2. Python uchun IDE muharrirlari



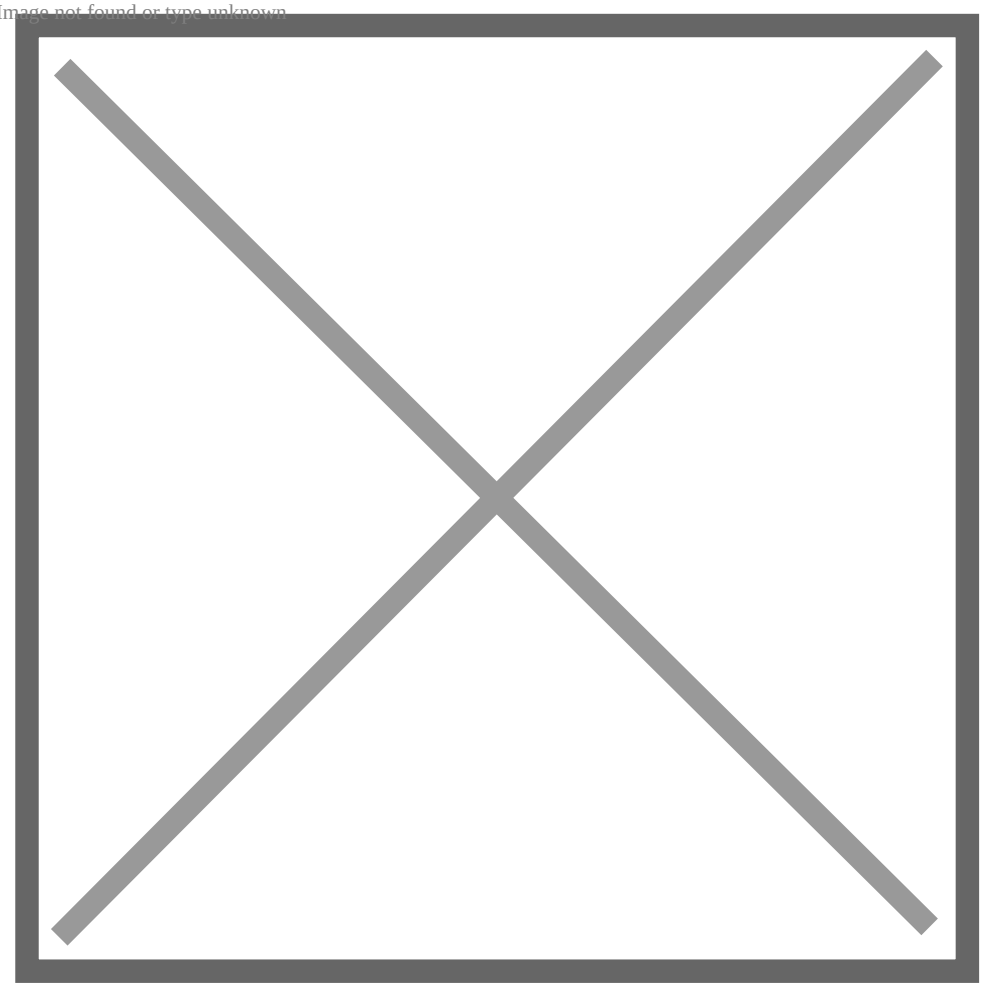
Python kompilyator rejimida ishlash qobiliyatiga ega, unda buyruqlar va operatsiyalar ular kiritilgandan so'ng darhol bajariladi. Python kompilyatori buyruq qatoriga python buyrug'ini kiritish orqali chaqiriladi. Kompilyator ishlashning namunasi (interfaol qobiq) rasm. 1.1 da keltirilgan. Ushbu rejimdan chiqish uchun < CTRL > + < D > tugmalar birikmasidan foydalaning.

Interfaol qobiqda buyruqlar va amallar >>> interpetator so'rovidan so'ng klaviaturadan kiritiladi. Har bir operatsiya tugmachasini bosish bilan yakunlanadi, shundan so'ng Python operatsiyani bajaradi va natija yoki xato xabari chiqaradi. Amaliyot natijasini biron bir o'zgaruvchiga bergandan so'ng, hech qanday natija chiqmaydi va uni ko'rish uchun o'zgaruvchining nomini yozib tugmachasini bosish kerak.

Biroq, interfaol qobiqda dastur fayllari bilan ishlash noqulay. Bundan tashqari, dasturning matnini uni bajarish natijalari bilan bir vaqtda ko'rish foydali bo'ladi. Bunday funksiyalarni integratsiyalashgan rivojlanish muhiti ta'minlaydi (IDE - Integrated Development Environment). IDE-ning afzalliklaridan biri bu sintaksisni ajratib ko'rsatishdir - buyruqlar, satrlar, raqamlar va dasturlar va ma'lumotlarning boshqa elementlari rang yoki shrift uslubida ta'kidlangan.

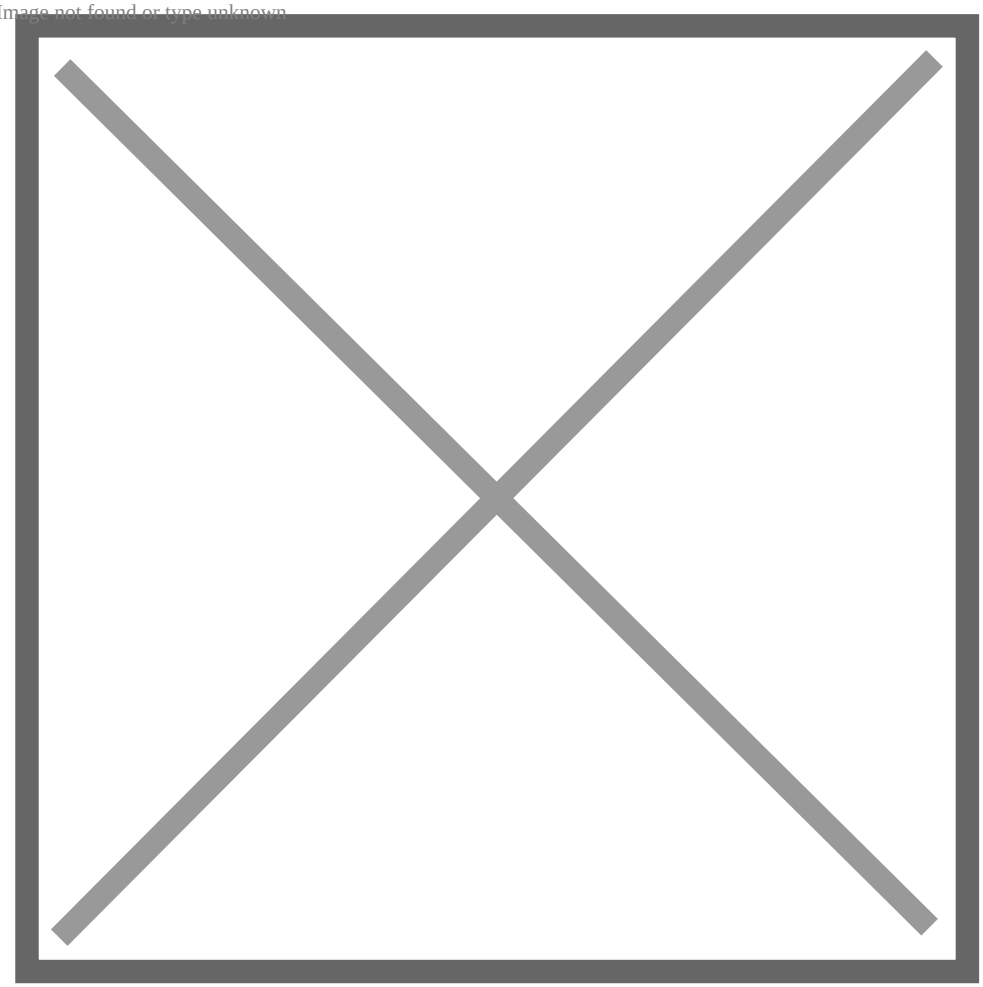
Python uchun eng oddiy IDE IDLE deb nomlanadi (1.2-rasm). Ushbu muhitda siz dastur matnlarini muharrir oynasida tahrirlashingiz va ularni ijro etish uchun ishlatishingiz mumkin. Bajarilish natijalari interfaol Python qobig'ining oynasi bo'lgan ijro oynasida aks etadi (ya'ni, bu oynada buyruqlar ham bajarilishi mumkin).

