

Deploy Golang

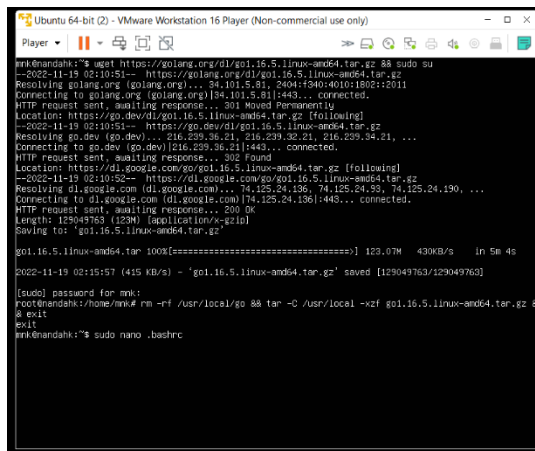
Pertama-tama sama seperti sebelumnya, kita harus mendownload engine-nya terlebih dahulu.

```
wget https://golang.org/dl/go1.16.5.linux-amd64.tar.gz && sudo su
```

```
rm -rf /usr/local/go && tar -C /usr/local -xzf go1.16.5.linux-amd64.tar.gz && exit
```

Selanjutnya masukkan path go pada .bashrc

```
sudo nano .bashrc
```

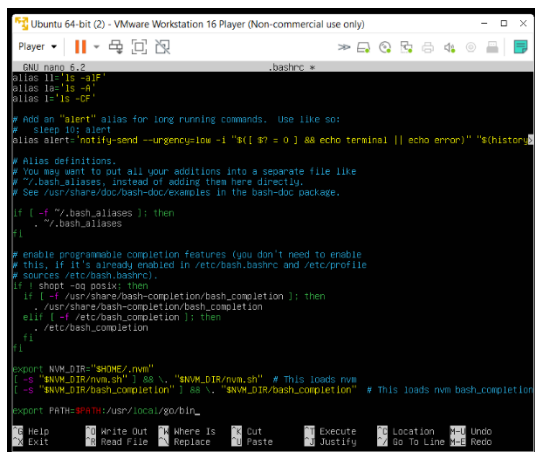


```
mnk@mandahk:~$ wget https://golang.org/dl/go1.16.5.linux-amd64.tar.gz && sudo su
--2022-11-19 02:10:51-- https://golang.org/dl/go1.16.5.linux-amd64.tar.gz
Resolving golang.org (golang.org)... 34.101.5.81, 2404:540:4010:1802::2011
Connecting to golang.org (golang.org)[34.101.5.81]:443... connected.
HTTP request sent, awaiting response... 200 OK
Location: https://go.dev/dl/go1.16.5.linux-amd64.tar.gz [following]
--2022-11-19 02:10:51-- https://go.dev/dl/go1.16.5.linux-amd64.tar.gz
Resolving go.dev (go.dev)... 216.239.36.21, 216.239.32.21, 216.239.34.21, ...
Connecting to go.dev (go.dev)[216.239.36.21]:443... connected.
HTTP request sent, awaiting response... 302 found
Location: https://dl.google.com/go/go1.16.5.linux-amd64.tar.gz [following]
--2022-11-19 02:10:52-- https://dl.google.com/go/go1.16.5.linux-amd64.tar.gz
Resolving dl.google.com (dl.google.com)... 74.125.24.136, 74.125.24.139, 74.125.24.130, ...
Connecting to dl.google.com (dl.google.com)[74.125.24.136]:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 12504763 (12.3M) [application/x-gzip]
Saving to: 'go1.16.5.linux-amd64.tar.gz'

go1.16.5.linux-amd64.tar 100K[#####] 123.07M  430KB/s   in 5m 4s
2022-11-19 02:15:57 (415 KB/s) - 'go1.16.5.linux-amd64.tar.gz' saved [129049763/129049763]

[sudo] password for mnk:
root@mandahk:~# rm -rf /usr/local/go && tar -C /usr/local -xzf go1.16.5.linux-amd64.tar.gz &
& exit
mnk@mandahk:~$ sudo nano .bashrc
```

