**BN232 Advanced Network programming**

**Week 8 Laboratory**

**Laboratory Activity:**

**8.1 Create a simple “HTTP-GET”, read JSON, print “ID”, “NAME” and “Email Address” field.**

**8.2 Implement SMTP to send yourself a simple plain-text email.**

End of laboratory class, submit the file on Moodle at least 10 minutes before the end of laboratory class.

**Total Marks** = 10 marks for 10 weeks.

**Hands-on:**

In this lab we are going demonstrate HTTP request/response and SMTP for project simulation.

**Step-by-Step guide to set-up the environment:**

**8.1 \*\*Set-up the virtual environment as you did the Lab-7 for Django framework.**

\*\*Ideally venv must already be configured since you executed the code python3 -m venv venv.

If the code does not works then follow the steps:

Sudo apt update

sudo apt install -y python3 python3-pip python3-venv

python3 -m venv venv

source venv/bin/activate

pip install requests // External package “requests” is installed for HTTP.

1. Create the python file

“nano http\_demo.py”

import requests

url = "https://jsonplaceholder.typicode.com/users"

response = requests.get(url)

if response.status\_code == 200:

users = response.json() # Parse the JSON response

for user in users:

print(f"ID: {user['id']}, Name: {user['name']}, Email: {user['email']}")

else:

print("Failed to retrieve data, status code:", response.status\_code)

1. Run the code “python3 http\_demo.py”
2. Output must be details of “ID”, “USER NAME” and “Email ID”.

**8.2**

sudo apt install python3-pip -y

pip install secure-smtplib

import smtplib

from email.mime.text import MIMEText

from email.mime.multipart import MIMEMultipart

EDIT THESE DETAILS

sender\_email = "your\_email@yahoo.com" # Replace with your Hotmail/yahoo/Gmail

app\_password = "your\_app\_password" # Replace with 16-char App Password

receiver\_email = "receiver\_email@hotmail.com" # Replace with the recipient

subject = "Test Email from Python Script"

body = "Hello! This is a test email sent from Python via Gmail SMTP server."

msg = MIMEMultipart()

msg["From"] = sender\_email

msg["To"] = receiver\_email

msg["Subject"] = subject

msg.attach(MIMEText(body, "plain"))

try:

with smtplib.SMTP\_SSL("smtp.gmail.com", 465) as server:

server.login(sender\_email, app\_password)

server.sendmail(sender\_email, receiver\_email, msg.as\_string())

print(" Email sent successfully!")

except Exception as e:

print("Error sending email:", e)

**References**

[1] https://docs.python.org/3/library/smtplib.html