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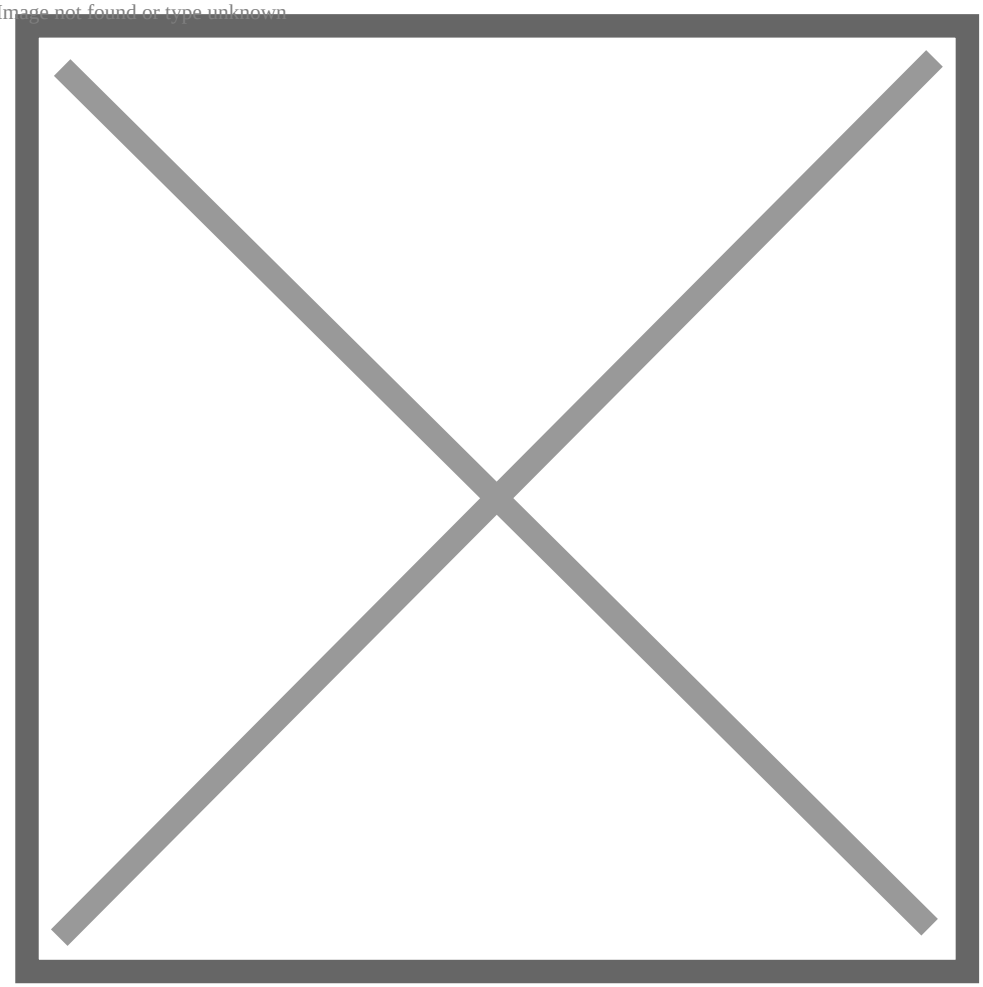
Rasm. 1.1. Python kompilyator sessiyasi

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Rasm. 1.2. IDLE IDE

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Rasm. 1.3. IDE Erik

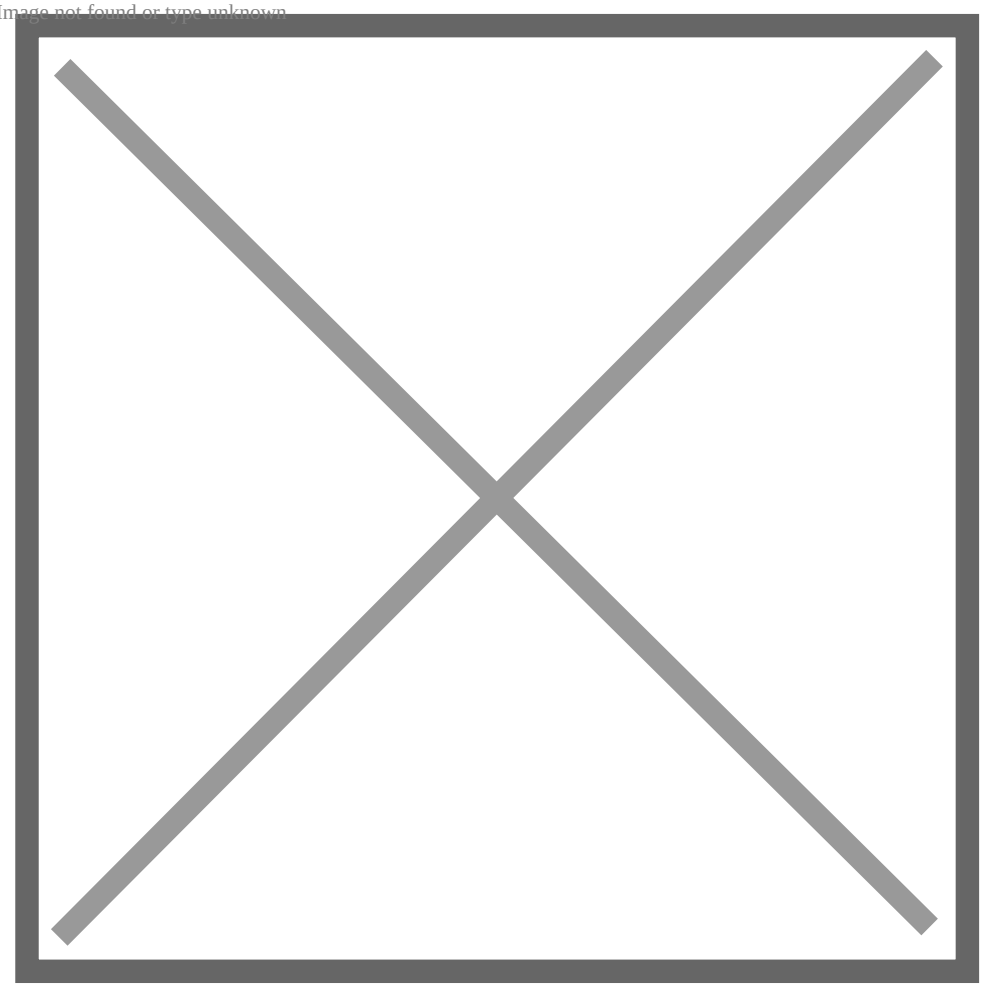
IDLE asosiy menyusidagi "Options" bandi sizga dastur boshlanganda muharrir oynasi yoki qobiq oynasini ochishini tanlashga imkon beradi. Redaktor oynasida yozilgan dasturni bajarish uchun tugmasini bosing. Agar dastur matni bilan fayl saqlanmasa, IDLE tegishli xabarni ko'rsatadi va faylni saqlashni taklif qiladi. Agar qobiq oynasi yo'q bo'lsa, u avtomatik ravishda ochiladi va dastur natijalarini ko'rsatadi.

