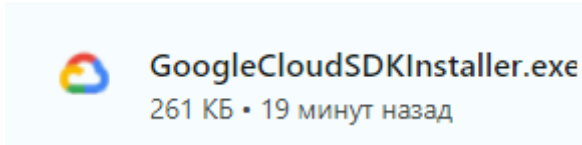


Assignment 1 Cloud Application Development

Exercise 1:

- 1) Install Google cloud SDK



- 2) Write gcloud init to initialize the SDK and authenticate with your Google account.

```
gcloud init --skip-diagnostics
```

[Cloud SDK](#) > [Documentation](#)

Эта информация ока:

You are now authenticated with the gcloud CLI!

Create a new project [3]

```
You are signed in as: [alimovedige262@gmail.com].

Pick cloud project to use:
[1] braided-rush-434507-g0
[2] Enter a project ID
[3] Create a new project
Please enter numeric choice or text value (must exactly match list item): 3

Enter a Project ID. Note that a Project ID CANNOT be changed later.
Project IDs must be 6-30 characters (lowercase ASCII, digits, or
hyphens) in length and start with a lowercase letter. you20031996
Waiting for [operations/cp.8706531101252185286] to finish...done.
Your current project has been set to: [you20031996].
```

Write gcloud version

```
C:\Users\Yedige\AppData\Local\Google\Cloud SDK>gcloud version
Google Cloud SDK 491.0.0
bq 2.1.8
core 2024.08.30
gcloud-crc32c 1.0.0
gsutil 5.30
```

Run gcloud info

```
C:\Users\Yedige\AppData\Local\Google\Cloud SDK>gcloud info
Google Cloud SDK [491.0.0]

Platform: [Windows, x86_64] uname_result(system='Windows', node='DESKTOP-DSA60JQ', release='10', version='10.0.19045', machine='AMD64')
Locale: ('Russian_Kazakhstan', '1251')
Python Version: [3.11.9 (tags/v3.11.9:de54cf5, Apr 2 2024, 10:12:12) [MSC v.1938 64 bit (AMD64)]]
Python Location: [C:\Users\Yedige\AppData\Local\Google\Cloud SDK\google-cloud-sdk\platform\bundledpython\python.exe]
OpenSSL: [OpenSSL 3.0.13 30 Jan 2024]
Requests Version: [2.25.1]
urllib3 Version: [1.26.9]
Default CA certs file: [C:\Users\Yedige\AppData\Local\Google\Cloud SDK\google-cloud-sdk\bin\..\lib\third_party\certifi\cacert.pem]
Site Packages: [Disabled]
```

3) What command did you use to authenticate with your Google account?

gcloud init

How did you set the default project?

The default project is set when gcloud init is run during the interactive prompt

What information does the gcloud info command provide?

This command provides version information in detail, along with the listing of components installed and present configuration-that includes the default project, region, and account, among others.

Exercise 2:

1) Run the command gcloud config list to see your current configuration

```
alimovedige262@cloudshell:~ (braided-rush-434507-g0) $ ls
README-cloudshell.txt
```

2) Run the command gcloud config list to see your current configuration

```
alimovedige262@cloudshell:~ (braided-rush-434507-g0) $ gcloud config list
[accessibility]
screen_reader = True
[component_manager]
disable_update_check = True
[compute]
gce_metadata_read_timeout_sec = 30
[core]
account = alimovedige262@gmail.com
disable_usage_reporting = False
project = braided-rush-434507-g0
[metrics]
environment = devshell

Your active configuration is: [cloudshell-32594]
```

2) Create a directory named gcp-intro and navigate into it.

```
C:\Users\Yedige\AppData\Local\Google\Cloud SDK>mkdir gcp-intro
Подпапка или файл gcp-intro уже существует.
```

```
C:\Users\Yedige\AppData\Local\Google\Cloud SDK>cd gcp-intro  
C:\Users\Yedige\AppData\Local\Google\Cloud SDK\gcp-intro>
```

3) Use the built-in code editor to create a simple README.md file describing your GCP project

```
≡ README-cloudshell.txt X  
≡ README-cloudshell.txt  
1  
2 Welcome to Google Cloud Shell, a tool for managing resources hosted on Google Cloud Platform!  
3 The machine comes pre-installed with the Google Cloud SDK and other popular developer tools.  
4  
5 Your 5GB home directory will persist across sessions, but the VM is ephemeral and will be reset  
6 approximately 20 minutes after your session ends. No system-wide change will persist beyond that.  
7  
8 Type "gcloud help" to get help on using Cloud SDK. For more examples, visit  
9 https://cloud.google.com/shell/docs/quickstart and https://cloud.google.com/shell/docs/examples  
10  
11 Type "cloudshell help" to get help on using the "cloudshell" utility. Common functionality is  
12 aliased to short commands in your shell, for example, you can type "dl <filename>" at Bash prompt to  
13 download a file. Type "cloudshell aliases" to see these commands.  
14  
15 Type "help" to see this message any time. Type "builtin help" to see Bash interpreter help.
```

4) What is the default home directory in Cloud Shell?

/home/<username>

o What tools are pre-installed in Cloud Shell?

