KAZAKH **KBTU** BRITISH
T E C H N I C A L
U N I V E R S I T Y

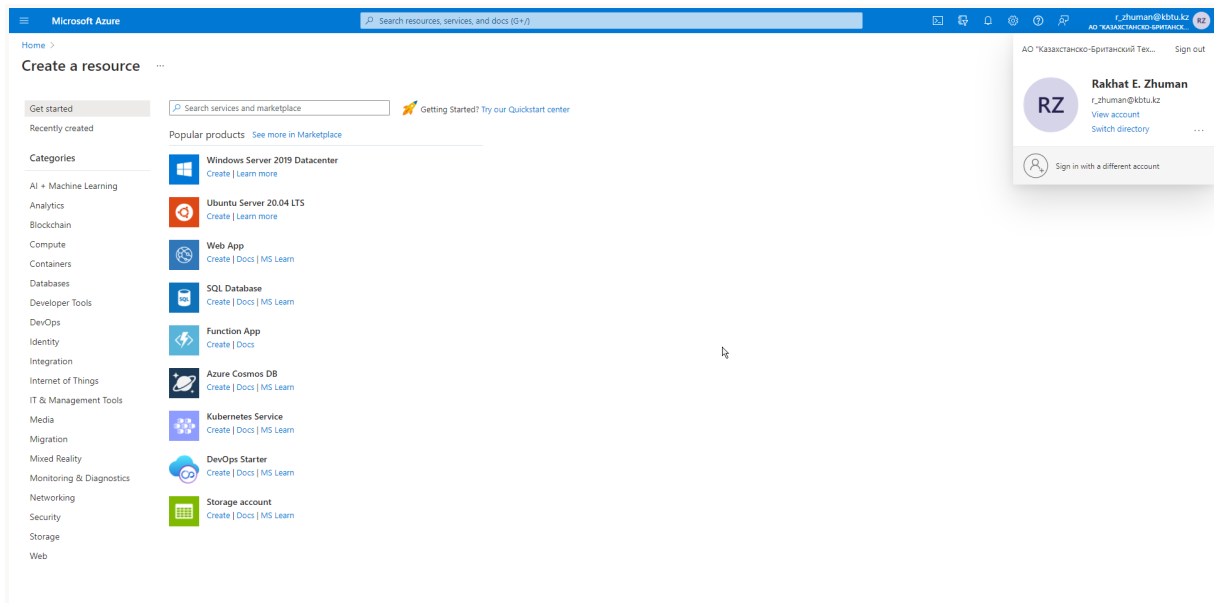## Cloud Development, 2021 fall.
Lab 7

Report

Access resource secrets more securely across services
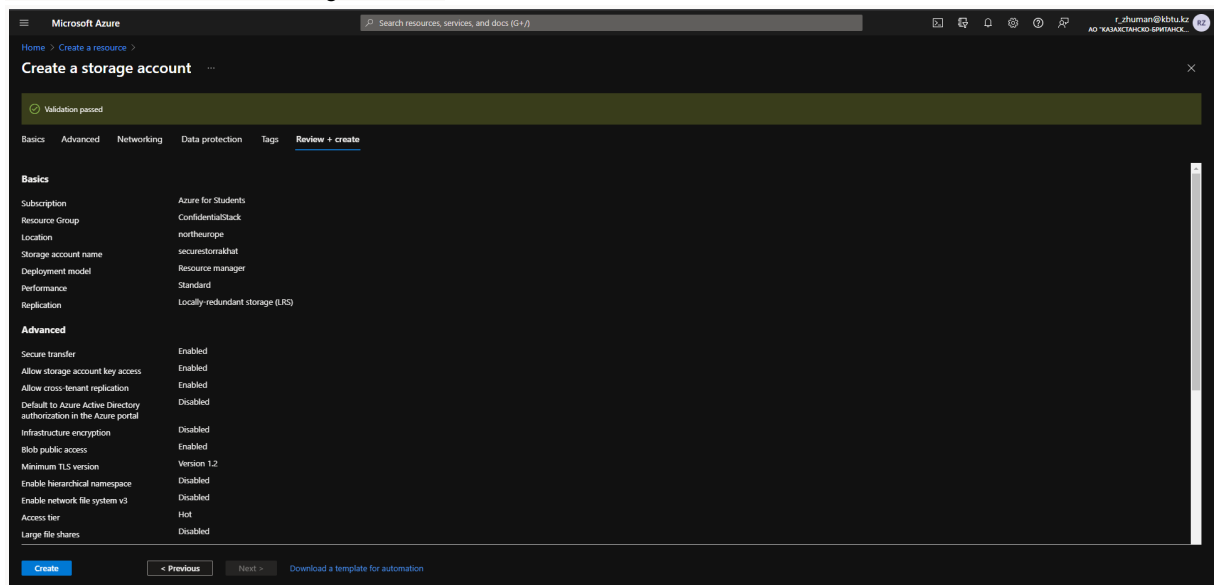
made by Zhuman Rakhat