IDLE ning kamchiliklari oddiy va mahalliylashtirilmagan interfeys hisoblanadi. Ammo afzalligi shundaki, IDLE dasturlari barcha umumiy operatsion tizimlarda mavjud.

Shuningdek, IDE Eric maxsus Python uchun ishlab chiqilgan (1.3-rasm), u dasturlar va yirik dasturiy ta'minot loyihalari uchun juda ko'p sozlash va disk raskadrovka qilish qobiliyatiga ega. Biroq, ushbu rivojlanish muhiti (aniqrog'i uning tashqi ko'rinishi) sezilarli darajada soddalashtirilishi va yangi boshlanuvchilar uchun tushunarli bo'lishi mumkin (1.4-rasm).

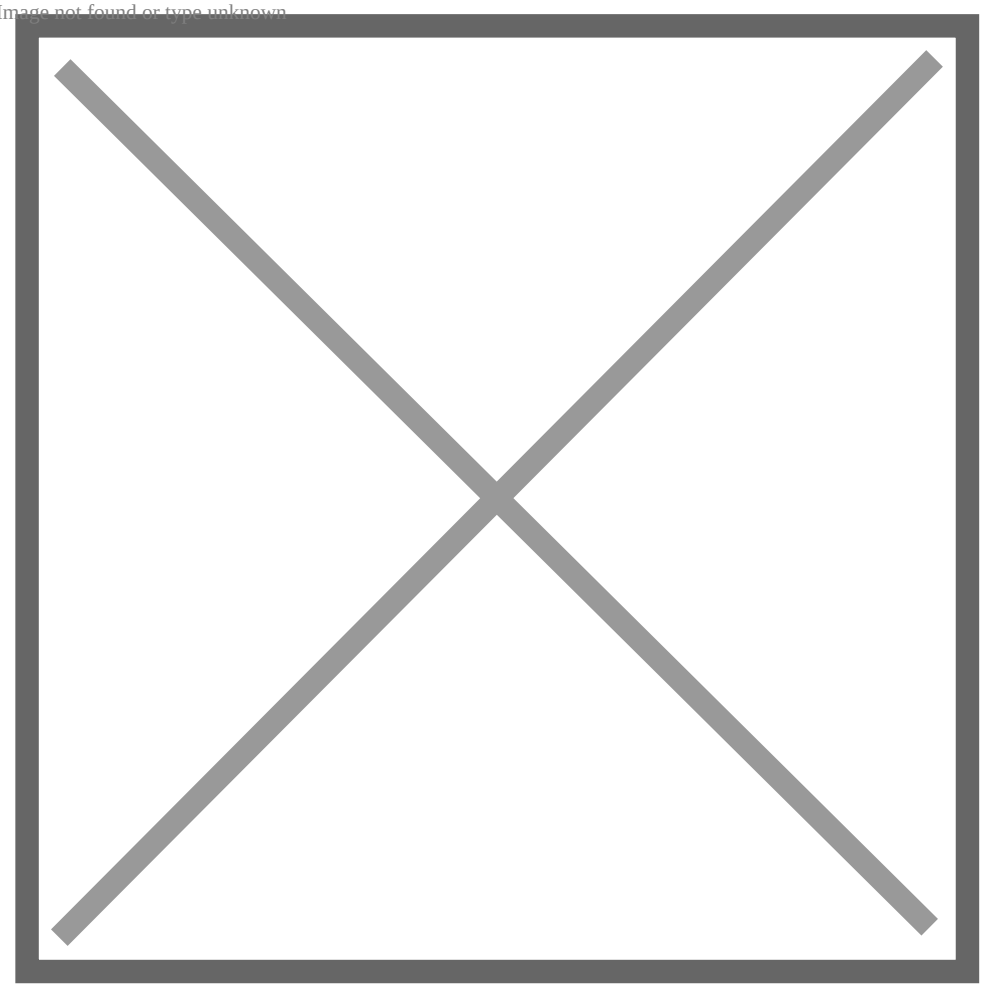
Shuni ta'kidlash kerakki, Erikda muharrir oynasi va ishga tushirish oynasi (interfaol qobiq oynasi) mavjud.

