

# Python

## Snippet list

### Edit file

The following functions can be used to edit any provided file. In the selected file a string can be searched that can then be replaced with a given string.

### Edit a file with python

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```
# search file for string
def searchLineWithString(self, string, file):
    for num, line in enumerate(file, 1):
        if string in line:
            return num - 1

# edit line dependend on provided parameter
def editLine(self, file, searchString, newLine):
    selectedFile = open(file, "r")
    readSelectedFile = selectedFile.readlines()
    selectedFile.close()
    # find specific line
    lineToEdit = searchLineWithString(self, searchString, readSelectedFile)
    # edit required line
    readSelectedFile[lineToEdit] = newLine

# write lines to files
selectedFile = open(file, "w")
selectedFile.writelines(readSelectedFile)
selectedFile.close()
```

### Send mail

The following functions can be used to emails from python.

### Send mails with python

[Show/Hide](#)

```
EMAILRECEIVER = ""
EMAILSENDER = ""
MAILSERVER = ""
MAILSERVERPORT = ""
EMAILSENDER = ""

def buildMail(self):
    mailText = ""
    # build your mail here string by string (mailText += "")
    return mailText

def sendMail(self):
    if EMAILRECEIVER and EMAILSENDER and MAILSERVER and MAILSERVERPORT:
        import smtplib
        from email.mime.multipart import MIMEMultipart
        from email.mime.text import MIMEText
        from email.header import Header

        smtp = smtplib.SMTP()
        smtp.connect(MAILSERVER, MAILSERVERPORT)
        # define subject here
        subject = ""
        msgRoot = MIMEMultipart("alternative")
        msgRoot['Subject'] = Header(subject, "utf-8")
        msgRoot['From'] = "Python-Script <" + EMAILSENDER + ">"
        msgRoot['To'] = EMAILRECEIVER
        mailContent = MIMEText(buildMail(self))
        mailText = MIMEText(mailContent, "plain", "utf-8")
        msgRoot.attach(mailText)
        try:
            smtp.sendmail(EMAILSENDER, EMAILRECEIVER,
msgRoot.as_string())
        except:
            print(self, "Failed to send mail to " + EMAILRECEIVER + " |
Check your settings!")
            print(traceback.format_exc())

    else:
        print(self, "Mailing disabled or not configured properly.")
```

## Send mails with python using AUTH

[Show/Hide](#)

```
# MAILCONFIG
MAILSERVER = ""
MAILSERVERPORT = 587
MAILUSER = ""
MAILPASSWORD = ""
```

```
EMAILRECEIVER = ""
EMAILSENDER = ""

def buildMail(self):
    mailText = ""
    # build your mail here string by string (mailText += "")
    return mailText

def sendMail(self):
    if EMAILRECEIVER and MAILUSER and MAILSERVER and MAILSERVERPORT:
        import smtplib
        from email.mime.multipart import MIMEMultipart
        from email.mime.text import MIMEText
        from email.header import Header

        smtp = smtplib.SMTP(MAILSERVER)
        smtp.connect(MAILSERVER, MAILSERVERPORT)
        smtp.ehlo()
        smtp.starttls()
        smtp.ehlo()
        smtp.login(MAILUSER, MAILPASSWORD)
        # define subject here
        subject = ""
        msgRoot = MIMEMultipart("alternative")
        msgRoot['Subject'] = Header(subject, "utf-8")
        msgRoot['From'] = EMAILSENDER
        msgRoot['To'] = EMAILRECEIVER

        mailContent = buildMail(self)
        mailText = MIMEText(mailContent, "plain", "utf-8")

        msgRoot.attach(mailText)
        try:
            smtp.sendmail(MAILUSER, EMAILRECEIVER, msgRoot.as_string())
        except:
            print(self, "Failed to send mail to " + EMAILRECEIVER + " |
Check your settings!")
            print(self, traceback.format_exc())
        else:
            print(self, "Mailing disabled or not configured properly.")
```

## Execute Bash command and capture output

The output will be captured when the command exited.

## Run subprocess

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```
resultEncoded = subprocess.run("/command/to/execute", capture_output=True, shell=True)
result = resultEncoded.stdout.decode()[:-1]
resultErr = resultEncoded.stderr.decode()[:-1]
```

Sourced from [stackoverflow.com](https://stackoverflow.com) - [Python Email](#)

## Get current Memory (RAM) information/statistics (Linux)

Using `op.popen` and Linux build-in binary `free`.

### Get memory information on Linux

[Show/Hide](#)

```
total_memory, used_memory, free_memory, shared_memory, cached_memory,
available_memory = map(int, os.popen('free -t -m').readlines()[1].split()[1:])
```

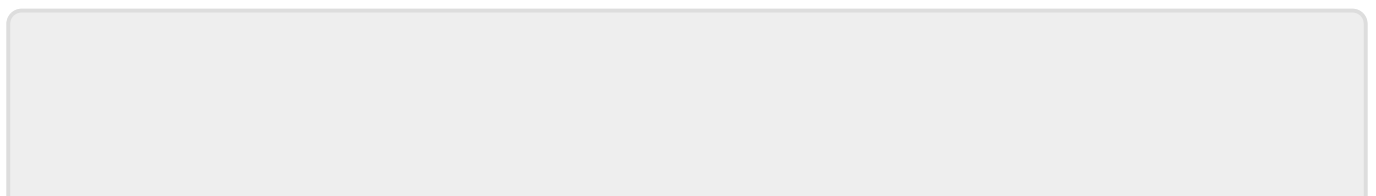
## FastAPI/Uvicorn

### Change Log Format

Adding the following lines to your uvicorn initialization function will change the output of the webserver:

```
log_config = uvicorn.config.LOGGING_CONFIG
log_config["formatters"]["access"]["fmt"] = "%(asctime)s - %(levelname)s - %(message)s"
uvicorn.run(app, port=80, host=SERVERIP, log_config=log_config)
```

Sourced from [github.com](https://github.com) - [tiangolo/fastapi](#)



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