Almaty 2021

Exercise 1: Create an Azure AD application registration
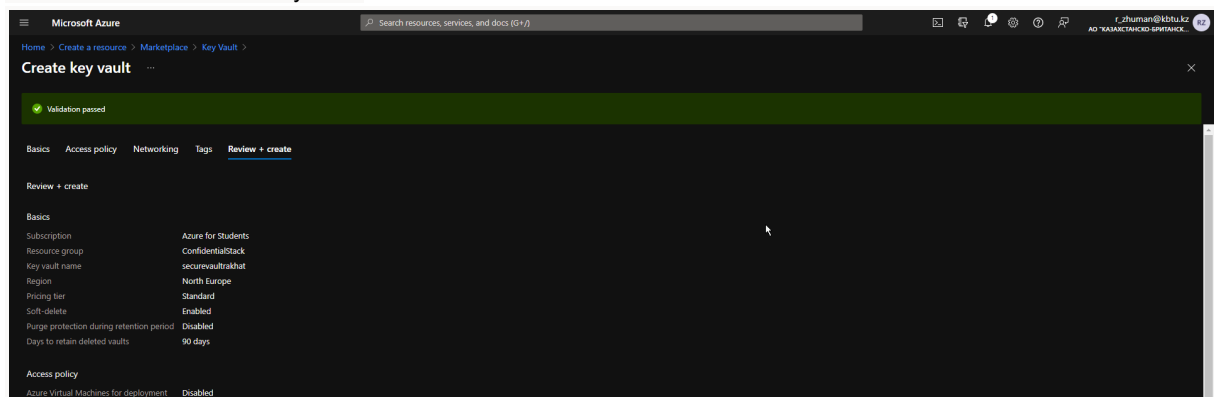### Task 1: Open the Azure portal

Task 2: Create an Azure Storage account

Connection string -
DefaultEndpointsProtocol=https;AccountName=securestorrakhat;AccountKey=bDib9BGsIggpKOKQiZo5atDqW8
A3hx7JJ2+7EsQuiQ+B2EYxndg+B59SFL62S/viWFYC6asgIT8c2W7TejpIBg==;EndpointSuffix=core.windows.net

Task 3: Create an Azure key vault

Task 4: Create an Azure Functions app

Exercise 2: Configure secrets and identities

Task 1: Configure a system-assigned managed service identity

Task 2: Create a Key Vault secret

https://securevaultrakhat.vault.azure.net/secrets/storagecredentials/a9a72251a85a40c6b453d0048a4b1206

Task 3: Configure a Key Vault access policy

Task 4: Create a Key Vault-derived application setting
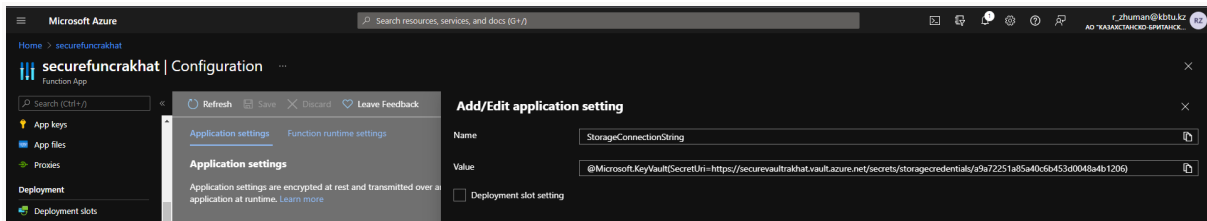
Exercise 3: Build an Azure Functions app

