

Assignment 1, Cloud Application Development

Exercise 1: Setting Up Google Cloud SDK

```
Reachability Check passed.
Network diagnostic passed (1/1 checks passed).

You must sign in to continue. Would you like to sign in (Y/n)? y

Your browser has been opened to visit:

    https://accounts.google.com/o/oauth2/auth?response_type=code&client_id=325
940559.apps.googleusercontent.com&redirect_uri=http%3A%2F%2Flocalhost%3A8085%
scope=openid+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fuserinfo.email+https%3
F%2F%2Fwww.googleapis.com%2Fauth%2Fcloud-platform+https%3A%2F%2Fwww.googleapis.c
2Fauth%2Fappengine.admin+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fsqlservice
gin+https%3A%2F%2Fwww.googleapis.com%2Fauth%2Fcompute+https%3A%2F%2Fwww.googl
is.com%2Fauth%2Faccounts.reauth&state=cTErprVHkaQGYBb06b7kygkyGFf&access_ty
=offline&code_challenge=aOGiInDQUKi0o32CKcx18kq57dbv2gTZvd488g3aLfM&code_chall
ge_method=S256

You are signed in as: [dinmukhamed2517@gmail.com].
```

```
Your current project has been set to: [assignment1-435712].

Not setting default zone/region (this feature makes it easier to use
[gcloud compute] by setting an appropriate default value for the
--zone and --region flag).
See https://cloud.google.com/compute/docs/gcloud-compute section on how to set
default compute region and zone manually. If you would like [gcloud init] to be
able to do this for you the next time you run it, make sure the
Compute Engine API is enabled for your project on the
https://console.developers.google.com/apis page.

The Google Cloud CLI is configured and ready to use!

* Commands that require authentication will use dinmukhamed2517@gmail.com by de
ault
* Commands will reference project `assignment1-435712` by default
Run `gcloud help config` to learn how to change individual settings
```

```
Account: [dinmukhamed2517@gmail.com]
Project: [assignment1-435712]
Universe Domain: [googleapis.com]

Current Properties:
[core]
  account: [dinmukhamed2517@gmail.com] (property file)
  disable_usage_reporting: [False] (property file)
  project: [assignment1-435712] (property file)

Logs Directory: [/Users/dimash/.config/gcloud/logs]
Last Log File: [/Users/dimash/.config/gcloud/logs/2024.09.15/17.45.53.009968.1
]

git: [git version 2.42.1]
ssh: [OpenSSH_9.4p1, LibreSSL 3.3.6]
```

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

gcloud init

How did you set the default project?

After the registration it requires me to choose the default project by id or by the name of the project

What information does the gcloud info command provide?

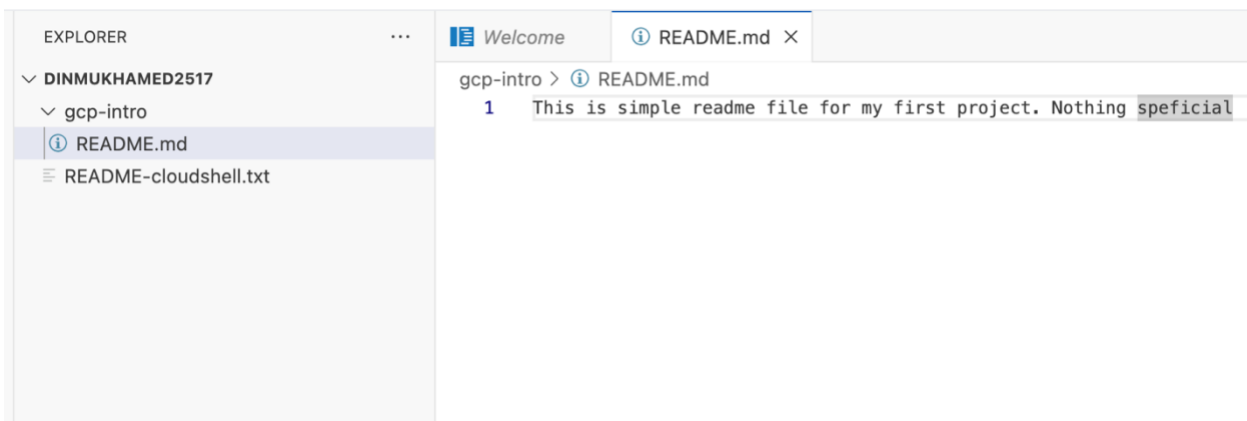
The gcloud info command provides detailed information about your current Google Cloud SDK configuration, including: SDK version, current project, account you're authenticated with, default region and zone installation directory, available APIs

Exercise 2: Exploring Cloud Shell

```

Welcome to Cloud Shell! Type "help" to get started.
Your Cloud Platform project in this session is set to assignment1-435712.
Use "gcloud config set project [PROJECT_ID]" to change to a different project.
dinmukhamed2517@cloudshell:~ (assignment1-435712)$ ls
README-cloudshell.txt
dinmukhamed2517@cloudshell:~ (assignment1-435712)$ mkdir gcp-intro
dinmukhamed2517@cloudshell:~ (assignment1-435712)$ cd gcp-intro/
dinmukhamed2517@cloudshell:~/gcp-intro (assignment1-435712)$ cloudshell edit.
usage: cloudshell [-h]
                    {help,edit-files,edit-file,edit,open,open-workspace,workspace,ws,down
aliases,get-web-preview-url}
...
cloudshell: error: argument command: invalid choice: 'edit.' (choose from 'help', 'edit
workspace', 'ws', 'download-files', 'download-file', 'download', 'dl', 'launch-tutorial
dinmukhamed2517@cloudshell:~/gcp-intro (assignment1-435712)$ cloudshell edit ,
dinmukhamed2517@cloudshell:~/gcp-intro (assignment1-435712)$

```



What is the default home directory in Cloud Shell?

