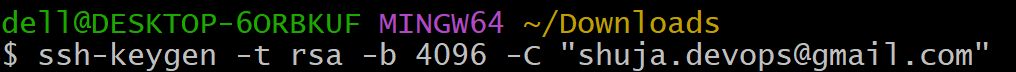
1. **Set up SSH password less authentication.**

**Steps :**

**1. Generate SSH Key Pair on Your Local Machine**

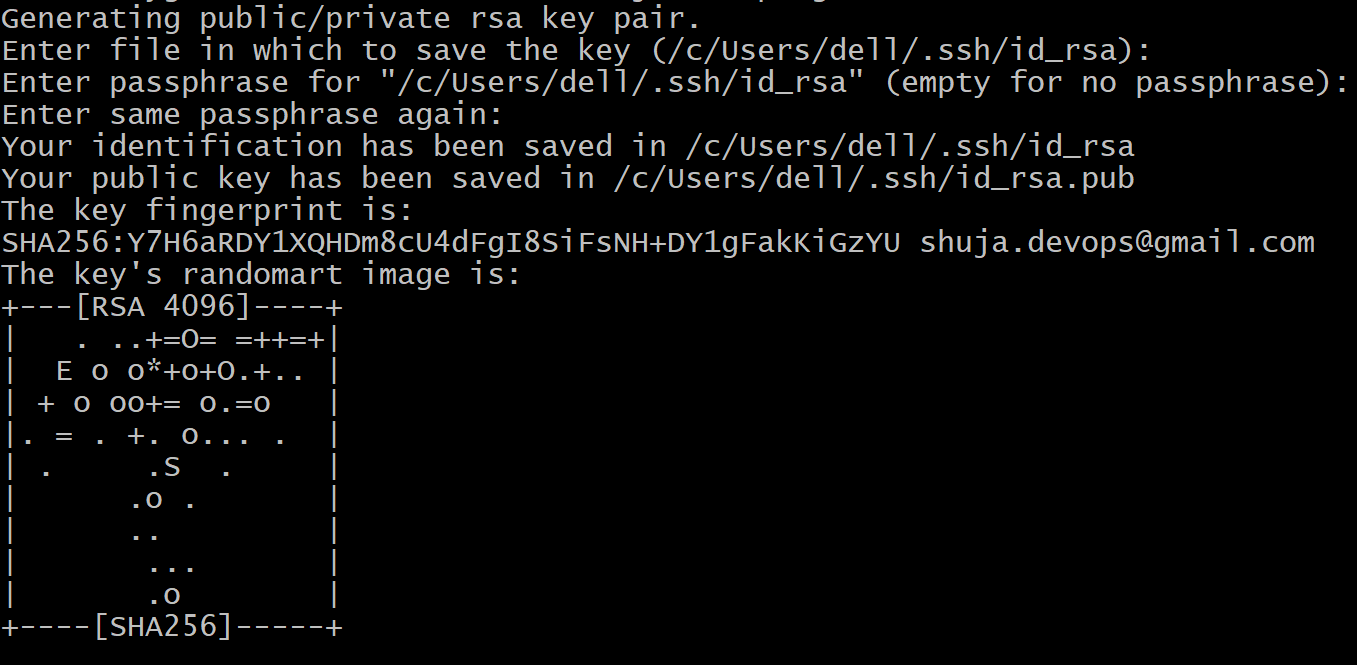
****

**It will ask where to save → press Enter (default: ~/.ssh/id\_rsa).**

**It will ask for a passphrase → press Enter (no passphrase, fully passwordless).**

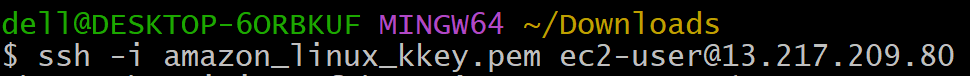
**This creates:**

* **Private key: ~/.ssh/id\_rsa**
* **Public key: ~/.ssh/id\_rsa.pub**

****

**2. Copy the Public Key to EC2 Instance.**

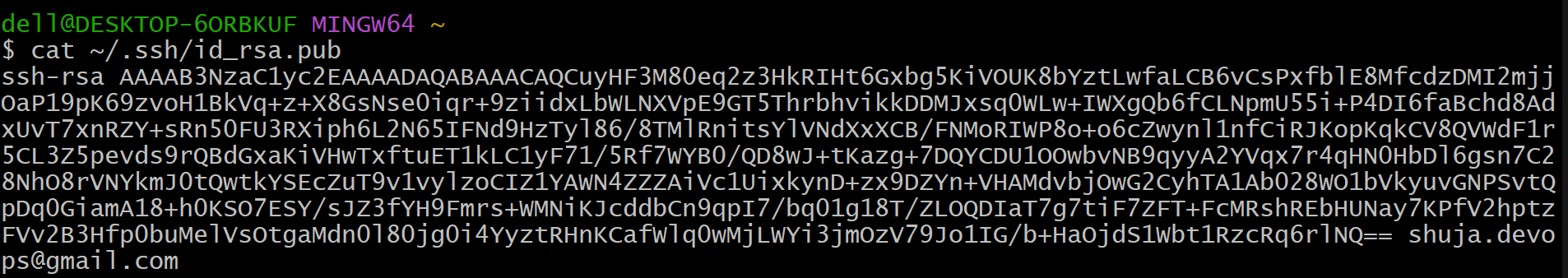
**Assuming you can already log in with the default user (ec2-user) using the AWS .pem key:**

****

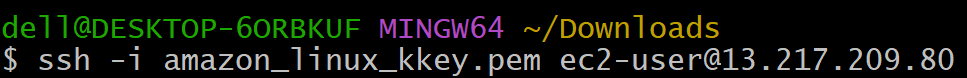
**Then, copy your public key (id\_rsa.pub) from your local machine to the EC2 server.**

