

# Experiment # 1

**AIM:** Study and practice of Internal & External DOS commands.

## THEORY:

In DOS systems, the internal commands reside in COMMAND.COM, which loads into memory when the computer system is started; these commands do not reside on disk. The external commands are files that do reside on disk and have an extension of .COM, .EXE, or .BAT. Both command types are executed from the MS-DOS prompt.

Internal Commands:	External Commands:
CHDIR ( CD )	Ping
CLS	Arp
DATE	Chkdsk
DEL ( ERASE )	FTP
DIR	Help
EXIT	Hostname
MKDIR ( MD )	Ipconfig
REM	logoff
RENAME ( REN )	Power
RMDIR ( RD )	Print
TIME	Reg
VER	Shutdown

## OUTPUT:

Internal Commands:	External Commands:						
CHDIR ( CD ) <b>cd d:</b> Changes current directory to D Directory.	Systeminfo <b>systeminfo</b> The above command would display information about the computer and the operating system, including networking information, and installed hotfixes.						
CLS <b>cls</b> Running the cls command at the command prompt would clear your screen of all previous text and only return the <a href="#">prompt</a> .	Arp <b>arp -a</b> Interface 220.0.0.80 <table><tr><td>Internet Address</td><td>Physical Address</td><td>Type</td></tr><tr><td>220.0.0.160</td><td>00-50-04-62-F7-23</td><td>static</td></tr></table>	Internet Address	Physical Address	Type	220.0.0.160	00-50-04-62-F7-23	static
Internet Address	Physical Address	Type					
220.0.0.160	00-50-04-62-F7-23	static					
DATE <b>date</b> Display the current date and prompt for a new one. If no date is entered, the current date will be kept.	Chkdsk <b>chkdsk</b> Will display all information described above and also report any crossed linked files.						
DEL ( ERASE ) <b>del c:\windows\test.tmp</b> Delete the c:\windows\test.tmp in the windows directory if it exists.	Mem <b>mem</b> 655360 bytes total conventional memory 655360 bytes available to MS-DOS 633296 largest executable program size 1048576 bytes total contiguous extended memory 0 bytes available contiguous extended memory 941056 bytes available XMS memory MS-DOS resident in High Memory Area						
DIR <b>dir</b> Lists all files and directories in the directory that you are currently in.	Help <b>HELP [command]</b> command - displays help information on that command.						

EXIT <b>exit</b> it returns to the windows desktop and quits from the command prompt.	Hostname <b>hostname</b> Running the command would display the hostname for the computer.
MKDIR (MD) <b>md test</b> The above example creates the "test" directory in the directory you are currently in.	Ipconfig <b>ipconfig</b> Ethernet adapter Local Area Connection:  Connection-specific DNS Suffix . : hsd1.ut.comcast.net. IP Address. . . . . : 192.168.201.245 Subnet Mask . . . . . : 255.255.255.0 Default Gateway . . . . . : 192.168.201.1
Vol <b>vol c:</b> Display the volume of drive c: as shown in the below example. Volume in drive C has no label. Volume Serial Number is 1C24-AB20	logoff <b>logoff</b> Would immediately log off the profile currently logged into Windows.
RENAME (REN) <b>rename c:\chope hope</b> Rename the directory chope to hope.	Power <b>power std</b> Monitors hardware devices and then chooses the best power procedure for each.
RMDIR (RD) <b>rmdir c:\test</b> Remove the test directory, if empty.	Print <b>print c:\file.txt /c /d:lpt1</b> Prints the file file.txt to the parallel port lpt1.
TIME <b>Time</b> Displays the system time.	Scandisk <b>scandisk c: /autofix</b> Scandisk the main hard disk drive for any errors and if found automatically fix those errors.
VER <b>ver</b> Display what version of MS-DOS or Windows command prompt you're using. Below is an example of what this may look like. Microsoft Windows XP [Version 5.1.2600]	Shutdown <b>shutdown -s</b> This would display a Windows System Shutdown window for 30 seconds, warning the user that the computer is going to shutdown.

## Experiment # 2

**AIM:** Study and Practice of MS windows – Folder related operations, My-Computer, window explorer, Control Panel.

### THEORY:

#### Folders

In Windows, the files, folders, and subfolders are represented by small pictures called icons. The icon for folders and subfolders intuitively looks like a folder.

Every Windows folder provides easy access to common file and folder management tasks. When you open any folder on your computer, a list of hyperlinked tasks is displayed next to the folder contents. You can select a file or folder, and then click a task to rename, copy, move, or delete it.

#### Folder related operations

- Create
- Delete
- Rename
- Copy
- Move
- Modify
- Customize

#### My Computer

In Windows, you can locate and manage your files and directories (folders) in either *My Computer* or *Explorer*. *My Computer* is most convenient for viewing one directory or window at a time; *Explorer* is your best choice when you want to view or reorganize files in different parts of your computer.