Ketik command (export PATH=\$PATH:/usr/local/go/bin) pada baris terakhir, lalu save



```
mnk@mandahk:~$ nano .bashrc
# If you run 'alias' you'll see lots of lines like 'alias ll='ls -la'.
# Add an "alias" alias for long running commands. Use like so:
# sleep 10; alert
# alias alert='notify-send --urgency=low -i "${PWD}" "echo terminal || echo error"' "${HISTFILE}"
# Alias definitions.
# You may want to put all your additions into a separate file like
# ~/.bash_aliases, instead of adding them here directly.
# See /usr/share/doc/bash-doc/examples in the bash-doc package.

if [ -f ~/.bash_aliases ]; then
    . ~/.bash_aliases
fi

# enable programmable completion features (you don't need to enable
# this, if it's already enabled in /etc/bash.bashrc and /etc/profile
# sources /etc/bash.bashrc)
if ! shopt -o posix; then
    if [ -f /usr/share/bash-completion/bash_completion ]; then
        . /usr/share/bash-completion/bash_completion
    elif [ -f /etc/bash_completion ]; then
        . /etc/bash_completion
    fi
fi

export NVM_DIR="$HOME/.nvm"
[ -s "$NVM_DIR/nvm.sh" ] && . "$NVM_DIR/nvm.sh" # This loads nvm
[ -s "$NVM_DIR/bash_completion" ] && . "$NVM_DIR/bash_completion" # This loads nvm bash_completion
export PATH=$PATH:/usr/local/go/bin
```

Jika sudah sekarang dapat verifikasi go dengan cara berikut.

go version



```
mnk@mandahk:~$ go version
go version go1.18.1 linux/amd64
mnk@mandahk:~$
```

Sekarang kita akan membuat aplikasi sederhana menggunakan go. Kalian dapat menjalankan beberapa perintah berikut ini.

Buat sebuah file dengan nama index.go.

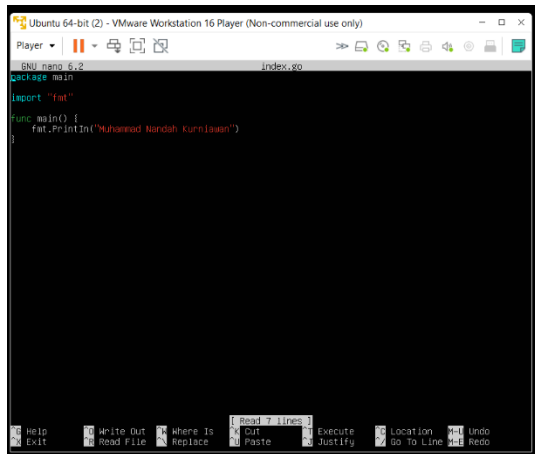
nano index.go

Setelah itu masukkan script dibawah ini.

```
package main
```

```
import "fmt"
```

```
func main() {  
    fmt.Println("Hello World!")  
}
```

A screenshot of a terminal window titled "Ubuntu 64-bit (2) - VMware Workstation 16 Player (Non-commercial use only)". The terminal shows the Go code being edited in the previous block. The code is:

```
package main  
import "fmt"  
  
func main() {  
    fmt.Println("Muhammad Nandah Kurniawan")  
}
```

Sekarang jalankan aplikasi go dengan menggunakan perintah berikut.

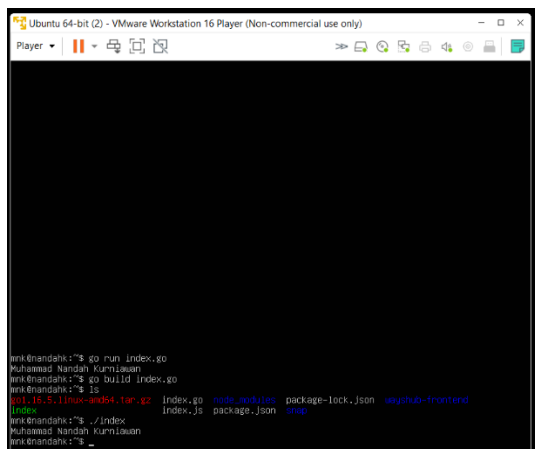
```
go run index.go
```

Jika aplikasi kalian ingin di build, maka jalankan perintah berikut ini.

```
go build index.go
```

Jika sudah jalankan aplikasi dengan menggunakan perintah berikut.

```
./index
```

A screenshot of a terminal window titled "Ubuntu 64-bit (2) - VMware Workstation 16 Player (Non-commercial use only)". The terminal shows the execution of the Go program. The commands and output are:

```
winknandah@i17:~$ go run index.go  
Muhammad Nandah Kurniawan  
winknandah@i17:~$ go build index.go  
winknandah@i17:~$ ls  
index  go1.18.5.linux-amd64.tar.gz  index.go  node_modules  package-lock.json  weslhub-frontend  
winknandah@i17:~$ ./index  
index.js  package.json  src  
winknandah@i17:~$
```

Berhasil dijalankan sehingga tampil tulisan “Muhammad Nandah Kurniawan”

Deploy Python

Pertama-tama kita harus install terlebih dahulu Python3. Untuk instalasi ikuti beberapa perintah di bawah ini.

