



سازمان جهاد دانشگاهی صنعتی شریف
مرکز آموزش های تخصصی کاربردی



دوره جنگو (آموزش بک اند دولوپر با Django)



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۰۲۱-۶۷۶۴۱۹۹۹

یک وب سایت اختصاصی از دو بخش فرانت اند و بک اند تشکیل شده است. در واقع بک اند هسته اصلی یک وب سایت به حساب می آید و هر چه قدر این بخش قوی تر و حرفه ای تر نوشته شود ما صاحب وب سایت بزرگ تر و قوی تری خواهیم بود. یک برنامه نویس بک اند مسئول ایجاد دیتابیس ها و پایگاه های داده، ایجاد فرم ها، ارتباطات آنها، ثبت اطلاعات کاربران در وب سایت و هر فرایندی که به طور کلی با چشم مشاهده نمیشود در وب سایت است.

جزئیات سرفصل های دوره بک اند دولوپر (Back End Developer) به شرح ذیل است:

دوره بک اند دولوپر با جنگو (Back End Developer With Django)

مروری بر برنامه نویسی پایتون

- Installation and setup
- Prepare your ide
- Datatypes
- Functions
- Pip
- Modules
- Virtualenv
- Exceptions
- Oop concepts
- Sample projects

آموزش نحوه کار با Git

- What is git
- How to install it and using github desktop
- Basic knowledge of git and usage

آموزش جنگو مقدماتی

- **Start using Django**
 - Introduction to django
 - Django architecture
 - Setup your first project and learn structures
 - Setup your first app and using url,view,template
 - Choose your template
- **Static, Media and Template**
 - Setup static and media in settings
 - How to use tags and jinja
 - Migrate your chosen template

- Inheritance of templates
- Dynamic urls
- Create blog app
- Render data to template
- **Database and Admin**
 - Makemigrations and migrate
 - Superuser and admin orm
 - Fields in database
 - Create model for blog with app
 - Create model in Django
 - Connect to shell and use orm
 - Checkout admin panel
 - Customizing admin
 - Meta in models
- **Views and Database**
 - Fetch data and render to page
 - url parameters
 - completing urls and views for blog app
 - post categorizations
 - concatenate the posts
 - template include
- **Template Tags**
 - Getting to use tags
 - Simple tag
 - Filter tag

- Inclusion tag
- Using tags in blog
- Pagination

- **Django Forms**

- Create forms in template
- Form
- ModelForm
- Use forms in blog
- Messages

- **Django Modules**

- Humanize
- Sites framework
- Sitemap
- Robots
- Debugger toolbar
- Captcha
- meta
- Rss feed
- Django compressor

- **Django Authentication**

- What is authentication
- Login form and authentication
- Logout
- Signup
- Authentication decorators

- Auth module
- Introduction to allauth
- **Deployment on host**
 - Deployment on cpanel
 - Deployment on liara

آموزش داکر (Docker)

- What is docker and how to install
- Basic usage of docker
- What is docker compose
- Setup a service and use for django

آموزش جنگو پیشرفته

- **Introduction**
 - Why we need to know more
- **Getting Ready**
 - Setup repo
 - Create dockerfile
 - Add docker-compose
 - Environmets
 - Database schema
 - Create needed apps

- **Setup Project**

- Add models
- AbstractBaseUser and CustomUser
- Managers and UserManager
- Change default auth model
- Customize admin and admin forms
- Add profile
- Django Signals

- **Class Based Views**

- FBV vs CBV
- TemplateView
- RedirectView
- ListView
- Paginations and Customizations
- DetailView
- FormView
- CreateView
- UpdateView
- DeleteView
- Permissions and mixins
- Start a TodoApp

- **RestFramework and Serializers**

- Api and RestAPI
- Whats the difference between rest and render
- DRF installation
- views
- Serializers
- Statuscodes
- Modelserializers

- Validation
- Crud operation
- Introduction to Postman and usage
- Permissions
- Postman Authentication
- **Restframework in class based views**
 - Migrate to ApiView
 - Permission classes
 - Crud in apiview
 - Migrate to GenericViews
 - Crud in GenericViews
 - Migrate to ViewSets and ModelViewSet
 - Crud in ViewSets
 - Default and Simple Router
 - Api Documentation
 - Customizing representation
 - Get user info
 - Permission Classes
 - FilterBackends
 - SearchFilter
 - Ordering and Sort
 - Paginations
 - More filters and customizations
- **Api Documentations**
 - Swagger and Redic
 - Swagger to postman

- **Authentications**

- Add accounting app
- What endpoints we need
- Register
- Token Authentications
- JWT Authentications
- Email Verifications and activation
- SMTP&Dev
- Email templates
- Versioning api

- **Reformat and Lint**

- Black and flake8

- **Tests**

- What is testcase
- What should we test
- url tests
- fom tests
- model tests
- view tests
- what is Pytest
- Crud tests for application in api

- **Continues Integrations**

- What is CI and devops
- Intro to github actions
- Workflow
- Create and deploy ci in actions

- **Fake data**
 - Create fake data with faker
- **Access Management to API**
 - Request with jquery
 - Corsheaders setup
- **Load Testing**
 - Introduction to locust
 - Create some load on api
- **Background tasks**
 - What is background tasks
 - Setup redis and settings
 - What is celery and setup in django
 - Create tasks for workers
 - Create schedule tasks with beat
- **Caching**
 - What is caching
 - Setup redis and settings
 - How to cache pages
 - How to cache api calls
- **Getting ready for Deployment**
 - Getting ready for deployment
 - Setup gunicorn
 - Setup nginx
 - Setup statics and media
 - Create ۳ stages of program

- **Deployment**

- Deploy on VPS
 - Setup ssh and docker
 - Setup server with proxy
 - Deploy
- Deploy on Hamravesht

- **Continuous Deployment**

- What is cd
- Automate deployment in actions

آشنایی با مفاهیم میکروسرویس ها

- What is microservice
- What is the best tools to choice
- General architectures
- Protocols and Usage

استفاده از ابزارهای AI در توسعه نرم افزار

- آموزش استفاده از cursor
- آموزش prompt نویسی برای برنامه نویسی
- مقایسه مدل های زبانی مختلف

یہ پہلے ہلاک تہ از تخصص ...