

**DASTURLASHNI O'RGANISH METODLARI, YO'LLARI VA O'RGANISH MANBALARI.
DASTURLASHNI BEPUL, ONLAYN YOKI OFLAYN O'RGANISH.**

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ANNOTATSIYA. Ushbu maqolamda dasturlashni mustaqil o'rganish uchun nimalar qilish kerak? Qanday qilib dasturlashni tez va oson o'rganish mumkin, bilim olishning tez va oson usullari haqida ma'lumot berib o'tmoqchiman.

ANNOTATION. What do you need to do to learn programming independently in this article? I want to give you information on how to learn programming quickly and easily, quick and easy ways to learn.

Kalit so'zlar: MOOC, edX.org, onlayn, ta'lim strategiyalari, malaka, elektron ta'lim, onlayn kurslar, tadqiqot, kreativ, zamonaviy yangi o'quv adabiyotlar, javascript.

Keywords: MOOC, edX.org, online, learning strategies, skills, e-learning, online courses, research, creative, modern new textbooks, javascript.

Dasturlashni o'rganish til va yosh tanlamaydi asosiysi o'zingiz qiziqsangiz va uni qunt bilan o'rgansangiz bas. Biz o'z maqsadlarimizga doim ham erisha olmaymiz, buning asosiy sababi maqsadlarni aniq va to'g'ri qo'ya olmaganimizda. Ya'ni har bir ishni o'ylab oldin rejalashtirish va uni tartib bilan bajaraolmasligimizdir. Inson qaysi kasbni tanlamasin hoh quruvchi, hoh dasturchi har doim kitob mutolaa qilmog'i shart. Hattoki tarixda mashhur 1642 yilda mexanik kalkulyatorni ixtiro qilgan Blez Paskal, Apple Lisa va Macintosh tizimlarining asoschisi Stiv Djobs ham hayotda maqsadni to'g'ri qo'ya olgan ya'ni o'qishdan maqsadimiz faqatgina pul topish, emas balki



hayotimizni yaxshilash, insonlar og'irini yengil qilish jamiyatni rivojlantirish bo'lgan. Bunday buyuk maqsadlar esa odamni beixtiyor buyuk kashfiyotlar qilishga undaydi.

Shunday sohalar borki siz uni bo'sh vaqtlaringizda o'zingiz ustingizda ko'proq ishlab, mustaqil o'rgana olasiz dasturlash aynan shunday kasblar sirasiga kiradi. Kompyuter texnologiyalari jadallik bilan rivojlanib ketdiki, biror soha vakili yuqki bundan bexabar qolsa. Dasturchilik kelajak kasblaridan biri deb bemalol aytishimiz mo'mkin. Chunki jahon bozorida ham dasturchilarga bo'lgan ehtiyoj yetarlicha.

Maktab o'quvchilaridan tortib talaba yoshlar ham dasturlashni mustaqil o'rganishlari uchun talaygina web-saytlar, video darsliklar, elektron bepul kitoblar mavjud. Faqatgina dasturlashni o'zi qiziqqan o'ziga mos sohasini tanlab o'rganishi kifoya. Kelajak kasbi bo'lgan dasturlashni tanlang.

Dasturlashni boshlashingizdan oldin bilishingiz muhim bo'lgan 7 narsa:

- 1 Dasturlash uchun diplom shart emas, lekin bilim bo'lishi muhim.
- 2 Dasturlash muammoni hal qilish qobiliyatidan tashqari ijodkorlikni talab qiladi.
- 3 Siz hamma narsani o'rganolmaysiz, bir nechta narsani juda yaxshi o'rgansangiz bas.
- 4 Dasturlash yodlash emas, balki bilimlarni qo'llashdir.
- 5 Agar siz boshqa birov bilan birga o'rgansangiz, dasturlashni tezroq o'rganib olasiz.
- 6 Matematika fanini yaxshi bilishingiz shart emas.

7 Ko'p vaqtingizni Googleda sizga hech kim javob bera olmaydigan javoblarni izlashga sarflaysiz.

Ko'pchilik o'yliyidiki Veb dasturlash bu veb sayt yaratish lekin aslidi bunday emas! Veb dasturlash sohasi juda keng va Veb dasturlash ikki yo'nalishga bo'linadi Frontend va Backend



yo'nalishlariga. Ushbu yo'nalishlarni biridan xabaringiz bo'lsa yoki ikkalasini ham bilsangiz siz Aliexpress, Amazonga o'xshagan katta onlayn do'konlar, o'quv platformalar, veb saytlar, veb ilovalar masalan Payme.uz ga o'xshagan, veb o'yinlar va boshqa turdagi veb dasturlarni tuzaolshingiz mumkin.