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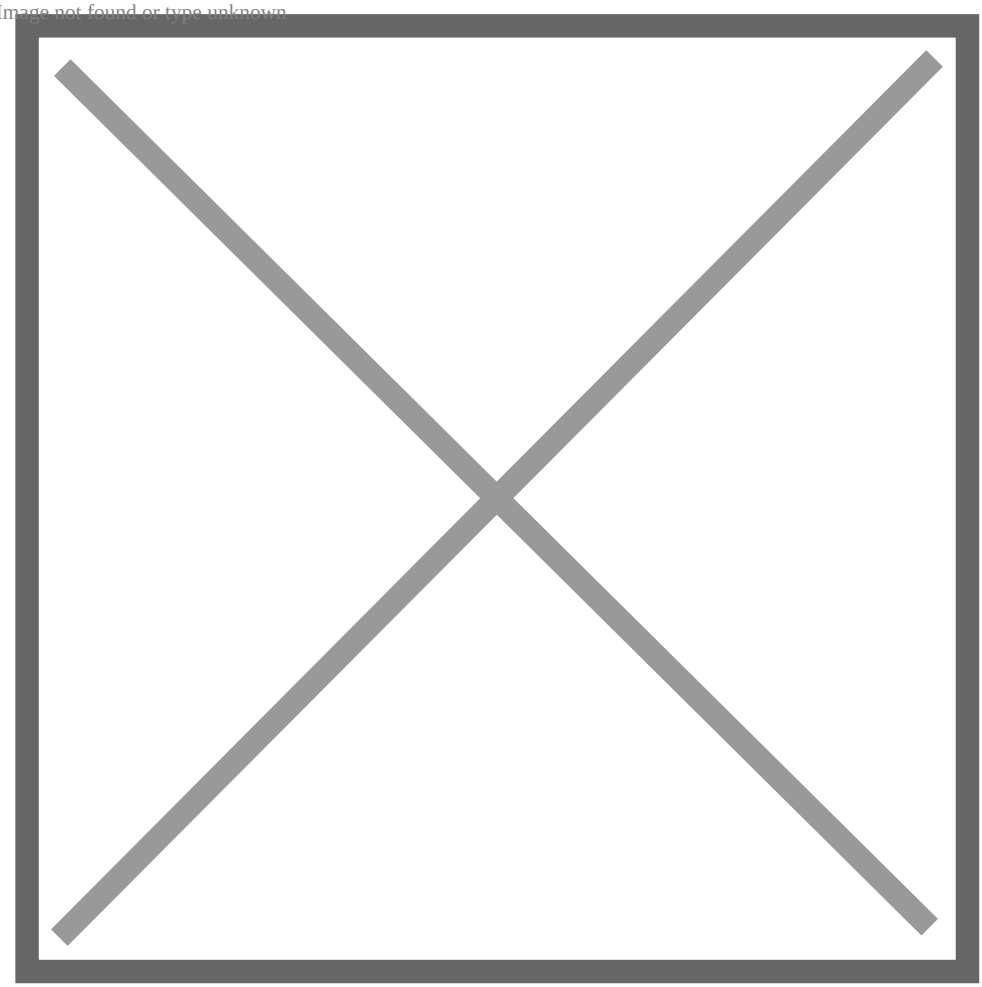
Rasm. 1.4. Soddalashtirilgan IDE Eric

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Rasm. 1.5. Asosiy oynasi IDE Geany

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Rasm. 1.6. Kate muharririda dastur matni va uni bajarish jarayoni

Python- dan tashqari siz boshqa ko'plab dasturlash tillari bilan ishlashingiz mumkin bo'lgan cross-platformali IDE Geany (1.5-rasm) ham qiziqish uyg'otadi.

Bundan tashqari, Python dasturlarini (va boshqa ko'plab dasturlash tillarini) yaratish va bajarish uchun siz dasturchilar uchun KDE integratsiyalangan muhitining bir qismi bo'lgan Kate matn muharrirlaridan foydalanishingiz mumkin (1.6-rasm). Dasturni ishga tushirish uchun Kate terminal oynasida python file_name.py buyrug'idan foydalaning.

ANACONDA platformasi

Kod yozish uchun avvalo kompyuterimizda Python o'rnatilgan bo'lishi kerak. Biz buning uchun Pythonni to'g'ridan-to'g'ri o'rnatib emas, balki

Anaconda platformasini o'rnatish orqali amalga oshiramiz.

Bunday qilishimizning bir nechta sabablari bor:

- Anaconda Python nisbatan tezroq
- Anaconda biz uchun kerakli bo'lgan qo'shimcha dasturlar va muhim paketlar bilan birga o'rnatiladi
- Anacondada turli dasturlar (loyihalar) uchun alohida muhit yaratish mumkin

Repl.it

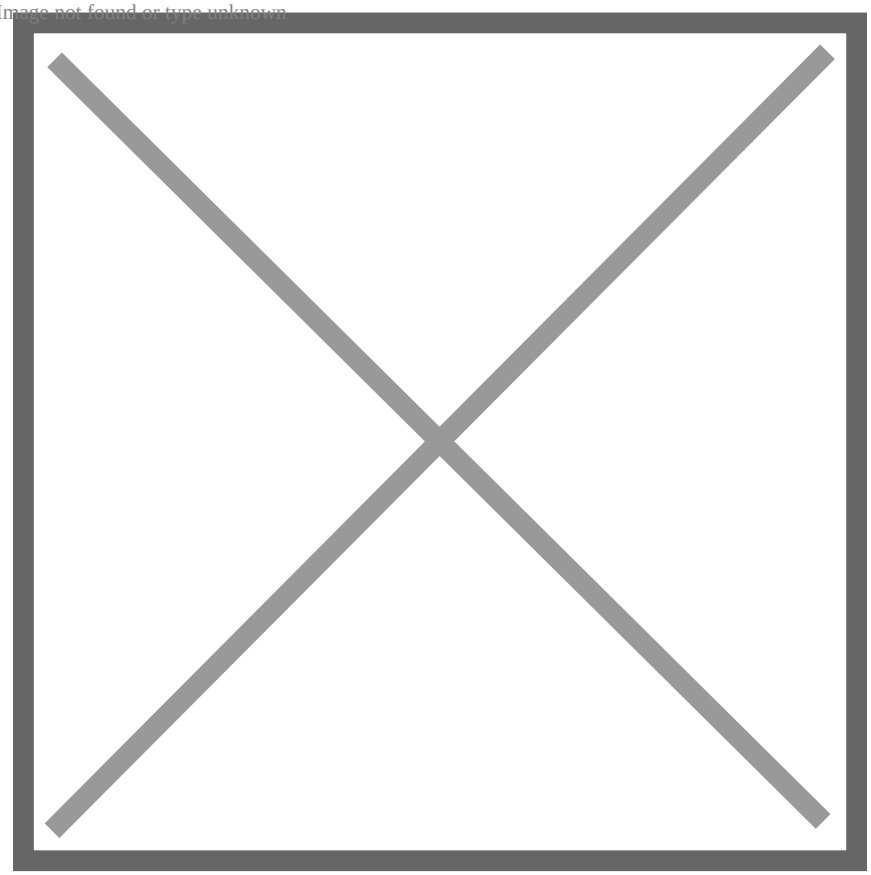
Agar siz turli sabablarga ko'ra kompyuteringizga Python o'rnata olmasangiz, repl.it sahifasi yordamida Python dasturlarini to'g'ridan-to'g'ri brauzerda ham yozishingiz mumkin.

ANACONDA platformasini o’rnatish

Anaconda platformasini o'rnatamiz.

