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Program: <u>BS-Data Science</u>

Operating System – Lab 05

Linux File & Directory Permissions

1. Create a directory bsseA _permission_test in /home/[username] directory.
2. Cd into bsseA _permission_test.

3. Create a file data.txt using following command:
   a. echo "This is a test file to inspect and modify permissions" > data.txt
4. Check the content of data.txt using following command:
   a. cat data.txt

5. create a dirA in pwd using "**mkdir dirA"** command

6. Check default permissions of dirA and data.txt using **ls –l** commad

7. Change the permission of data.txt using octal digits as
    a. All users can only read and write [confirm using ls –l]

```
s21-ds-maimoona@tamleek-vm: ~/bsseA_permission_test
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ chmod 666 data.txt
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ ls -l
total 8
-rw-rw-rw- 1 s21-ds-maimoona s21-ds-maimoona   54 17:05 12  اپریل data.txt
drwxrwxr-x 2 s21-ds-maimoona s21-ds-maimoona 4096 17:06 12  اپریل dirA
```

    b. Only group can read write and execute [confirm using ls –l]

```
s21-ds-maimoona@tamleek-vm: ~/bsseA_permission_test
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ chmod 070 data.txt
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ ls -l
total 8
----rwx--- 1 s21-ds-maimoona s21-ds-maimoona   54 17:05 12  اپریل data.txt
drwxrwxr-x 2 s21-ds-maimoona s21-ds-maimoona 4096 17:06 12  اپریل dirA
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$
```

8. Change the permission of dirA using octal digits as
    a. owner can only execute and write & group can read and execute & other can read and write [confirm using ls –l]

```
s21-ds-maimoona@tamleek-vm: ~/bsseA_permission_test
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ chmod 356 dirA
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ ls -l
total 8
----rwx--- 1 s21-ds-maimoona s21-ds-maimoona   54 17:05 12  اپریل data.txt
d-wxr-xrw- 2 s21-ds-maimoona s21-ds-maimoona 4096 17:06 12  اپریل dirA
```

    b. Owner and other can read and execute [confirm using ls –l]

```
s21-ds-maimoona@tamleek-vm: ~/bsseA_permission_test
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ chmod 505 dirA
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ ls -l
total 8
----rwx--- 1 s21-ds-maimoona s21-ds-maimoona   54 17:05 12  اپریل data.txt
dr-x---r-x 2 s21-ds-maimoona s21-ds-maimoona 4096 17:06 12  اپریل dirA
```

9. Set permissions of data.txt using symbol to:
   a. –rw-rw----

```
s21-ds-maimoona@tamleek-vm: ~/bsseA_permission_test
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ chmod u=rw,g=rw,o= data.txt
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ ls -l
total 8
-rw-rw---- 1 s21-ds-maimoona s21-ds-maimoona   54 17:05 12 ابريل data.txt
dr-x---r-x 2 s21-ds-maimoona s21-ds-maimoona 4096 17:06 12 ابريل dirA
```

   b. –rwx rwx rwx

```
s21-ds-maimoona@tamleek-vm: ~/bsseA_permission_test
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ chmod u=rwx,g=rwx,o=rwx data.txt
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ ls -l
total 8
-rwxrwxrwx 1 s21-ds-maimoona s21-ds-maimoona   54 17:05 12 ابريل data.txt
dr-x---r-x 2 s21-ds-maimoona s21-ds-maimoona 4096 17:06 12 ابريل dirA
```

   c. -rw-rw-rw-

```
s21-ds-maimoona@tamleek-vm: ~/bsseA_permission_test
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ chmod u=rw,g=rw,o=rw data.txt
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ ls -l
total 8
-rw-rw-rw- 1 s21-ds-maimoona s21-ds-maimoona   54 17:05 12 ابريل data.txt
dr-x---r-x 2 s21-ds-maimoona s21-ds-maimoona 4096 17:06 12 ابريل dirA
```

10. Set permissions of dirA using symbol to:
    a. –rw-rw---x

```
s21-ds-maimoona@tamleek-vm: ~/bsseA_permission_test
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ chmod u=rw,g=rw,o=x dirA
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ ls -l
total 8
-rw-rw-rw- 1 s21-ds-maimoona s21-ds-maimoona   54 17:05 12 ابريل data.txt
drw-rw---x 2 s21-ds-maimoona s21-ds-maimoona 4096 17:06 12 ابريل dirA
```

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        b.   −rwxr-xr-x

```
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ chmod u=rwx,g=rx,o=rx dirA
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ ls -l
total 8
-rw-rw-rw- 1 s21-ds-maimoona s21-ds-maimoona   54 17:05 12 اپریل data.txt
drwxr-xr-x 2 s21-ds-maimoona s21-ds-maimoona 4096 17:06 12 اپریل dirA
```

        c.   --w-r--rw-

```
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ chmod u=w,g=r,o=rw dirA
s21-ds-maimoona@tamleek-vm:~/bsseA_permission_test$ ls -l
total 8
-rw-rw-rw- 1 s21-ds-maimoona s21-ds-maimoona   54 17:05 12 اپریل data.txt
d-w-r--rw- 2 s21-ds-maimoona s21-ds-maimoona 4096 17:06 12 اپریل dirA
```