`sudo apt install python3-pip`

jika muncul output konfirmasi lagi, kita ketik y lagi

```
devops@DESKTOP-17R0QNP:~$ sudo apt install python3-pip
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  libexpat1-dev libjs-jquery libjs-sphinxdoc libjs-underscore
  libpython3-dev libpython3.10-dev python3-dev python3-distutils
  python3-lib2to3 python3-setuptools python3-wheel python3.10-dev
  zlib1g-dev
Suggested packages:
  python-setuptools-doc
The following NEW packages will be installed:
  libexpat1-dev libjs-jquery libjs-sphinxdoc libjs-underscore
  libpython3-dev libpython3.10-dev python3-dev python3-distutils
  python3-lib2to3 python3-pip python3-setuptools python3-wheel
  python3.10-dev zlib1g-dev
0 upgraded, 14 newly installed, 0 to remove and 0 not upgraded.
Need to get 8076 kB of archives.
After this operation, 34.6 MB of additional disk space will be used.
Do you want to continue? [Y/n] Y
0% [Connecting to archive.ubuntu.com (185.125.190.39)]
```

setelah itu, kita perlu untuk mengunduh framework flask

`pip install flask`

```
devops@DESKTOP-17R0QNP: × + ~
Setting up libpython3-dev:amd64 (3.10.6-1~22.04) ...
Setting up python3-dev (3.10.6-1~22.04) ...
Processing triggers for man-db (2.10.2-1) ...
devops@DESKTOP-17R0QNP:~$ pip install flask
Defaulting to user installation because normal site-packages is not writeable
Collecting flask
  Downloading Flask-2.2.2-py3-none-any.whl (101 kB)
    _____ 101.5/101.5 KB 37.8 kB/s eta 0:00:00
Collecting click>=8.0
  Downloading click-8.1.3-py3-none-any.whl (96 kB)
    _____ 96.6/96.6 KB 70.2 kB/s eta 0:00:00
Collecting Jinja2>=3.0
  Downloading Jinja2-3.1.2-py3-none-any.whl (133 kB)
    _____ 133.1/133.1 KB 91.1 kB/s eta 0:00:00
Collecting Werkzeug>=2.2.2
  Downloading Werkzeug-2.2.2-py3-none-any.whl (232 kB)
    _____ 232.7/232.7 KB 78.9 kB/s eta 0:00:00
Collecting itsdangerous>=2.0
  Downloading itsdangerous-2.1.2-py3-none-any.whl (15 kB)
Collecting MarkupSafe>=2.0
  Downloading MarkupSafe-2.1.1-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (25 kB)
Installing collected packages: MarkupSafe, itsdangerous, click, Werkzeug, Jinja2, flask
  WARNING: The script flask is installed in '/home/devops/.local/bin' which is not on PATH.
  Consider adding this directory to PATH or, if you prefer to suppress this warning, use --no-warn-script-location.
Successfully installed Jinja2-3.1.2 MarkupSafe-2.1.1 Werkzeug-2.2.2 click-8.1.3 flask-2.2.2 itsdangerous-2.1.2
devops@DESKTOP-17R0QNP:~$
```