1. **Print your public key locally:**

**cat ~/.ssh/id\_rsa.pub**

****

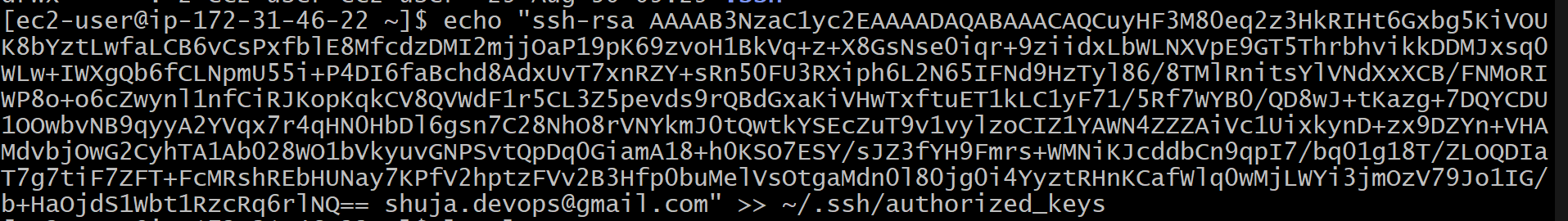
1. **SSH into EC2 with the PEM key:**

****

**On EC2, paste your key:**

****

**Paste your public key here:**

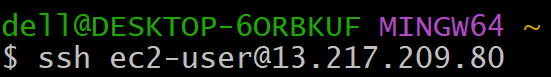
****

**chmod 700 ~/.ssh**

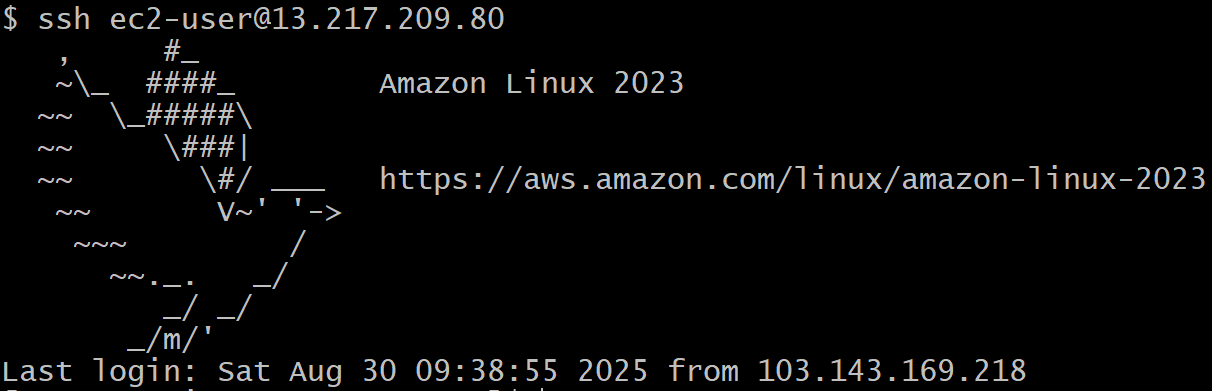
****

**chmod 600 ~/.ssh/authorized\_keys**

1. **Now try logging in without the pem:**

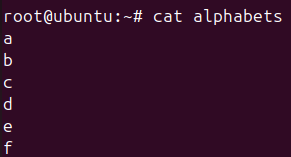
****

**Then we will be able to login without password:**

****

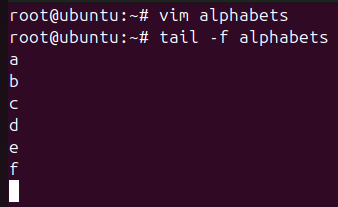
1. **Monitor log files using tail or grep.**
2. **Monitor log files using tail or grep.**

**Create a file with name ‘alphabets’ and with contents a to f by using vi/vim/nano editor or by using echo, and that file we can see in cat.**

****

**Monitoring log using tail:**

**When we monitor using tail -f alphabets then we can see it will continuously monitors the file and the cursor is at waiting position.**

****

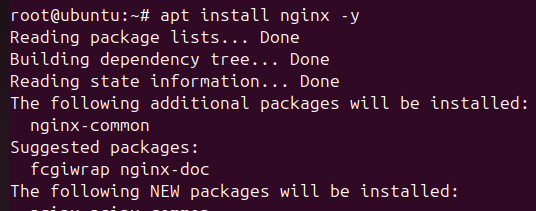