Python, Java, Node.js, Alibaba Cloud CLI, cURL, SSH, Kubectl

o How can you open the built-in code editor in Cloud Shell?

code <filename>

Exercise 3:

1) List all the projects associated with your Google account

```
C:\Users\Yedige\AppData\Local\Google\Cloud SDK\gcp-intro>gcloud projects list  
PROJECT_ID          NAME                PROJECT_NUMBER  
braided-rush-434507-g0  My First Project  277481230970  
supple-century-435414-a7  My First Project  564020276208  
you20031996          you20031996      176428992931
```

2) `gcloud projects create your20031996 --name="My First GCP Project"`

```
C:\Users\Yedige\AppData\Local\Google\Cloud SDK>gcloud projects create your20031996 --name="My First GCP Project"
Create in progress for [https://cloudresourcemanager.googleapis.com/v1/projects/your20031996].
Waiting for [operations/cp.5971825708624351058] to finish...done.
Enabling service [cloudapis.googleapis.com] on project [your20031996]...
Operation "operations/acat.p2-298080053341-4ceb0347-f70c-4a50-ab22-af65eb637811" finished successfully.
```

3) Set this new project as your default project

```
C:\Users\Yedige\AppData\Local\Google\Cloud SDK>gcloud config set project your20031996
Updated property [core/project].
```

4) Explore project metadata

```
C:\Users\Yedige\AppData\Local\Google\Cloud SDK>gcloud projects describe your20031996
createTime: '2024-09-12T15:01:21.262310Z'
lifecycleState: ACTIVE
name: My First GCP Project
projectId: your20031996
projectNumber: '298080053341'
```

5) Delete project

```
C:\Users\Yedige\AppData\Local\Google\Cloud SDK>gcloud projects delete your20031996
Your project will be deleted.

Do you want to continue (Y/n)? Y

Deleted [https://cloudresourcemanager.googleapis.com/v1/projects/your20031996].

You can undo this operation for a limited period by running the command below.
$ gcloud projects undelete your20031996

See https://cloud.google.com/resource-manager/docs/creating-managing-projects for information on shutting down projects.
C:\Users\Yedige\AppData\Local\Google\Cloud SDK>
```

- How do you list all projects associated with your account?

gcloud projects list

- What command is used to set a default project?

gcloud config set project PROJECT_ID

- How do you describe project metadata?

gcloud projects describe PROJECT_ID

Exercise 4:

- 1) mkdir -p myproject/src to create directory

- 2) touch for creating files

- 3) nano for editing file

Help	Write Out	Where Is	Cut	Execute	Location	Undo	Set Mark	To Bracket	Previous	Back
Exit	Read File	Replace	Paste	Justify	Go To Line	Redo	Copy	Where Was	Next	Forward

- 4) cat for showing what is in file

- 5) rm for deleting file

```
alimovedige262@cloudshell:~ (braided-rush-434507-g0) $ cat myproject/src/main.py
x
alimovedige262@cloudshell:~ (braided-rush-434507-g0) $ rm myproject/src/main.py
alimovedige262@cloudshell:~ (braided-rush-434507-g0) $
```

6) Create new bucket google storage(permission denied)

```
alimovedige262@cloudshell:~ (braided-rush-434507-g0)$ gsutil mb gs://fort
Creating gs://fort/...
AccessDeniedException: 403 The billing account for the owning project is disabled in state absent
alimovedige262@cloudshell:~ (braided-rush-434507-g0)$ gsutil cp myproject/src/main.py gs://fort/
CommandException: No URLs matched: myproject/src/main.py
alimovedige262@cloudshell:~ (braided-rush-434507-g0)$ gsutil ls gs://fort
AccessDeniedException: 403 alimovedige262@gmail.com does not have storage.objects.list access to the G
oogle Cloud Storage bucket. Permission 'storage.objects.list' denied on resource (or it may not exist)
alimovedige262@cloudshell:~ (braided-rush-434507-g0)$
```

- What command did you use to create the directory structure?
mkdir -p myproject/src
- How did you upload a file to a Cloud Storage bucket?
gsutil cp myproject/src/main.py gs://fort/
- How can you list the contents of a Cloud Storage bucket?
gsutil ls gs://fort

Exercise 5:

- 1) create a new shell script named **setup.sh** in your **gcp-intro** directory.

```
alimovedige262@cloudshell:~ (braided-rush-434507-g0)$ mkdir gcp-intro
alimovedige262@cloudshell:~ (braided-rush-434507-g0)$ cd gcp-intro
```

- 2) The script should automate the creation of a new directory, a simple text file, and set up a basic Google Cloud configuration
- 3) **chmod +x setup.sh**

```
GNU nano 6.2 setup.sh
mkdir -p myproject
echo "Hello world!" >myproject/hello.txt
gcloud config set project your20031996
```

```
alimovedige262@cloudshell:~/gcp-intro (braided-rush-434507-g0)$ nano setup.sh
alimovedige262@cloudshell:~/gcp-intro (braided-rush-434507-g0)$ chmod +x setup.sh
alimovedige262@cloudshell:~/gcp-intro (braided-rush-434507-g0)$ ./setup.sh
```

```
alimovedige262@cloudshell:~/gcp-intro (braided-rush-434507-g0)$ ./setup.sh
Updated property [core/project].
alimovedige262@cloudshell:~/gcp-intro (your20031996)$ ls
myproject setup.sh
alimovedige262@cloudshell:~/gcp-intro (your20031996)$ cat myproject/hello.txt
Hello world!
alimovedige262@cloudshell:~/gcp-intro (your20031996)$ gcloud config get-value project
Your active configuration is: [cloudshell-17450]
your20031996
alimovedige262@cloudshell:~/gcp-intro (your20031996)$
```

- What command did you use to make the script executable?
chmod +x setup.sh
- How did you ensure the script was executed correctly?

I checked the presence of the created directory and file, as well as the default installation of the project.

- What steps did your script automate?

Creating a new directory, creating a simple text file, the default project installation.