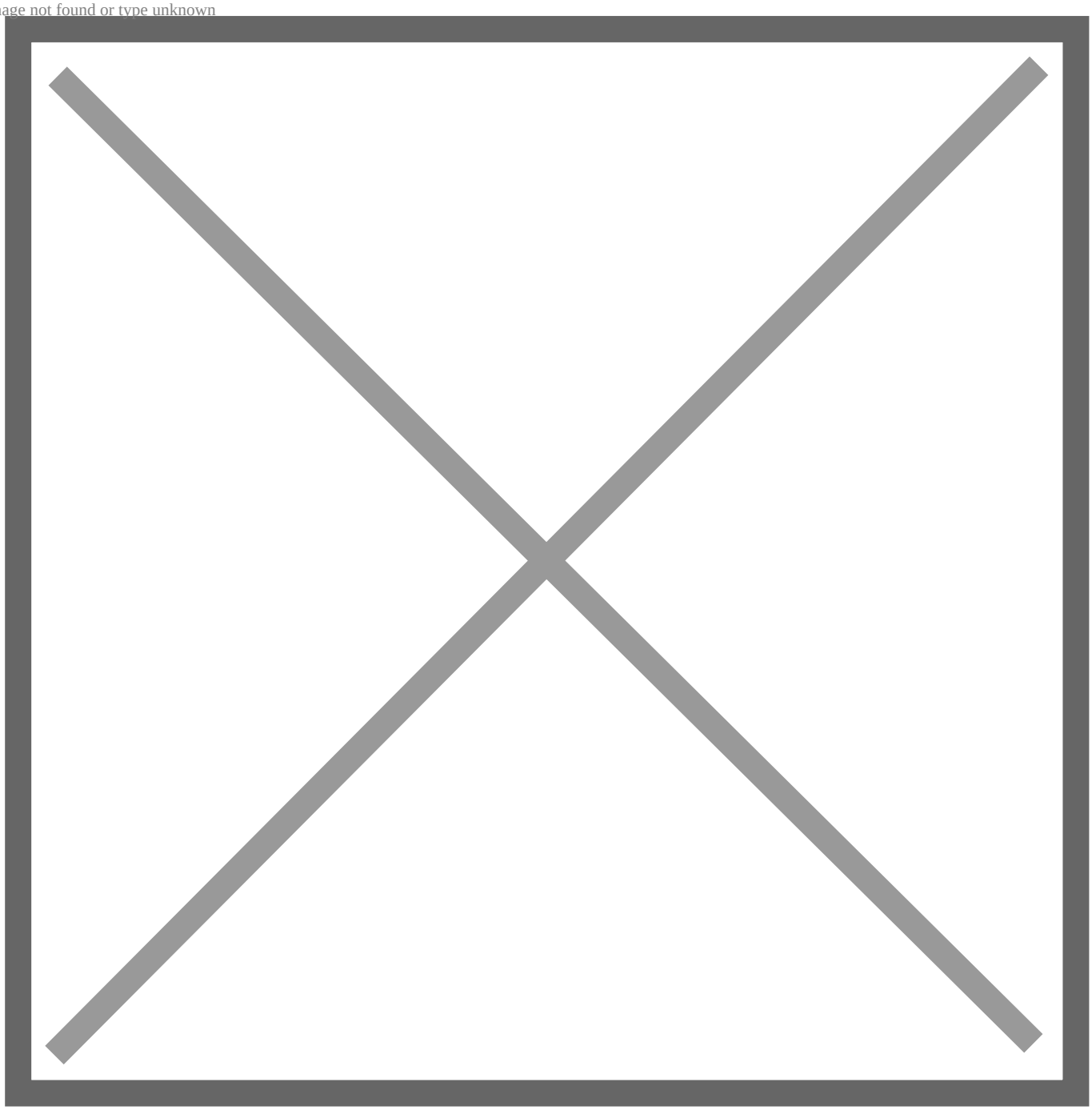
1. Kompyuterimizda brauzerni ochib, https://www.anaconda.com/products/individual sahifasiga kiramiz va **Download** tugmasini bosamiz.
2. Kompyuterimizda o'rnatilgan operatsion tizim uchun mos keluvchi faylni yuklab olamiz (*agar yuqoridagi jumlani tushunmagan bo'lsangiz, katta ehtimollik bilan sizda 64-Bit Windows operatsion tizimi o'rnatilgan*)

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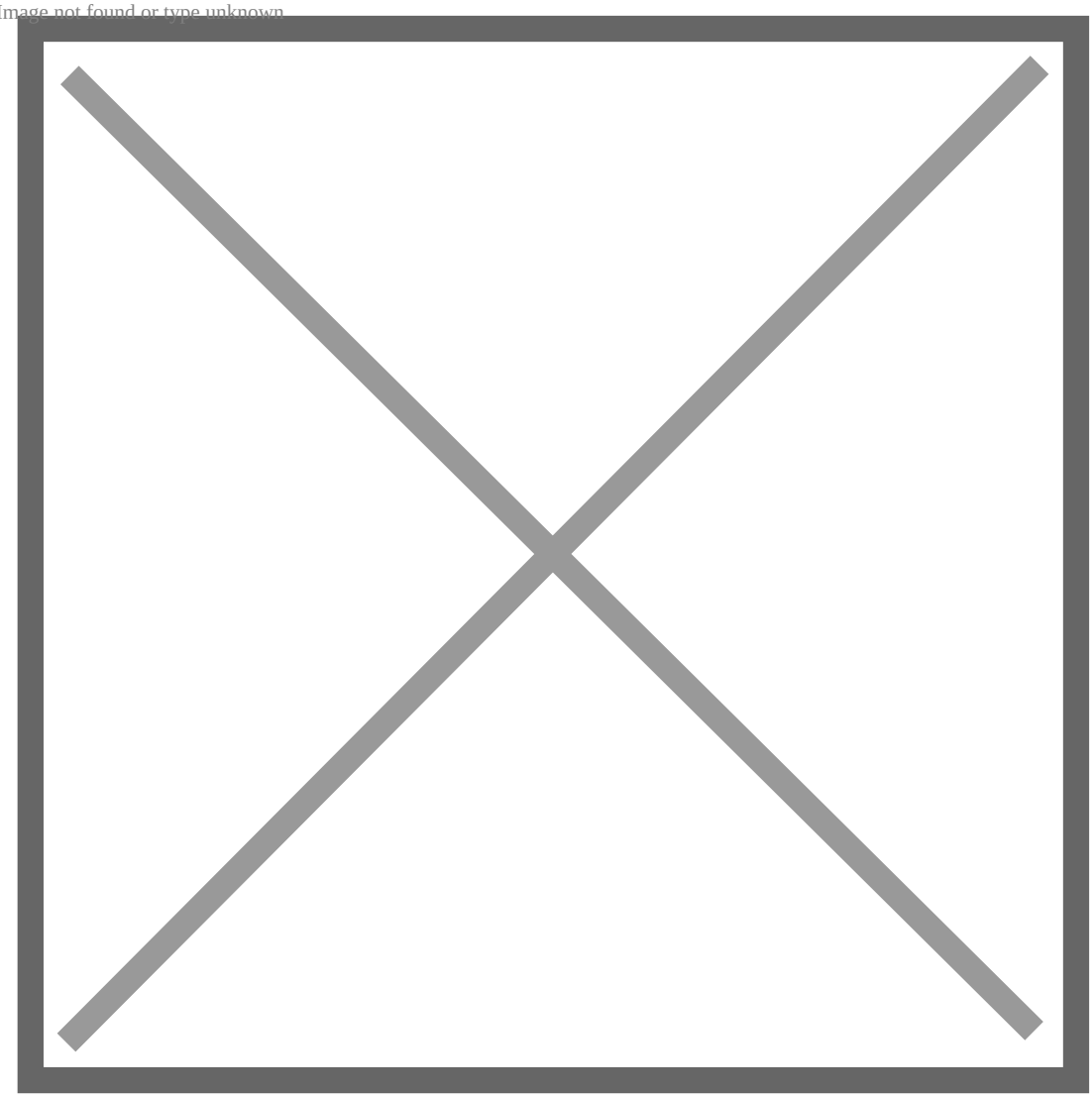
- Yuklab olingan faylni ochamiz, va o'rnatamiz *(hech qanday o'zgartirishlarga hojat yo'q, NEXT, ACCEPT, FINISH tugmalarini bosib turamiz xolos)*