Ko'plab dasturlash tillarini o'rgatuvchi web saytlar ro'yhati:

1. <https://www.w3schools.com/>
2. <http://uzbekcoders.uz/>
3. <https://www.codecademy.com/>
4. <http://www.tutorialspoint.com/>
5. <https://teamtreehouse.com/>
6. <https://hackr.io/>
7. <https://www.pluralsight.com/codeschool>
8. <https://www.codeavengers.com/>
9. <https://stackoverflow.com/>
10. <https://www.khanacademy.org/>
11. <https://www.udacity.com/>
12. <https://scratch.mit.edu/>
13. <http://www.programmr.com/>
14. https://sqlzoo.net/wiki/SQL_Tutorial
15. <https://www.mooc.org/>
16. <https://www.coursera.org/>
17. <https://www.edx.org/>
18. <https://www.udemy.com/>



19. <http://www.ted.com>

20. <http://www.busuu.com/enc/>

21. <http://lingualeo.ru/>

Kod yozmasdan dasturlar, veb saytlarni yaratish uchun platformalar

Sizga tezda qandaydir dastur yoki veb sayt ishlab chiqish kerak bo'lsa unda no-code platformalardan foydalanganingiz ma'qul.


www.stencyl.com/game — o'yinlarni hechqanday kod yozmasdan turib ishlab chiqing.


<https://www.adalo.com/> — turli xil mobil dasturlarni ishlab chiqish uchun ajoyib servis.


<https://www.adalo.com/> — ushbu platforma yordamida turli xil veb saytlar, landing pagelarni yaratish mumkin.

<https://botcommerce.io/> — qisqa muddatlarda telegram bot orqali onlayn do'kon ochish.

onworks.net — bu Linux'dan onlayn foydalanish imkonini beruvchi bepul hosting ta'minlovchi sayt.

 tinkercad.com — bu Autodesk-dan mashhur 3DMax ilovasining onlayn versiyasi. Tinkercad bepul va yangi boshlovchilar uchun qulay. Bu oddiy shakllardan tashkil topgan murakkab obyektlardan foydalanadi.

 Tinkercad.com — saytida siz yangi boshlovchilar uchun modellashtirishni imkon qadar tezroq o'rganishga yordam beradigan ko'rsatmalar, o'quv videolari va boshqa foydali kontentni topishingiz mumkin.

 <https://www.apkonline.net/> - bu bepul Android ilovalarini ishga tushirish imkonini beruvchi onlayn xizmat.

Shu bilan birga kitoblarni yuklab olgan holda ham o'rganish mumkin: <https://goalkicker.com/>



Dasturlashga oid o'zbek platformalari.

1. Mohirdev.uz – O'zbek tilidagi eng yaxshi dasturlash platformasi. Bepul va pullik doimiy video kurslar, dasturlashga oid maslahat va tavsiyalar mavjud.

2. Eduon.uz – Dasturlashga oid o'zbek tilidagi platformalardan biri. Platformada 5 dan ortiq soha va 150 dan ortiq video kurslar mavjud.

3. Onlinedars.uz – Turli sohalarga oid eng yaxshi va qulay video darslar joylangan platforma. Muhimi darslarning ko'p qismi bepul.

Yangi dasturchilar uchun maslahat. Yangi dasturchilar ko'proq kod yozish, sabrli bo'lishi, qisqa kod yozishdan voz kechishi kerak.

1. Ko'pchilik kod yozishga zerikadi. Ba'zilar yarim tayyor kodlarni sotib oladi yoki kimlargadir buyurtma beradi. Yangi dasturchi iloji boricha kodlarni o'zi noldan yozish kerak.

2. Nafaqat yangi dasturchilar, balki ko'p yillik dasturchilar ham sabrli bo'lishlari kerak. Bu dasturchining eng kuchli quroli deb o'ylayman. Zeriksangiz, o'z Qat'iyatingiz ustida ishleng.

Agar chindan ham sabr-toqat va dasturlashni o'rganishga o'zingizni bag'ishlangan bo'lsangiz, dasturlash tillarini va kodlarni o'rganish unchalik qiyin emas. O'zingizga qiziq va kerakli dasturlash tillarini o'rganganingizdan so'ng, siz kompyuterlar va smartfonlar uchun turli tillarda har qanday turdagi dasturlarni ishlab chiqishingiz mumkin bo'ladi. Dasturlash tillarini o'rganishning asosan ikkita usuli mavjud. Onlayn yoki offlayn. Masalan yaxshi universitetdandan kompyuter, dasturlash tillarini o'rganishingiz mumkin yoki bir nechta mashhur kodlash veb-saytlari yordamida onlayn dasturlashni o'rganishingiz mumkin. Internetda ko'plab veb-saytlar mavjud bo'lib, ularda siz dasturiy ta'minotni, qanday qilib dasturlashni va ishlab chiqishni o'rganishingiz mumkin. Onlayn dasturlashni o'rganishning afzalligi shundaki, siz istalgan vaqtda va istalgan joydan o'rganishingiz mumkin. Bunday imkoniyat ayniqsa xotin-qizlar uchun ayni mudao.