In *My Computer*, you choose a drive, and by default, view icons or a list of folders and files in that drive. Your view is one window at a time, unless you choose *explore* in *My Computer* to move to *Explorer*, which makes it easy to work in a particular folder, but difficult to move between folders.

When you open a folder in *My Computer*, a new window opens; when you open a folder within that window, another window opens. Soon your screen is cluttered with windows, unless you initially choose, in *view, options* to use a single window.

#### Windows Explorer

Windows Explorer is an application that provides detailed information about your files, folders, and drives. You can use it to see how your files are organized and to copy, move, and rename files, as well as perform other tasks pertaining to files, folders, and drives.

The simplest way to access Windows Explorer is to right-click the **Start** menu or the **My Computer** icon and selects **Explore**. If your keyboard has a Windows logo key, you can press Win-e to launch Windows Explorer. Alternatively, you can access it from the **Start** menu. In newer operating systems, it is under **Accessories**.

#### Control Panel

Control Panel is full of specialized tools that are used to change the way Windows looks and behaves. Some of these tools help you adjust settings that make your computer more fun to use. For example, use Mouse to replace standard mouse pointers with animated icons that move on your screen, or use

Sounds and Audio Devices to replace standard system sounds with sounds you choose. Other tools help you set up Windows so that your computer is easier to use. For example, if you are left-handed, you can use Mouse to switch the mouse buttons so that the button on the right performs the primary functions of selecting and dragging.

To open Control Panel, click **Start** and then click **Control Panel**. If your computer is set up in Classic view using the more familiar **Start** menu, click **Start**, point to **Settings**, and then click **Control Panel**.

## Experiment # 3

**AIM:** Study and practice of Basic linux Commands – ls, cp, mv, rm, chmod, kill, ps etc.

**THEORY: Linux** → Linux is an operating system that was initially created as a hobby by a young student, Linus Torvalds, at the University of Helsinki in Finland. Linus had an interest in Minix, a small UNIX system, and decided to develop a system that exceeded the Minix standards. He began his work in 1991 when he released version 0.02 and worked steadily until 1994 when version 1.0 of the Linux Kernel was released. The kernel, at the heart of all Linux systems, is developed and released under the GNU General Public License and its source code is freely available to everyone. It is this kernel that forms the base around which a Linux operating system is developed.

### OUTPUT:

Command	Example	Description
<b>cd</b>		Change directory
	cd /home	Change the current working directory to /home. The '/' indicates relative to root, and no matter what directory you are in when you execute this command, the directory will be changed to "/home".
	cd httpd	Change the current working directory to httpd, relative to the current location which is "/home". The full path of the new working directory is "/home/httpd".
	cd ..	Move to the parent directory of the current directory. This command will make the current working directory "/home".
	cd ~	Move to the user's home directory which is "/home/username". The '~' indicates the users home directory.
<b>cp</b>		Copy files
	cp myfile yourfile	Copy the files "myfile" to the file "yourfile" in the current working directory. This command will create the file "yourfile" if it doesn't exist. It will normally overwrite it without warning if it exists.
	cp -i myfile yourfile	With the "-i" option, if the file "yourfile" exists, you will be prompted before it is overwritten.
	cp -i /data/myfile .	Copy the file "/data/myfile" to the current working directory and name it "myfile". Prompt before overwriting the file.
	cp -dpr srcdir destdir	Copy all files from the directory "srcdir" to the directory "destdir" preserving links (-p option), file attributes (-p option), and copy recursively (-r option). With these options, a directory and all its contents can be copied to another directory.
<b>logout</b>		Logs the current user off the system.
<b>ls</b>		List files
	ls	List files in the current working directory except those starting with . and only show the file name.
	ls -al	List all files in the current working directory in long listing format showing permissions, ownership, size, and time and date stamp