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- Anaconda o'rnatilganidan so'ng Windowsdagi dasturlar orasida Anaconda Navigator dasturini ochamiz.

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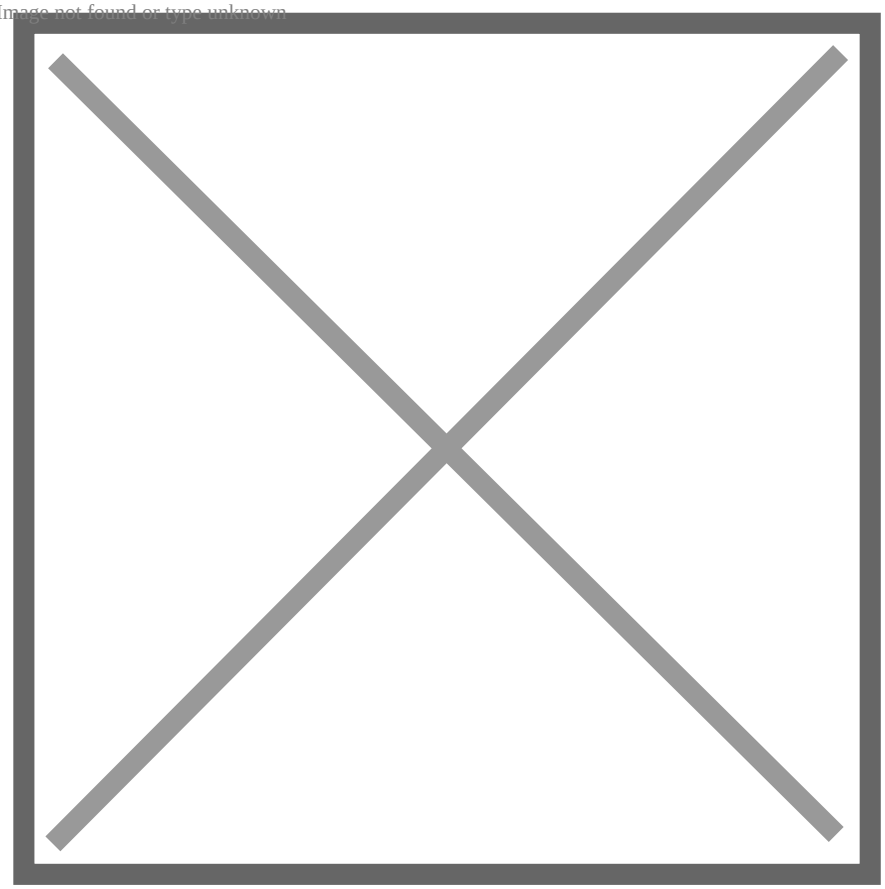


SPYDER IDE

Spyder — Python tilida kod yozich uchun mo'ljallangan dasturlash muhiti va bizning asosiy ish qurolimizdir. Ingliz tilida dasturlash muhiti - **IDE** (Integrated Development Environment) deyiladi.

Dastur yozish uchun yuzlab turli muhitlar bor. Aslida, umuman muhitsiz, oddiy matn redaktorida ham kod yozishimiz mumkin edi. Lekin Spyder va unga o'xshash muhitlar dasturchilarning ishini yengillatishga qaratilgan. Muhitlar turli qo'shimcha funktsiyalar va foydali xossalarga boy bo'ladi.

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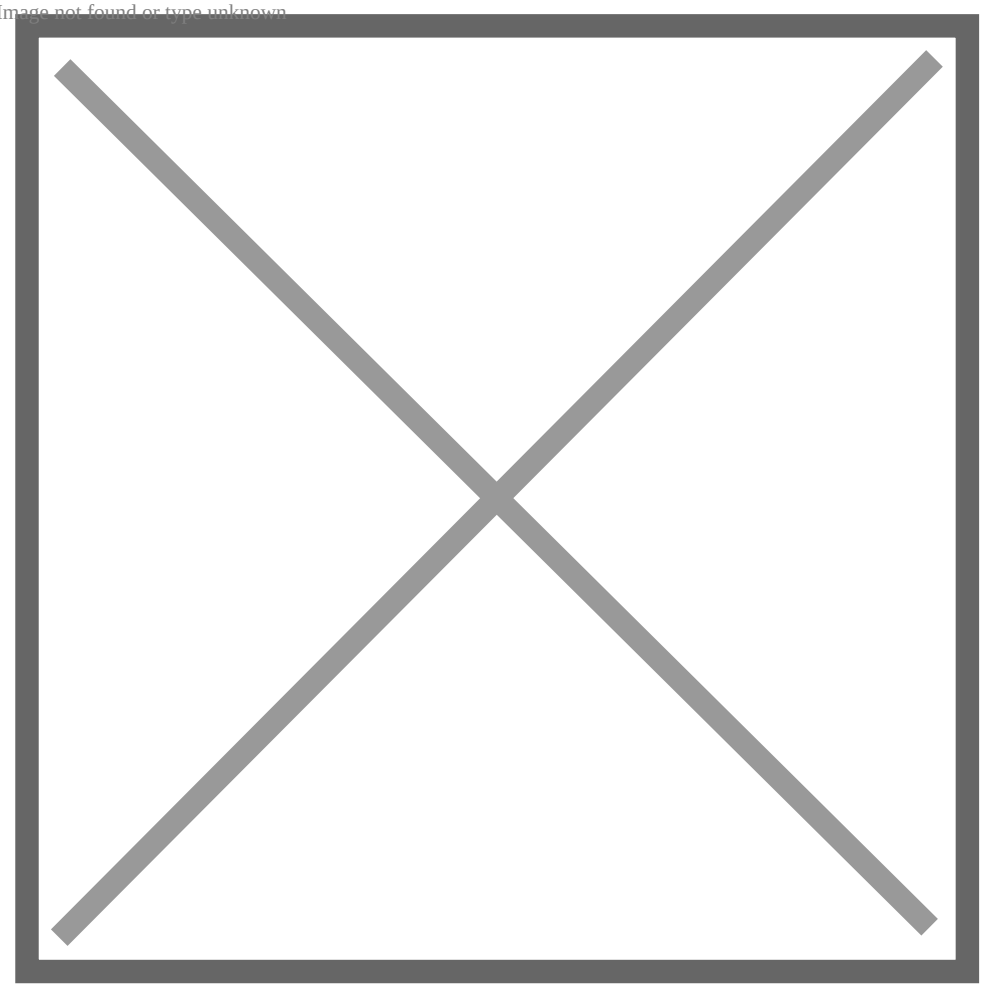