**Monitoring log using grep:**

**When we monitor using grep then we can monitor based on particular patter.**

****

1. **Set up a web server (e.g., Apache or Nginx).**

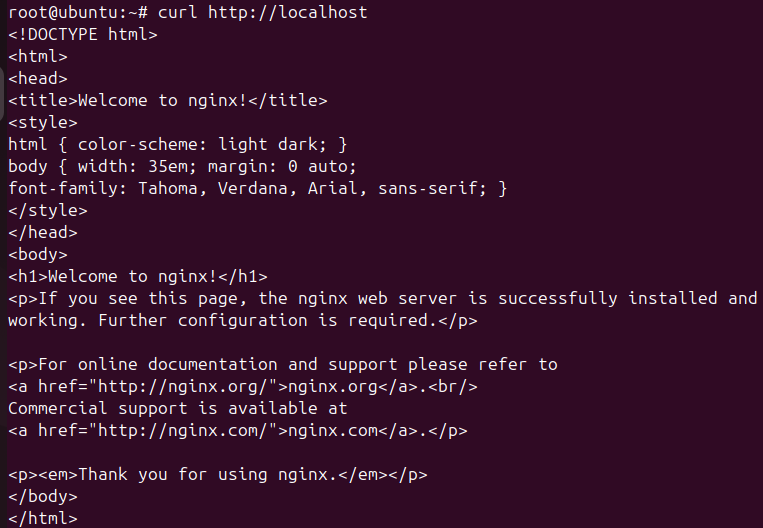
**a)installing nginx: using apt install nginx**

****

**b)Starting Nginx: then start the nginx using systemctl start nginx**

****

**c)Accessing Nginx: we can access the nginx using curl command**

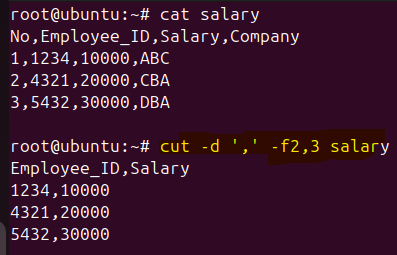
****

1. **Configure and secure a MySQL Database.**
2. **Set up a Application Server (e.g.,Apache Tomcat)**
3. **create a service file for Apache Tomcat.(Should execute by using systemtctl command)**
4. **Print specific columns from a delimited file.**

**Prints column 2 and 3 (default delimiter is TAB):**

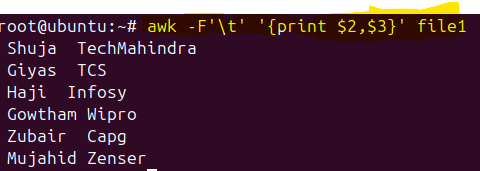
**(tab-delimited file): created a file with contents with tab delimiter, and we can print specific columns of that file using cut , and to print specific column from a file which has delimeter as comma then we have to use cut -d ‘,’ -f2,3 salary which will print 2 columns 3rd and 4th from the file with comma.**