`username@cloudshell:/home`

What tools are pre-installed in Cloud Shell?

Google Cloud SDK (gcloud, gsutil) Kubernetes tools (kubectl) Docker Git Python, Node.js, Go, and Java SDKs Text editors like vim, nano, and emacs Package managers (apt-get, npm, pip) Terraform Build tools like maven, gradle Other common Unix/Linux utilities like curl, wget, zip, etc.

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

There are two ways to open the editor in cloud shell. First one, you just click the “open editor” button on the top right corner of the shell. The second one is to write “cloudshell edit”

Exercise 3: Managing Projects with Google Cloud SDK

```

dimash@DinmukhmedsAir2 desktop % gcloud projects list
PROJECT_ID      NAME              PROJECT_NUMBER
apteka-1d2bd    apteka            235063105016
arbuz-copy      Arbuz copy        423829130729
asdamdibolsyn   asdamdibolsyn     391717691184
assignment1-435712 Assignment1        896904582686
balmy-renderer-412607 My First Project  667264291378
delta-tuner-416108 My First Project  169190262229
devmuscles-c20d2 DevMuscles        537777437589
expense-3506f   Expense           77332598007
frdb-866f4      FRDB              542690784120
kotopes-2       kotopes-2         216480931457
kotopesoff-951df Kotopesoff        742371981607
newproject-a8e24 newproject         255314247350
ordinal-nectar-412205 My First Project  393848483592
place-16a9e     Place             881033063640
portfolio-370d0 portfolio         707220146401
shina-ea73d     Shina             790278978690
shop-50d7e      Shop              681265314612
su-events-b1421 SU events         1930995325
tourism-a0fa4   tourism           2898112470
turizm-be758    turizm            861030365569

```

```

dimash@DinmukhmedsAir2 desktop % gcloud projects create --name="My First GCP Project"
No project ID provided.

Use [my-first-gcp-project-435713] as project ID (Y/n)? Y

Create in progress for [https://cloudresourcemanager.googleapis.com/v1/projects/my-first-gcp-project-435713].
Waiting for [operations/cp.4954392921869153646] to finish...done.
Enabling service [cloudapis.googleapis.com] on project [my-first-gcp-project-435713]...
Operation "operations/acat.p2-861971152597-9e0403c1-f50d-4773-941c-bdccf2eb12ce" finished successfully.
dimash@DinmukhmedsAir2 desktop %

```

```

dimash@DinmukhmedsAir2 desktop % gcloud config set project my-first-gcp-project-435713
Updated property [core/project].
dimash@DinmukhmedsAir2 desktop % gcloud projects describe my-first-gcp-project-435713
createTime: '2024-09-15T13:24:49.957310Z'
lifecycleState: ACTIVE
name: My First GCP Project
projectId: my-first-gcp-project-435713
projectNumber: '861971152597'
dimash@DinmukhmedsAir2 desktop %

```

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: Using Cloud Shell for Basic Operations

```
gcp-intro README-cloudshell.txt
dinmukhamed2517@cloudshell:~ (assignment1-435712)$ mkdir -p myproject/src myproject/tests myproject/docs
dinmukhamed2517@cloudshell:~ (assignment1-435712)$ gsutil mb -l REGION gs://basket/
Creating gs://basket/...
```

What command did you use to create the directory structure?

`mkdir -p myproject/src myproject/tests myproject/docs`

How did you upload a file to a Cloud Storage bucket?

`gsutil cp [FILE_PATH] gs://[BUCKET_NAME]/`

How can you list the contents of a Cloud Storage bucket?

`gsutil ls gs://[BUCKET_NAME]/`

Exercise 5: Automating Tasks with Shell Scripts in Cloud Shell

```
Your active configuration is: [cloudshell-3869]
dinmukhamed2517@cloudshell:~/gcp-intro (assignment1-435712)$ ./setup.sh
-bash: ./setup.sh: Is a directory
dinmukhamed2517@cloudshell:~/gcp-intro (assignment1-435712)$ chmod +x setup.sh
dinmukhamed2517@cloudshell:~/gcp-intro (assignment1-435712)$ ./setup.sh
WARNING: [dinmukhamed2517@gmail.com] does not have permission to access projects instance [my-gcp-project]
does not have permission. This command is authenticated as dinmukhamed2517@gmail.com which is the active
property
Are you sure you wish to set property [core/project] to my-gcp-project-id?

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

Updated property [core/project].
Setup script executed successfully!
dinmukhamed2517@cloudshell:~/gcp-intro (my-gcp-project-id)$
```

```
gcp-intro > $ setup.sh
1  mkdir -p myproject/automation
2
3  echo "This is a setup script for my GCP project." > myproject/automation/README.txt
4
5  gcloud config set project my-gcp-project-id
6
7  echo "Setup script executed successfully!"
```

What command did you use to make the script executable?

`chmod +x setup.sh`

How did you ensure the script was executed correctly?

Firstly, I ran the script by using `./setup.sh` command. After running I checked if the expected directory and file is created or not. Moreover, I check the Gcloud configuration using this command `gcloud config list`

What steps did your script automate?

The script automated the following tasks:

Created a new directory

Created a simple text file in that directory

Set up a basic Google Cloud configuration by setting a default project.