Python uchun mavjud Dasturlash Muhitlari. Manba: https://www.indianaiexpert.com/best-python-ide-2019/

Kelajakda siz o'zingiz uchun qulay muhitni tanlab, yangi dasturlarni yangi muhitda yozishingiz mumkin. Boshlanishiga esa biz Anaconda bilan birga keladigan qulay va sodda, lekin shu bilan birga funktsiyalarga boy bo'lgan Spyder muhitini tanlaymiz.

Spyder dasturini Android Navigator yoki Windows orqali to'g'ridan-to'g'ri ochish mumkin.

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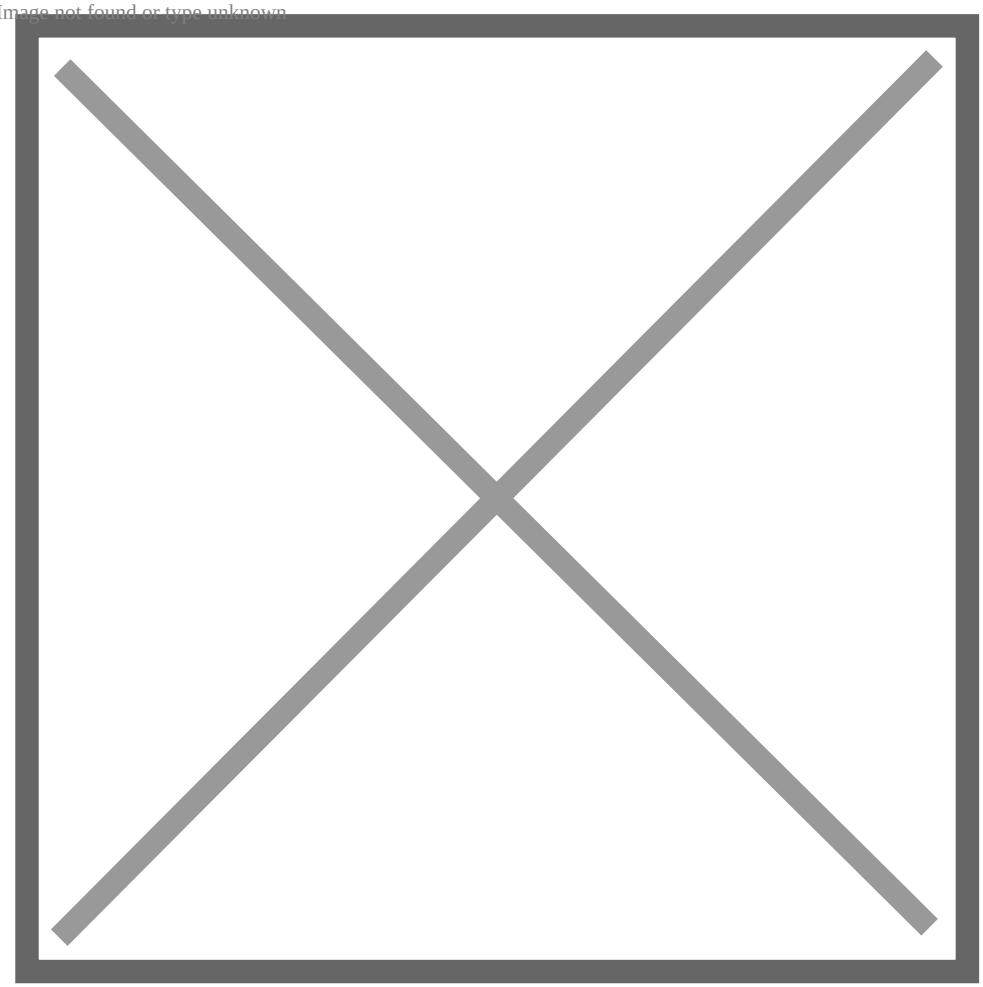
Spyder IDE ochamiz

KITE

Spyder dastruni ilk marotaba ochganimizda **Kite** dasturlash yordamchisini (pogramming assistant) o'rnatishni taklif qilishi mumkin.

Kite —sun'iy intellekt asosida ishlovchi virtual yordamchi bo'lib, kod yozishni osonlashtiradi. Kite yordamida istalgan funktsiya yoki komanda haqida qo'shimcha ma'lumot olishingiz mumkin. Shungdek Kite sizga kodlarni to'g'ri yozishda ishora (подсказка) ham ko'rsatib turadi.

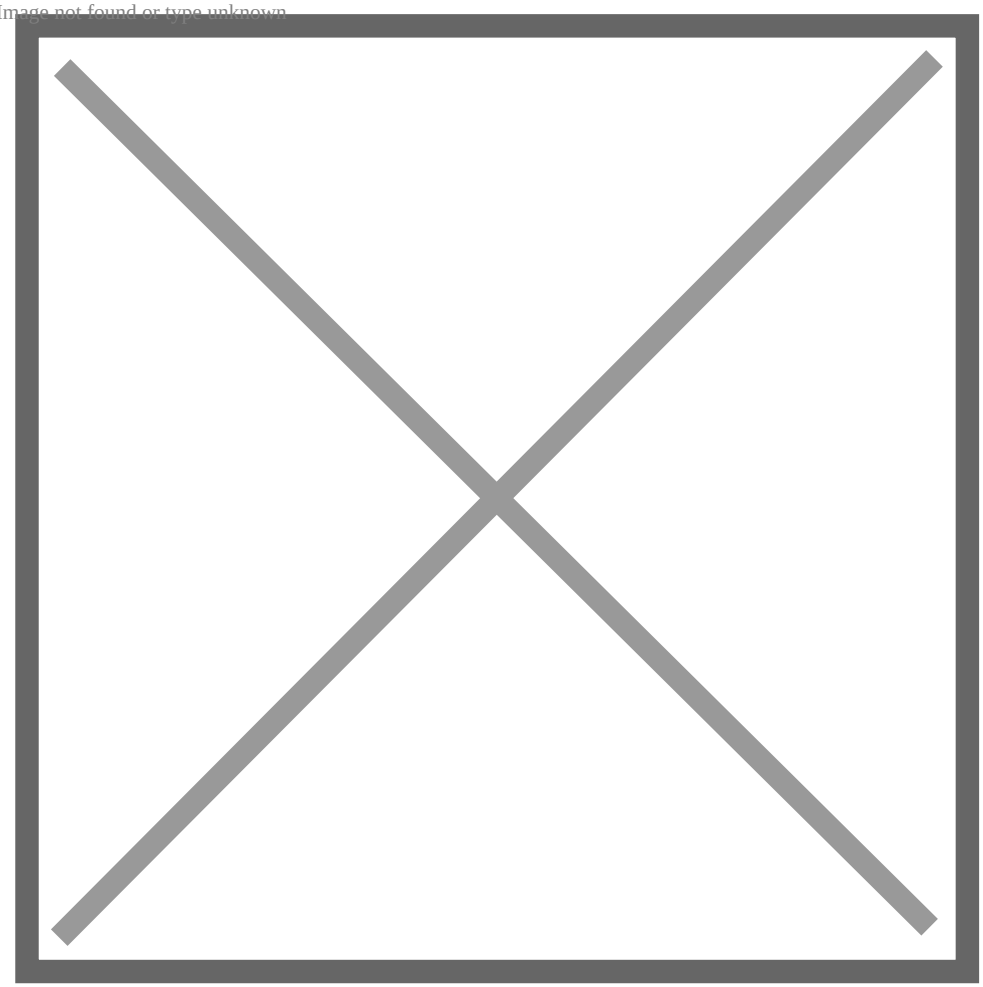
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Kite yordamida kod yozish bir muncha osonlashadi

