

SRE Training (Day 9) - REGEX & PYTHON

REGEX EMAIL VALIDATION

```
root@RheaAlisha: /mnt/c/mthree_practice
```

```
read -p "Enter email" email

if [[ $email =~ ^[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}$ ]]; then
    echo "Valid Email"
else
    echo "Invalid Email"
fi
```

```
root@RheaAlisha:/mnt/c/mthree_practice# ./regexEmail.sh
Enter emailrhearobinson123@domain.com
Valid Email
```

REGEX PHONE NUMBER VALIDATION

```
root@RheaAlisha: /mnt/c/mthree_practice
```

```
read -p "Enter phone number" phone

if [[ $phone =~ ^[6-9][0-9]{9}$ ]]; then
    echo "Valid Phone Number"
else
    echo "Invalid Phone Number"
fi
```

```
root@RheaAlisha:/mnt/c/mthree_practice# vi regexPhone.sh
root@RheaAlisha:/mnt/c/mthree_practice# ./regexPhone.sh
Enter phone number9986825989
Valid Phone Number
```

REGEX DOB VALIDATION

```
root@RheaAlisha: /mnt/c/mthree_practice
```

```
read -p "Enter DOB" dob

if [[ $dob =~ ^(0[1-9]|[12][0-9]|3[01])-(0[1-9]|1[0-2])-[0-9]{4}$ ]]; then
    echo "Valid Date of Birth"
else
    echo "Invalid Date of Birth"
fi
```

```
root@RheaAlisha:/mnt/c/mthree_practice# ./regexDOB.sh
Enter DOB16-01-2002
Valid Date of Birth
```

LOG ANALYSIS WITH REGEX AND GREP

GREP

```
root@RheaAlisha:/mnt/c/mthree_practice# grep -Eo '[a-zA-Z0-9._%+-]+@[a-zA-Z0-9.-]+\.[a-zA-Z]{2,}' sample-logs.md
admin@example.com
john.doe@company.org
sarah.jenkins@company.org
sarah.jenkins@company.org
michael.brown@example.net
lisa.wong@company.org
david.kim@example.com
emma.davis@company.org
carlos.rodriguez@example.org
admin@example.com
olivia.parker@company.org
james.wilson@example.net
sophia.nguyen@company.org
admin@example.com
ethan.miller@example.com

root@RheaAlisha:/mnt/c/mthree_practice# grep -Eo "INFO|DEBUG|WARN|ERROR" sample-logs.md | sort | uniq -c
    13 DEBUG
    13 ERROR
    60 INFO
    12 WARN
```

AWK

```
root@RheaAlisha:/mnt/c/mthree_practice# awk '$3 == "ERROR" {print $0}' sample-logs.md
2024-02-01 07:32:18 ERROR [app-server-1] Failed to connect to payment gateway: Connection timed out
2024-02-01 07:32:19 ERROR [app-server-1] Transaction 392841 failed: PAYMENT_GATEWAY_ERROR
2024-02-01 07:48:12 ERROR [app-server-1] Invalid request: Missing required field 'authorization'
2024-02-01 08:10:14 ERROR [app-server-1] Database connection lost
2024-02-01 08:35:27 ERROR [app-server-1] Failed to process payment: INVALID_CARD_NUMBER
2024-02-01 08:55:27 ERROR [app-server-2] 500 Internal Server Error: Java heap space
2024-02-01 09:18:56 ERROR [app-server-1] Missing required configuration: SMTP_PASSWORD
2024-02-01 09:20:11 ERROR [notification-service] Failed to send email notification: Authentication failed
2024-02-01 09:45:30 ERROR [app-server-1] Database query failed: Deadlock detected
2024-02-01 10:15:22 ERROR [app-server-1] Failed to connect to external API: https://partner-api.example.com
2024-02-01 10:15:23 ERROR [app-server-1] External API error: Connection refused
2024-02-01 10:40:11 ERROR [app-server-1] 404 Not Found: Resource /api/v1/legacy_endpoint no longer exists
```

SED

```
root@RheaAlisha:/mnt/c/mthree_practice# sed -n '/WARN/p' sample-logs.md
2024-02-01 07:26:14 WARN [app-server-1] Database query took 1583ms to execute
2024-02-01 07:40:11 WARN [app-server-1] Memory usage at 82%, consider scaling up
2024-02-01 08:05:23 WARN [app-server-1] Slow database query detected - query took 2387ms
2024-02-01 08:12:33 WARN [cache-service] Cache miss rate above threshold: 35%
2024-02-01 08:40:19 WARN [monitoring] Network latency increased to 250ms
2024-02-01 08:55:28 WARN [app-server-2] Service restarting due to memory error
2024-02-01 09:10:14 WARN [app-server-1] Rate limit reached for IP 203.0.113.42
2024-02-01 09:35:27 WARN [database] High number of connections detected: 187/200
2024-02-01 10:05:33 WARN [app-server-1] File upload failed: File size exceeds the 10MB limit
2024-02-01 10:20:11 WARN [app-server-2] JWT token expired
2024-02-01 10:35:29 WARN [app-server-2] Report generation taking longer than expected
2024-02-01 10:48:33 WARN [cache-service] Cache eviction rate high: 15%
```

STAT (Metadata)

```
root@RheaAlisha:/mnt/c/mthree_practice# stat sample-logs.md
  File: sample-logs.md
  Size: 8219          Blocks: 24          IO Block: 512   regular file
Device: 0,82    Inode: 19421773393129344  Links: 1
Access: (0777/-rwxrwxrwx)  Uid: (  0/   root)   Gid: (  0/   root)
Access: 2025-02-20 17:32:40.107500300 +0000
Modify: 2025-02-20 17:32:40.107500300 +0000
Change: 2025-02-20 17:32:40.107500300 +0000
 Birth: -
```

PYTHON INSTALLATION WITH BAZEL

BAZEL - is a build and test tool that can be used to build Python projects and manage dependencies in a reproducible manner.

```
278 sudo apt install -y apt-transport-https curl gnupg
279 curl -fsSL
280 curl -fsSL https://bazel.build/bazel-release.pub.gpg | gpg --dearmor | sudo tee /usr/share
281 echo "deb [signed-by=/usr/share/keyrings/bazel-archive-keyring.gpg] https://storage.google
282 sudo apt update && sudo apt install -y bazel
283 bazel --version
```

AUTOMATED SCHEDULING - CRON JOBS

CREATING A CRONTAB AND ADDING JOBS

crontab -e - to create/edit a crontab

```
root@RheaAlisha:/mnt/c/mthree_practice# crontab -e
no crontab for root - using an empty one
crontab: installing new crontab
```

LISTING JOBS

```
root@RheaAlisha:/mnt/c/mthree_practice# crontab -l

0 9 * * * echo "Good Morning, Rhea!" >> ~/morning_greeting.log
30 18 * * * echo "Good Evening, Rhea!" >> ~/evening_greeting.log
```

REMOVING CRONTAB/ DELETION

```
root@RheaAlisha:/mnt/c/mthree_practice# crontab -r
root@RheaAlisha:/mnt/c/mthree_practice# crontab -l
no crontab for root
```