<b>mv</b>		Move or rename files
	<code>mv -i myfile yourfile</code>	Move the file from "myfile" to "yourfile". This effectively changes the name of "myfile" to "yourfile".
	<code>mv -i /data/myfile .</code>	Move the file from "myfile" from the directory "/data" to the current working directory.
<b>pwd</b>		Show the name of the current working directory
	<code>more /etc/profile</code>	Lists the contents of the "/etc/profile" file to the screen one page at a time.
<b>shutdown</b>		Shuts the system down.
	<code>shutdown -h now</code>	Shuts the system down to halt immediately.
	<code>shutdown -r now</code>	Shuts the system down immediately and the system reboots.
<b>rm</b>		This command is used to remove or delete files and directories
	<code>rm directory2</code>	This will delete the directory - directory2
<b>chmod</b>		change file access permissions
	<code>chmod u+x file</code>	Add execute-by-user permission to <i>file</i> :
	<code>chmod 751 file</code> <code>chmod u=rwx,g=rx,o=x file</code>	Either of them will assign read/write/execute permission by owner (7), read/execute permission by group (5), and execute-only permission by others (1) to <i>file</i>
	<code>chmod =r file</code> <code>chmod 444 file</code> <code>chmod a-wx,a+r file</code>	Any one of them will assign read-only permission to <i>file</i> for everyone:
	<code>chmod 4755 file</code>	This makes the executable setuid, assigns read/write/execute permission by owner, and assigns read/execute permission by group and others
<b>ps</b>	<code>ps</code>	Typing ps alone would list the current running processes. Below is an example of the output that would be generated by the ps command. PID TTY TIME CMD 6874 pts/9 0:00 ksh 6877 pts/9 0:01 csh 418 pts/9 0:00 csh
	<code>ps -ef</code>	Display full information about each of the processes currently running. UID PID PPID C STIME TTY TIME CMD hope 29197 18961 0 Sep27 ? 00:00:06 sshd: hope@pts/87 hope 32097 29197 0 Sep27 pts/87 00:00:00 -csh hope 7209 32097 0 12:17 pts/87 00:00:00 ps -ef
	<code>ps -l</code>	Displays processes including those that are in a wait state, similar to the below example. F S UID PID PPID C PRI NI ADDR SZ WCHAN TTY TIME CMD 0 T 0 12308 29722 0 80 0 - 16136 finish pts/0 00:00:00 pico 0 R 0 12530 29722 0 80 0 - 15884 - pts/0 00:00:00 ps 4 S 0 29722 29581 0 80 0 - 16525 wait pts/0 00:00:00 bash

<b>kill</b>	<b>kill [-s] [-l] %pid</b>	kill command is used to kill the background process.
	-s	Specify the signal to send. The signal may be given as a signal name or number.
	-l	Write all values of signal supported by the implementation, if no operand is given.
	-pid	Process id or job id.
	-9	Force to kill a process.

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## Experiment # 4

**AIM:** Creation and editing of Text files using MS- word.

### **THEORY:**

**MS-Word:** Microsoft Word is a **word processing software** package. You can use it to type letters, reports, and other documents. This lesson introduces you to the Word window. You use the Word window to interact with Microsoft Word.

### **Getting Started**

Open Microsoft Word by clicking on *Start > All Programs* and selecting Microsoft Word from the list.

Word will open with a blank document. You will see the flashing cursor at the top left corner of the page, ready for you to start typing.

If you hold your mouse over any of the icons in the menu bars or toolbars, you will see a quick description of what those buttons do.

If you can't see any of the toolbars mentioned in this article (mainly the **Standard** and **Formatting** toolbars), you may have to instruct Word to show them by clicking *View* then *Toolbars* and putting a tick by any toolbars you want to show.

**TASK:** Create a MS-Word .doc file contain yours complete biodata.

## Experiment # 5

**AIM:** Creation and operating of spreadsheet using MS-Excel.

### **THEORY:**

**MS-Excel:** Microsoft Excel is an electronic spreadsheet that runs on a personal computer. You can use it to organize your data into rows and columns. You can also use it to perform mathematical calculations quickly. This tutorial teaches Microsoft Excel basics. Although knowledge of how to navigate in a Windows environment is helpful, this tutorial was created for the computer novice. This lesson will introduce you to the Excel window. You use the window to interact with Excel.

### **Getting Started**

- Click on the **Start** button, point to **Programs**, and following by **Microsoft Office** and click on **Microsoft Office Excel 2003**.

**TASK:** Create a MS-Excel .xls file contain mark sheet of 10<sup>th</sup> and 12<sup>th</sup> Standards.

## Experiment # 6

**AIM:** Creation and editing power-point slides using MS- power point.

### **THEORY:**

#### **MS-Power Point:**

PowerPoint is a **presentation software** package. With PowerPoint, you can easily create slide shows. Trainers and other presenters use slide shows to illustrate their presentations. This tutorial teaches PowerPoint basics. This lesson introduces you to the PowerPoint window. You use the window to interact with PowerPoint.

Microsoft PowerPoint 2003 is a program designed to create and use a presentation. This Guide will take you through getting started and building your confidence in the skills needed to use the software productively

#### **Getting Started**

To start PowerPoint, go to the Start menu and select Programs ->Microsoft Office ->Power Point.

**TASK:** Create a MS-Power Point Presentation .ppt file Covers the topic "Computer Organization".

## Experiment # 7

**AIM:** Creation and manipulation of database table using SQL in MS-Access.

### **THEORY:**

#### **MS-Access:**

Microsoft Access 2003 is a powerful, yet easy to learn, relational database application for Microsoft Windows. It introduces fundamental database concepts and operations and illustrates how they are performed in Microsoft Access 2003.