****

****

**Or by using awk also we can do this(tab-delimited file):**

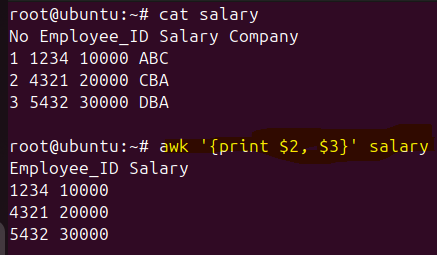
**To print specific column from a file which is having tab-delimiter using awk we can use awk -F’\t’ ‘{print $2,$3}’ file1 then this will print column 2 and column 3 from that file.**

****

**If a file is having contents with space-delimiter :**

**For Space delimited file using awk:**

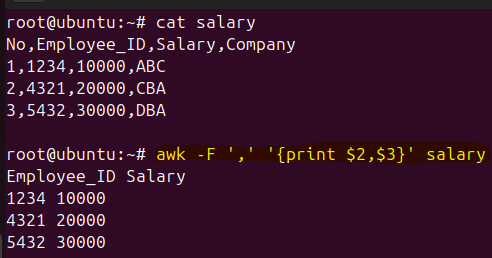
**awk ‘{print $2,$3}’ <filename>**

****

**For Comma delimited file using awk:**

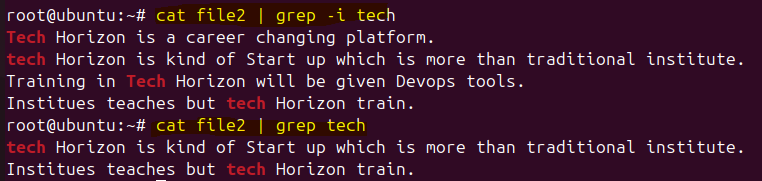
**If the file is having comma as delimiter then**

**awk -F ‘,’ ‘{print $2,$3}’ <filename>**

****

1. **Filter and print lines based on a specific pattern or condition.**

**To filter and print lines based on specific pattern suppose the file is having ‘tech’ then to print all the lines which is having keyword ‘tech’ use grep command but it will print only the lines which is having small case tech and if you want to print ‘tech’ irrespective of its case then use -i along with grep:**

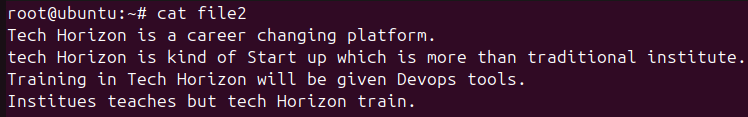
****

1. **Calculate and print the average, sum, or other statistics of a column.**

**33) Perform string manipulation, such as extracting substrings or changing case.**

**34) Count the occurrences of a specific pattern in a file.**

**Suppose we have a file with name file2 in which it contains the contents:**

****

**In the above file if we want to see how many occurrences are there for the word ‘Horizon’ :**

****

**35) Sort lines based on a specific field or column.**

**36) Merge multiple files based on a common field or column.**

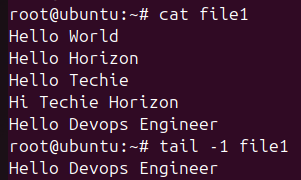
**37) Substitute text in a file using search and replace.**

**38) Delete specific lines based on a pattern or line number.**

**39) Append or insert text before or after a specific pattern or line.**

**40) Print only specific lines from a file.**

**Suppose I have a file with contents as shown below in which if I want to print a line ‘Hello Devops Engineer’ then we do : tail -1 file1**

****

**41)  Copy file from linux to windows machine**

**42)  5 use cases for AWK and 5 use cases for sed**

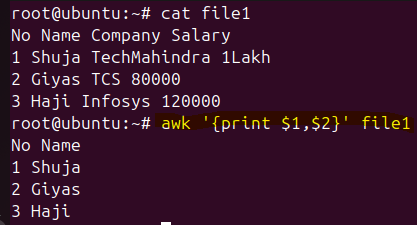
**Awk use cases:**

**AWK is great when working with structured text, columns, or logs.**

**Related AWK Built-in Variables**

* **NR → Number of Records (line number)**
* **NF → Number of Fields (columns in the line)**
* **$0 → Whole line**
* **$1, $2, ... → Field values (columns)**

