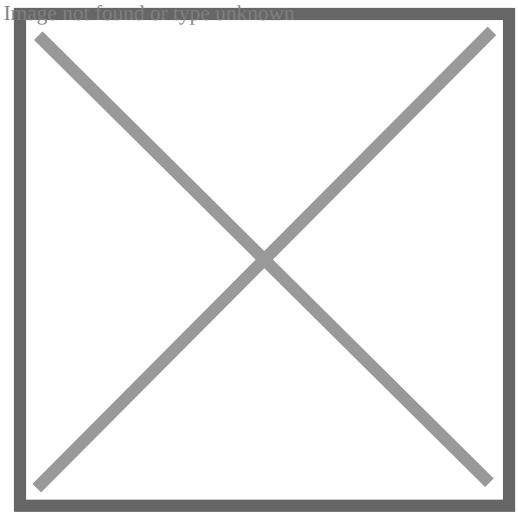
{}

11. copy() metodi lug'at nusxasini qaytaradi



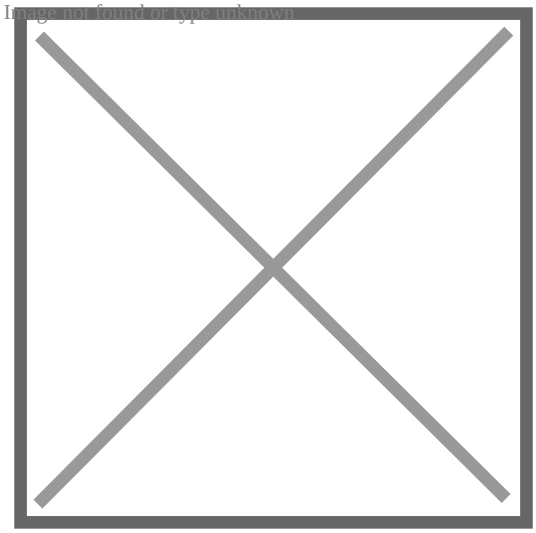
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'M.Mamarajabov', 'yil': 2021, 'adad

12. dict() funksiyasi lug'at nusxasini qaytaradi



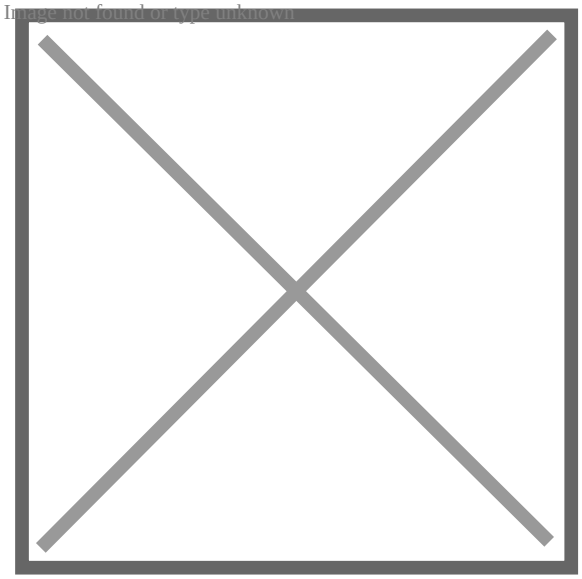
{'nom': 'Python asoslari', 'muallif':
'M.Mamarajabov', 'yil': 2021, 'adad

13. setdefault() metodi belgilangan kalit qiymatini qaytaradi. Agar kalit bo'lmasa: kalitni belgilangan qiymat bilan kiriting



2021

14.Pythonda ichma-ich lug’atlardan foydalanish mumkin



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'yil': 2021, 'adadi': 500}, 'kitob2': {'nom'

'muallif': 'R.Turayev', 'yil': 2020, 'adadi':

'kitob3': {'nom': 'PHP7', 'muallif': 'Sh.Mer

'yil': 2019, 'adadi': 250}}

Pythonda foydalaniladigan metodlar quyidagilarni tashkil etadi

Usul	Tavsifi
clear()	Lug'atdan barcha elementlarni olib tashlaydi
copy()	Lug'at nusxasini qaytaradi

fromkeys()	Belgilangan kalitlar va qiymati bo'lgan lug'atni qaytaradi
get()	Belgilangan kalit qiymatini qaytaradi
items()	Har bir kalit qiymat juftligi uchun tuple o'z ichiga olgan ro'yxatn qaytaradi
keys()	Lug'at kalitlari bo'lgan ro'yxatni qaytaradi
pop()	Belgilangan kalit yordamida element o'chiriladi
popitem()	Oxirgi kiritilgan kalit-qiymat juftligini olib tashlaydi
setdefault()	Belgilangan kalit qiymatini qaytaradi. Agar kalit bo'lmasa: kalitn belgilangan qiymat bilan kiriting
update()	Belgilangan kalit-qiymat juftlari bilan lug'atni yangilaydi
values()	Lug'atdagi barcha qiymatlar ro'yxatini qaytaradi

Eslatma. Amaliyot jarayonida lug’at ichida ro’yxat hamda lug’at ichida lug’at bilan ishlash talab etiladi. Bunday topshiriqlarni bajarishda yuqoridagi o’rganildan kabi bajariladi.

Mustaqil yechish uchun topshiriqlar

Masala 1. Kompyuter nomli bo’sh lug’at yarating.

Masala 2. Kompyuter nomli lug’at yarating va kalit so’zlar orqali o’zgartiring.

Masala 3. Kompyuter nomli lug’atga get metodi qo’llang.

Masala 4. Kompyuter qo’shimcha qurilmalari yomli lug’at yarating. Barcha kalitlar ro’yxatini chiqaring.

Masala 5. Kompyuter qo’shimcha qurilmalari nomli lug’at yarating va items() metodi yordamida lug’atni chop qiling.

Masala 6. Kompyuter qo’shimcha qurilmalari nomli lug’at yarating va lug’at tarkibini o’zgartiring.

Masala 7. Kompyuter qo’shimcha qurilmalari nomli lug’at yarating va alifbo bo’yicha saralang.

Masala 8. Kompyuter qo’shimcha qurilmalari nomli lug’at yarating va lug’at tarkibini o’zgartiring.

Masala 9. Mevalar nomli lug’at yarating kalit so’z orqali lug’at tarkibini tozalang.

Masala 10. Mevalar nomli lug’at yarating va oxirgi kiritilgan elementni olib tashlang.

Masala 11. Mevalar nomli lug’at yarating va mevalar2 yangi lug;atga nusxa ko’chiring.

Masala 12. Mevalar nomli lug’at yarating va dict() funksiyasi yordamida nusxalang.

Masala 13. Kompyuter va kompyuter ichki qurilmalari nomli ichma-ich lug’at yarating.

Masala 14. Mevalar nomli lug’at yarating va kalit so’z orqali lug’at elementlarini o’chiring.

Masala 15. Uquv qurollari nomli lug’at yarating va values() metodini yordamida amal bajaring.