My name is Timur. I am from Uzbekistan, Tashkent. I am 25 years old.

I graduated from Tashkent University of information technologies with Telecommunication Technologies specialty.

Before and while I was student I worked as IT Supporter, who fix problems with computer and other office equipment.

After I graduated from University, I worked in Huawei. My position was IT Engineer, it is something like a Systems Engineer. My responsibilities was integration, supporting, maintenance Huawei products and solutions. For example, Beeline order solution for traffic analyzing from Huawei and Huawei have this solution and offer to Beeline. After our project manager provide and organize the subcontractors. Subcontractors installing equipment, after installation I begin to configure devices. It is one of the example, also I worked with VideoConference systems, especially I maintained government videoconference. Also we had some military projects.

When I was working in Huawei, last half a year I was thinking about switching position to DevOps, because it is interesting for me. It is difficult to find DevOps job I Uzbekistan.

But I found it. So they were looking for DevOps expert with big experience in bank. They said that first time I will be QA Engineer, next I will be QA and Release Engineer. And in near future our Bank will invite Russian IT specialist from Yandex and BSS, so and this specialist will develop new infrastructure, also the will integrate real financial technology devops and teach us.

Build

Mvn install

JS – npm or yarn. Frontend - webpack

Project must have some package.json file for building app. Npm

# DevOps

# Jenkins

# Network

# Git

version control system. IT tracking changes in our files

# Python

A function is a block of code which is executed only when it is called

One of the most common python interview question, There are mutable and immutable built-in types.

The mutable ones include:

* List
* Sets
* Dictionaries

The immutable types include:

* Strings
* Tuples
* Numbers

The difference between list and tuple is that list is mutable while tuple is not. Tuple can be hashed, for example., as a key for dictionaries.

make\_sum = lambda x,y: x+y

make\_sum(3,8)

>>> a = [1, 2, 3]

>>> a

[1, 2, 3]

>>> a.reverse()

>>> a

[3, 2, 1]

>>> L = [0,10,20,40]

>>> L[::-1]

[40, 20, 10, 0]

# Docker

docker container run -d -p 80:80 --name proxy nginx

docker container run -d -p 80:80 --name proxy -m 10485760 --memory-reservation 5242880 nginx

docker container exec -it <CONTAINER\_ID> /bin/sh

docker container kill my\_container #forcely

docker container kill $(docker ps -q) #kill all containers

docker container inspect <Container\_name>

FROM ubuntu:18.04

RUN apt -y update

RUN apt -y install httpd

RUN echo “Hello World from Docker!” > /var/www/html/index.html

CMD [“/usr/sbin/apache2ctl”, “-DFOREGROUND”]

EXPOSE 80

> docker image build -t abu\_bandit/my\_image:tag .

# Kubernetes

is an [open source](https://www.redhat.com/en/topics/open-source/what-is-open-source) container orchestration platform provide automation of many the manual processes with containers. It help deploying, managing, and scaling containerized applications.

**Components**

***Master -*** *manage kuber cluster*

Api server – it is front-end or client part kuber controller that orchestrate all operations on server.

Scheduler – help to schedule the pods on the different nodes and depends to computer resources.

Etcd - stores information about cluster

Controller - is a control plane component that runs controllers (replica controller, node controller, account, endpoint)

***Worker***

Kubectl – listens to instructions from kube-api server

Kube-proxy enable communications between services in between cluster

Container runtime engine

Pods - are the smallest deployable units of computing that you can create and manage in Kubernetes.

Service – service is responsible for exposing an interface to those pods, which enables network access

ClusterIP - Exposes the Service on an internal IP in the cluster

NodePort - Exposes port

LoadBalancer - Creates an external load balancer

ExternalName - DNS CNAME record

Deployment - is a method of launching a pod with containerized applications and ensuring that the necessary number of replicas is always running on the cluster.

Ingress - is an object that allows access to your Kubernetes services from outside the Kubernetes cluster

# Ansible

Is a configuration management tool that provides automation for application deployment, updates on workstations and servers, cloud provisioning, configuration management

An inventory file is a list to identify your managed nodes

[staging\_servers]

aws\_ubuntu1 ansible\_host=aws2

[prod\_servers]

aws\_ubuntu2 ansible\_host=aws1

Ad hoc - are commands which can be run individually to perform quick functions. Ad-hoc to send a single task on one or more managed nodes

ansible all -i production.ini -m ping

Playbooks are the files where Ansible code is written. Playbooks are written in YAML format.  They are like a to-do list for Ansible that contains a list of tasks (instruction)

- name: Install and run nginx web-server

hosts: all

become: yes

tasks:

- name: install nginx

apt: name=nginx state=latest

- name: start nginx

service: name=nginx state=started enabled=yes

### **name**

This tag specifies the name of the Ansible playbook

### **hosts**

This tag specifies hosts or host group. It tells Ansible on which hosts to run the listed tasks

### **vars**

Vars tag lets you define the variables which you can use in your playbook

### **tasks**

Tasks are a list of actions one needs to perform

Modules - These are small programs that perform certain work on the server

group\_vars - The file contains a set of variables, such as the database user name and password.