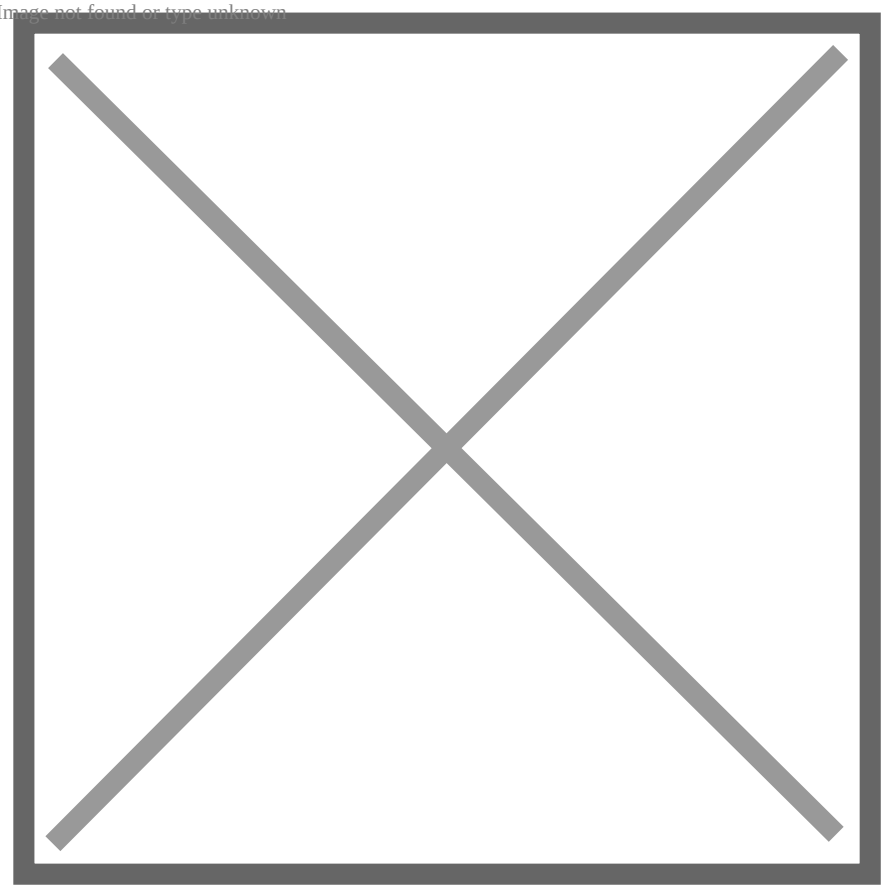
Maslahatim, 5 minut vaqtingizni qizg'anmay, Kite yordamchisini ham o'rnating**:**

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Install Kite tugmasini bosing

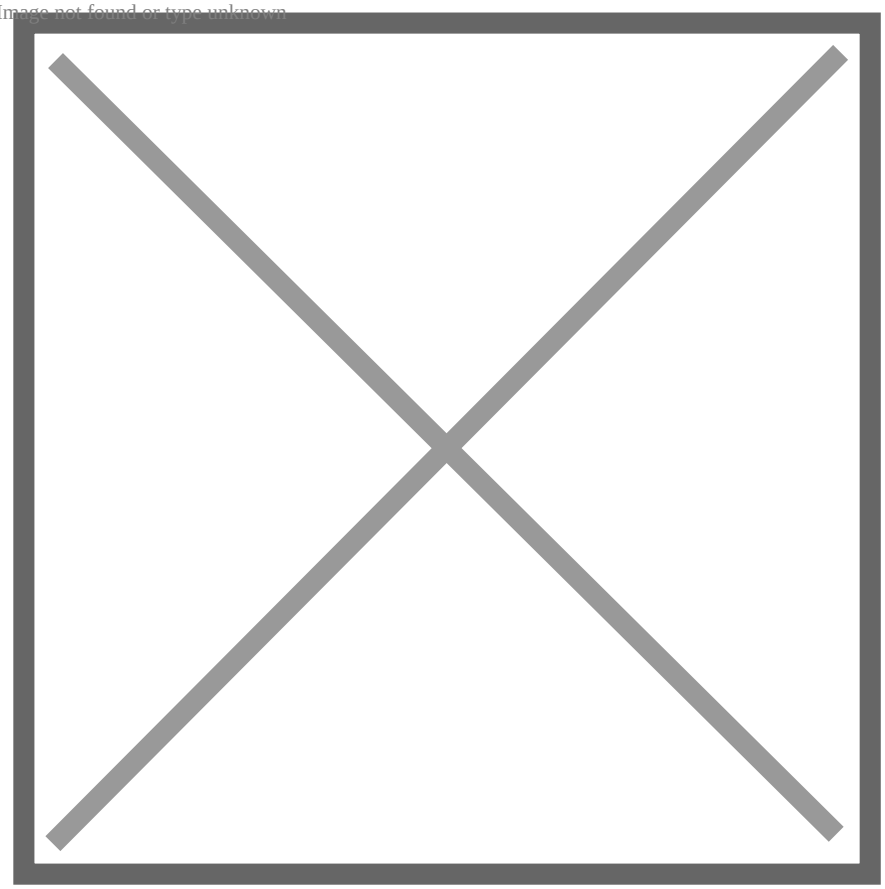
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Kite yordamchisini o'rnatish jarayoni

Va nihoyat Spyder IDE ochiladi:

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Spyder IDE

Yuqoridagi qadamlarni muvaffqaiyatli yakunlagan bo'lsangiz, siz birinchi dasturingizni yozishga tayyorsiz!