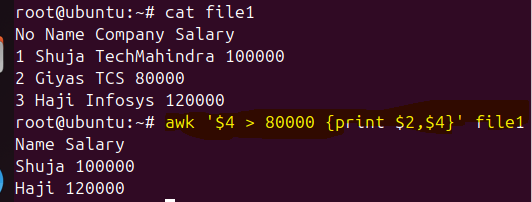
1. **Print specific column(s)**

****

**Prints only column 1 and 2 from each line.**

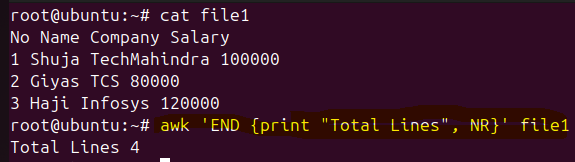
1. **Filter rows by condition:**

**Prints rows where column 4 value is greater than 80000.**

****

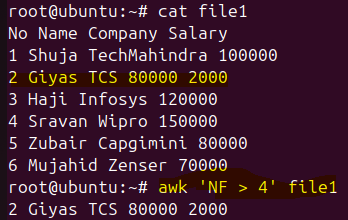
1. **Count number of lines (records)**

**Prints the total number of lines in the file (like wc -l).**

****

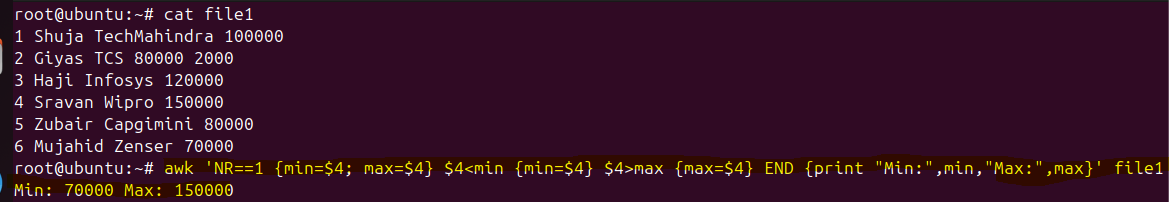
1. **Print lines with more than N fields:**

**Prints only lines that have more than 4 fields (useful for inconsistent log parsing).**

****

1. **Find min/max value in a column:**

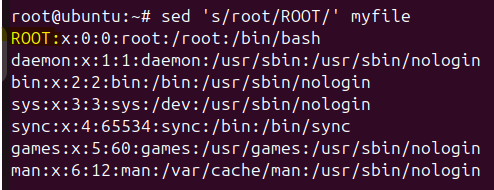
**Finds the minimum and maximum value from column 4.**

****

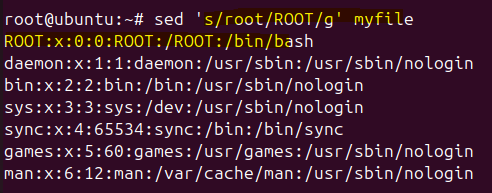
**sed Use Cases**

**sed is best for searching, replacing, and transforming text.**

1. **Find and replace text (single occurrence)**

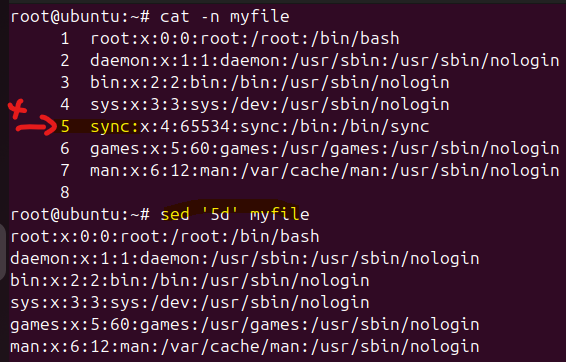
****

1. **Replace all occurrences in a line**

****

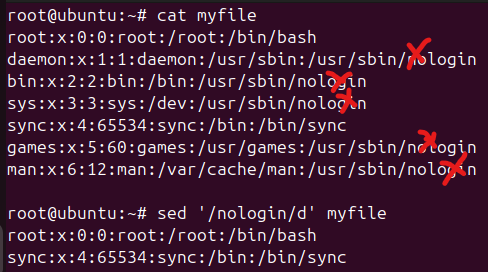
1. **Delete specific line**

Deletes line number 5



1. **Delete lines matching a pattern**

Deletes all lines containing the word nologin



1. **Insert text at the beginning of each line**

Adds [INFO] at the start of each line.