Task 1: Initialize a function project
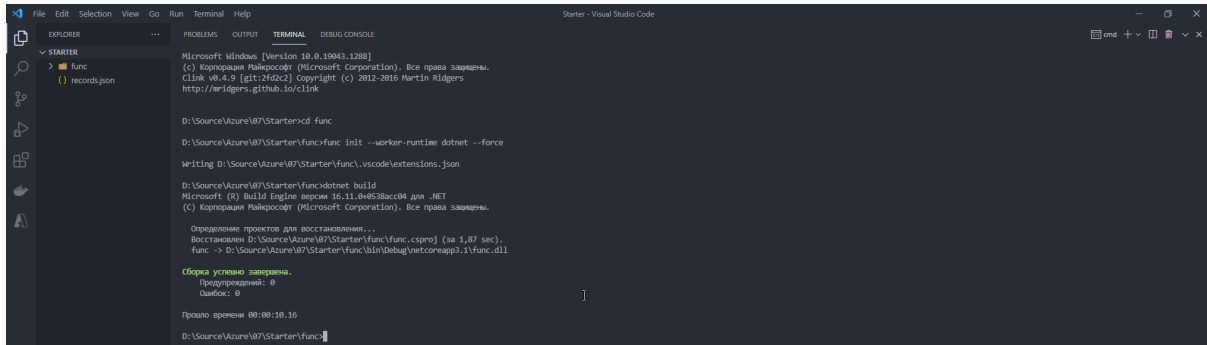
Task 2: Create an HTTP-triggered function
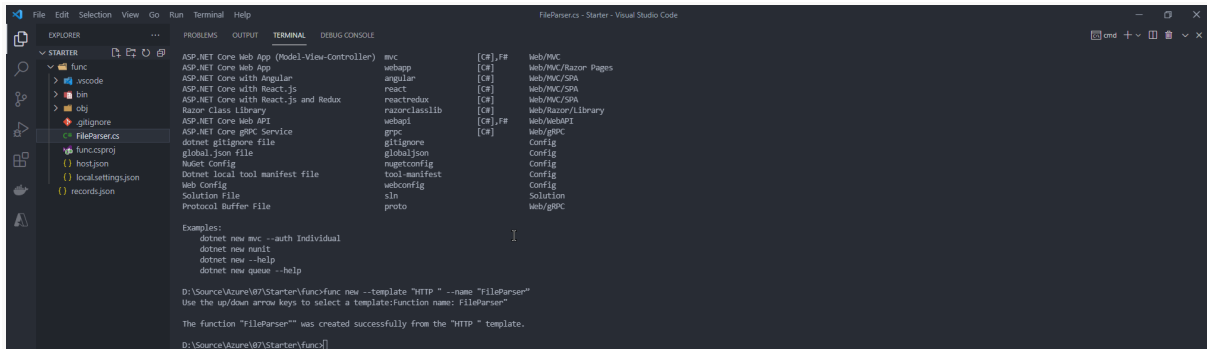
Task 3: Configure and read an application setting
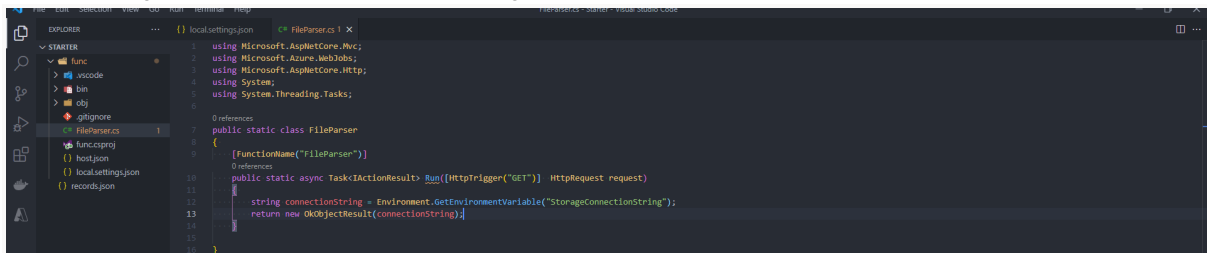
Task 4: Validate the local function
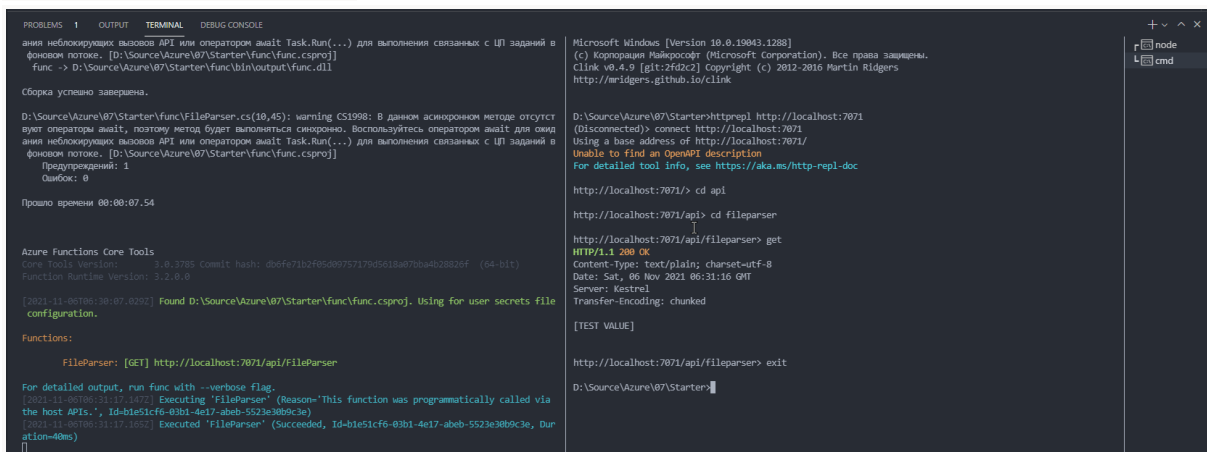
Task 5: Deploy using the Azure Functions Core Tools

```
        "user": {
            "name": "r_zhuman@kbtu.kz",
            "type": "user"
        }
    }
]

D:\Source\Azure\07\Starter\func>func azure functionapp publish securefuncrakhat
Microsoft (R) Build Engine версии 16.11.0+0538acc04 для .NET
(C) Корпорация Майкрософт (Microsoft Corporation). Все права защищены.

    Определение проектов для восстановления...
    Все проекты обновлены для восстановления.
    func -> D:\Source\Azure\07\Starter\func\bin\publish\func.dll

Сборка успешно завершена.
    Предупреждений: 0
    Ошибок: 0

Прошло времени 00:00:07.03


Getting site publishing info...
Uploading package...
Uploading 2,3 MB [##################################################################]
Upload completed successfully.
Deployment completed successfully.
Syncing triggers...
Functions in securefuncrakhat:
    FileParser - [httpTrigger]
        Invoke url: https://securefuncrakhat.azurewebsites.net/api/fileparser?code=jt6aaYkZQKeOM7eUpaAJ1WvPvFDJjjujYzG4z10x90u/eF1qh52dkg==


D:\Source\Azure\07\Starter\func>
```

