LSC raport
Lab 5
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Task 1.
a)

```
dawid@DESKTOP-389PK2L:/mnt/d/semestr_XIX/lsc/lab5$ time aws s3 cp file.txt s3://dawid126bucket
upload: ./file.txt to s3://dawid126bucket/file.txt

real    0m26.489s
user    0m5.089s
sys     0m4.633s
```

```
dawid@DESKTOP-389PK2L:/mnt/d/semestr_XIX/lsc/lab5$ time aws s3 cp s3://dawid126bucket/file.txt file.txt
download: s3://dawid126bucket/file.txt to ./file.txt

real    0m54.285s
user    0m5.545s
sys     0m2.725s
```

```
dawid@DESKTOP-389PK2L:/mnt/d/semestr_XIX/lsc/lab5$ python3 script.py
Measurement:  0
Measurement:  1
Measurement:  2
Measurement:  3
Measurement:  4
Measurement:  5
Measurement 0
Measurement 1
Measurement 2
Measurement 3
Measurement 4
Measurement 5
Upload:   19.012258569399517
Download:   107.28478821118672
```

b)

```
[ec2-user@ip-172-31-88-47 ~]$ python3 script.py
Measurement:  0
Measurement:  1
Measurement:  2
Measurement:  3
Measurement:  4
Measurement:  5
Measurement 0
Measurement 1
Measurement 2
Measurement 3
Measurement 4
Measurement 5
Upload:  1.3240622679392497
Download:  1.1337854862213135
[ec2-user@ip-172-31-88-47 ~]$
```

The region was set to us-east-1 and the local PC was downloading and uploading from Poland, with quite low internet speed. The S3 and EC2 instances were set up in the same region and the internet connection between those two were much higher.

script.py :

```python
    s3 = boto3.client('s3')

    bucket = 'dawid126bucket'
    filename = 'file.txt'
    with open(filename, 'rb') as f:
        file = f.read()
    measurements = []
    for i in range(6):
        print("Measurement: ", i)
        start = time.time()
        s3.put_object(Body=file, Bucket=bucket, Key=filename)
        end = time.time()
        measurements.append(end - start)

    avg_upload_time = sum(measurements) / 6

    measurements = []
    for i in range(6):
        print("Measurement", i)
        start = time.time()
        response = s3.get_object(Bucket=bucket, Key=filename)
        content = response['Body'].read()
        end = time.time()
        measurements.append(end - start)

    avg_download_time = sum(measurements) / 6

    print("Upload: ", avg_upload_time)
    print("Download: ", avg_download_time)
```