Access is a pseudo-relational database management system from Microsoft that combines the relational Microsoft Jet Database Engine with a graphical user interface and software-development tools. It is a member of the Microsoft Office suite of applications

#### **Getting Started**

- Click the Windows Start button, located in the bottom-left corner of the screen.
- Use the mouse to move the pointer over the words All Programs.
- A menu pops up to the right of All Programs. The programs and menus you see listed depend on the programs installed on your computer, so your menu will probably look somewhat different from other users' menus.
- On the All Programs menu, move the pointer over the words Microsoft Office 2003, then point to and click Microsoft Office Access 2003.



**TASK:** Create a MS-Access database .mdb file to store the results of students.

Fields	Student Name	Class	Date of Birth	Marks Obtained	Division	Rank
Type	Text	Number	Date/Time	Number	Number	Number

## Experiment # 8

**AIM:** WAP to illustrate Arithmetic expressions. (Implement the addition, multiplication, subtraction and division).

### CODE:

```
#include<iostream.h>
#include<conio.h>
#include<process.h>

class arithmetic
{
public:
void add()
{
double a, b, c;
cout<<"ADDITION OF TWO NUMBERS";
cout<<"\n\nEnter The Number#1 :: ";
cin>>a;
cout<<"\nEnter the Number#2 :: ";
cin>>b;
c=a+b;
cout<<"\nSUM = "<<c;
}

void sub()
{
double a, b, c;
cout<<"SUBTRACTION OF TWO NUMBERS";
cout<<"\n\nEnter The Number#1 :: ";
cin>>a;
cout<<"\nEnter the Number#2 :: ";
cin>>b;
c=a-b;
cout<<"\nSUB = "<<c;
}

void mul()
{
double a, b, c;
cout<<"MULTIPLICATION OF TWO NUMBERS";
cout<<"\n\nEnter The Number#1 :: ";
cin>>a;
cout<<"\nEnter the Number#2 :: ";
cin>>b;
c=a*b;
cout<<"\nMUL = "<<c;
}

void div()
{
double a, b, c;
cout<<"DIVISION OF TWO NUMBERS";
cout<<"\n\nEnter The Number#1 :: ";
cin>>a;
cout<<"\nEnter the Number#2 :: ";
cin>>b;
c=a/b;
cout<<"\nQNT = "<<c;
}
};

void main()
{
a:
clrscr();
int i;
cout<<"\n*****";
cout<<"\n*****Enter The Value*****";
cout<<"\n*****";
cout<<"\n\t1 --> Addition";
cout<<"\n\t2 --> Subtraction";
cout<<"\n\t3 --> Multiplication";
cout<<"\n\t4 --> Division";
cout<<"\n\t0 --> Exit";
cout<<"\n\tValue = ";
cin>>i;
clrscr();
arithmetic obj;

switch(i)
{
case 0 : exit(0);

case 1 : obj.add();
```

```

                                break;
case 2 : obj.sub();
                                break;
                                }
case 3 : obj.mul();
                                getch();
                                goto a;
case 4 : obj.div();
                                }
                                default :
                                break;

```

## Experiment # 9

**AIM:** WAP to illustrate Arrays. (Implement the addition of array elements).

**CODE:**

```

#include<iostream.h>
#include<conio.h>

void main()
{
    int index, a[10];
    int sum=0;
    for(index=0;index<10;index++)
    {
        cout<<"Enter The "<<i<<"th Element = ";
        cin>>a[i];
        sum = sum + a[i];
    }
    cout<<endl<<"\n\n";
    cout<<"SUM of ARRAY = "<<sum;
}

```

## Experiment # 10

**AIM:** WAP to illustrate functions. (Implement the table generator).

**CODE:**

```

#include<iostream.h>
#include<conio.h>

void table(int i);

void main()
{
    int a;
    cout<<"Enter The Number For The Table= ";
}

```

```

        cin>>a;
        table(a);
        getch();
    }

void table(int i)
{
    int number, index, temp;
    number = i;
    for (index=1; index<=10; i++)
    {
        temp = index * number;
        cout<<"number * "<<index<<" = "<<temp<<endl;
    }
}

```

## Experiment # 11

**AIM:** WAP to illustrate constructor & Destructor. (Display the working of constructor and destructor).

**CODE:**

```

#include<iostream.h>
#include<conio.h>

```

```

class mycpp
{
    public:
        mycpp()
        {
            cout<<"THIS IS THE CONSTRUCTOR FUNCTION CALL.";
        }
        void add(int l, int j)
        {
            int k = i + j;
            cout<<"SUM = "<<k;
        }
        ~mycpp()
        {
            cout<<"THIS IS THE DESTRUCTOR FUNCTION CALL.";
        }
};

```

```

Void main()
{
    myclass obj;
    obj.add(5,6) ;
    getch();
}

```