Task 6: Test the Key Vault-derived application setting

Exercise 4: Access Azure Blob Storage data

Task 1: Upload a sample Storage blob

```json
[
  {
    "_id": "5c5318082390c97ac43be30d",
    "index": 0,
    "guid": "f7b104d1-cf92-4861-a187-dc25aa0cf79b",
    "isActive": true,
    "balance": "$3,940.15",
    "picture": "http://placehold.it/32x32",
    "age": 34,
    "eyeColor": "brown",
    "name": "Miles Fleming",
    "gender": "male",
    "company": "OPPORTECH",
    "email": "milesfleming@opportech.com",
    "phone": "+1 (846) 485-3207",
    "address": "498 Lancaster Avenue, Fresno, District Of Columbia, 5580",
    "about": "Aliqua irure cupidatat ea occaecat fugiat voluptate laboris ad nostrud. Consequat aliquip consequat amet do est deserunt ea. Voluptate adipisicing veniam pariatur eu commodo enim do sint eiusmod. Proident elit tempor cillum anim magna qui.\r\n",
    "registered": "2014-02-02T05:21:22 +04:00",
    "latitude": -75.703852,
    "longitude": 101.595201,
    "tags": [
      "voluptate",
      "officie",
      "pariatur",
      "enim",
      "ex",
      "ea",
      "sit"
    ],
    "friends": [
      {
        "id": 0,
        "name": "Walter Puckett"
      },
      {
        "id": 1,
        "name": "Karla Koch"
      },
      {
        "id": 2,
        "name": "Ingrid Mcknight"
      }
    ],
    "greeting": "Hello, Miles Fleming! You have 9 unread messages.",
    "favoriteFruit": "apple"
  },
```

```xml
This XML file does not appear to have any style information associated with it. The document tree is shown below.
▼<Error>
    <Code>ResourceNotFound</Code>
    <Message>The specified resource does not exist. RequestId:5c288e02-601e-00b2-49d9-d28865000000 Time:2021-11-06T06:43:54.7654116Z</Message>
  </Error>
```

Task 2: Pull and configure the Azure SDK for .NET

Task 3: Write Azure Blob Storage code using the Azure SDK for .NET

Task 4: Deploy and validate the Azure Functions app

Exercise 5: Clean up your subscription

Task 2: Delete a resource group