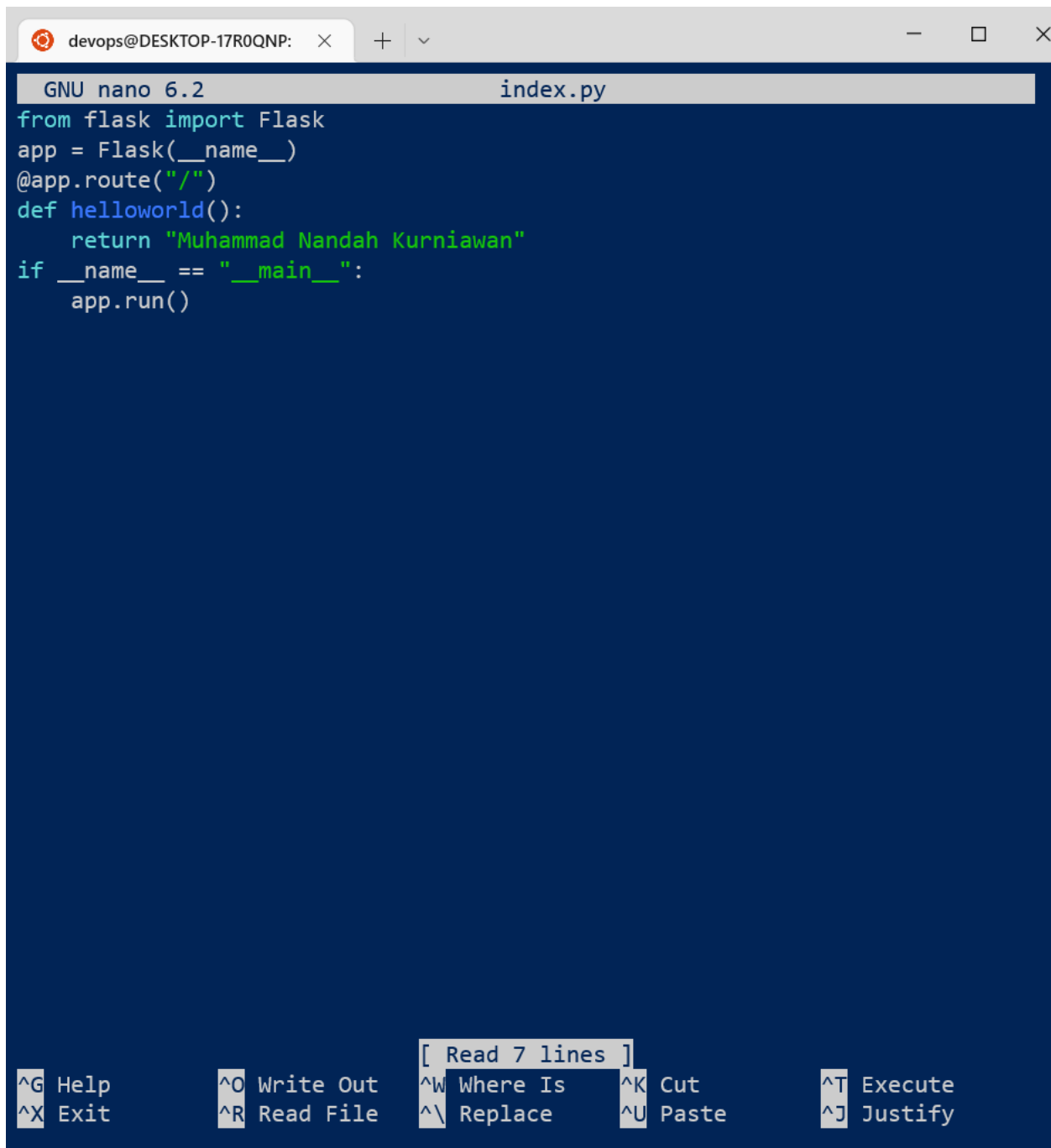
setelah itu kita buat file pythonnya, saya akan menggunakan nama index.py

nano index.py

```
devops@DESKTOP-17R0QNP: × + ~
devops@DESKTOP-17R0QNP:~$ nano index.py
```

kita isikan sebagai berikut:

```
from flask import Flask
app = Flask(__name__)
@app.route("/")
def helloworld():
    return "Muhammad Nandah Kurniawan"
if __name__ == "__main__":
    app.run()
```



```
devops@DESKTOP-17R0QNP: × + v
GNU nano 6.2 index.py
from flask import Flask
app = Flask(__name__)
@app.route("/")
def helloworld():
    return "Muhammad Nandah Kurniawan"
if __name__ == "__main__":
    app.run()

[ Read 7 lines ]
^G Help      ^O Write Out  ^W Where Is   ^K Cut        ^T Execute
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^J Justify
```

setelah itu, kita perlu export script python kita ke dalam pm2

```
export FLASK_APP=sayMyNameFromPython.py
image
```

lalu jalankan python diatas pm2

pm2 start "flask run"

```
devops@DESKTOP-17R0QNP:~$ nano index.py
devops@DESKTOP-17R0QNP:~$ export FLASK_APP=index.py
devops@DESKTOP-17R0QNP:~$ pm2 start "flask run"
[PM2] Applying action restartProcessId on app [flask run](ids: [ 0 ])
[PM2] [flask run](0) ✓
[PM2] Process successfully started
```

id	name	mode	u	status	cpu	memory
0	flask run	fork	15	online	0%	780.0kb

```
devops@DESKTOP-17R0QNP:~$ python3 index.py
* Serving Flask app 'index'
* Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
* Running on http://127.0.0.1:5000
Press CTRL+C to quit
```

lalu kita cek di browser kita apakah sudah terdeploy dengan benar, karena python secara default berjalan di port 5000, ketikan

localhost:5000

bila berhasil akan muncul output seperti dibawah