Ushbu ro'yhatda keltirilgan xalqaro universitetlarning veb saytlariga kirib siz dasturlashga doir bepul kurslardan foydalanishingiz va kurs oxirida sertifikatga ega bo'lishingiz mumkin. Kurslar yuqori tajribali professorlar, mentorlar tomonidan tayyorlangan. Eng muhimi bu kurslar orqali yaxshi bilim, yangi narsalarni o'rganish mumkin.

[Harvard University](#)

1. CS50's Introduction to Computer Science
2. CS50's Understanding Technology
3. CS50's Computer Science for Business Professionals
4. CS50's AP® Computer Science Principles
5. [New] CS50's Introduction to Artificial Intelligence with Python
6. CS50 for Lawyers
7. Using Python for Research
8. CS50's Web Programming with Python and JavaScript
9. CS50's Mobile App Development with React Native
10. CS50's Introduction to Game Development
11. Quantitative Methods for Biology
12. Statistics and R
13. Data Science: R Basics
14. High-Dimensional Data Analysis
15. Data Science: Visualization
16. Data Science: Machine Learning
17. Case study: DNA methylation data analysis
18. Causal Diagrams: Draw Your Assumptions Before Your Conclusions
19. Data Science: Linear Regression
20. Data Science: Inference and Modeling
21. Data Science: Probability
22. Data Science: Wrangling
23. Data Science: Productivity Tools



24. Principles, Statistical and Computational Tools for Reproducible Data Science
25. Data Science: Capstone

[Columbia University](#)

1. Animation and CGI Motion
2. Machine Learning
3. Artificial Intelligence (AI)
4. Big Data and Education
5. Machine Learning for Data Science and Analytics
6. Data, Models and Decisions in Business Analytics
7. Statistical Thinking for Data Science and Analytics
8. Enabling Technologies for Data Science and Analytics: The Internet of Things
9. HI-FIVE: Health Informatics For Innovation, Value & Enrichment (Social/Peer Perspective)
10. HI-FIVE: Health Informatics For Innovation, Value & Enrichment (Administrative/IT Perspective)
11. HI-FIVE: Health Informatics For Innovation, Value & Enrichment (Clinical Perspective)

[Princeton University](#)

1. Algorithms, Part I
2. Algorithms, Part II
3. Bitcoin and Cryptocurrency Technologies
4. Software-Defined Networking
5. Computer Architecture
6. Analysis of Algorithms
7. Networks Illustrated: Principles without Calculus
8. Networks: Friends, Money, and Bytes



9. Computer Science: Algorithms, Theory, and Machines
10. Computer Science: Programming with a Purpose

[University of Pennsylvania](#)

1. Programming for the Web with JavaScript
2. Software Development Fundamentals
3. Algorithm Design and Analysis
4. Data Structures and Software Design
5. Computational Thinking for Problem Solving
6. [New] Robotics: Vision Intelligence and Machine Learning
7. Robotics: Perception
8. Cryptocurrency and Blockchain: An Introduction to Digital Currencies
9. People Analytics

[Dartmouth College](#)

1. C Programming: Getting Started
2. C Programming: Advanced Data Types
3. C Programming: Pointers and Memory Management
4. C Programming: Using Linux Tools and Libraries
5. C Programming: Modular Programming and Memory Management
6. Linux Basics: The Command Line Interface

Ushbu saytlardan ro'yhatdan o'tgandan so'ng, bemaol o'zingiz tanlagan dasturlash tilingizni professional darajada o'rganishingiz va bir kasbning egasi bo'lish o'z qo'lingizda. Eng qimmatli vaqtimizni qadrlaylik, bilim olishdan hech qachon to'xtamaylik. Vatanimiz jamiyatimiz gullab, yashnab, rivojlanishi biz yoshlarning qo'limizda.

**Foydalanilgan adabiyotlar ro'yhati:**

1. en.wikipedia.org/wiki/Massive_open_online_course
2. vetak.ru/blog/mooc-massovye-otkrytye-onlayn-kursy.
3. www.mooc.org.
4. Pravodelov S.V. The benefits of distance learning and its species // Modern education, 2015. № 2. S.. DOI: 10.7256 / 2409- 8736.2015.2.14207. [Electronic resource]. URL: http://e-notabene.ru/pp/article_14207.html/ (date of access: 07.06.2017).
5. Revich I.B. Improving the general cultural competence of students Universities with the help of massive open online course // Proceedings SanktPeterburgskogo State University of Culture and Arts, 2014.
6. <https://telegra.ph/Top-universitetlarning-dasturchilar-uchun-bepul-onlayn-kurslari-12-14>