SNS COLLEGE OF TECHNOLOGY

Coimbatore-35.

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COURSE NAME : 19CSB201 – OPERATING SYSTEMS

II YEAR/ IV SEMESTER

UNIT – IV File Systems

Topic: File Protection

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File Protection

- File owner/creator should be able to control:
  - what can be done
  - by whom

- Types of access
  - **Read**
  - **Write**
  - **Execute**
  - **Append**
 - **Delete**
  - **List**

Access Lists and Groups

- Mode of access: read, write, execute
- Three classes of users on Unix / Linux

				RWX
a) **owner access**	7	$\Rightarrow$		1 1 1
				RWX
b) **group access**	6	$\Rightarrow$		1 1 0
				RWX
c) **public access**	1	$\Rightarrow$		0 0 1

- Ask manager to create a group (unique name), say G, and add some users to the group.
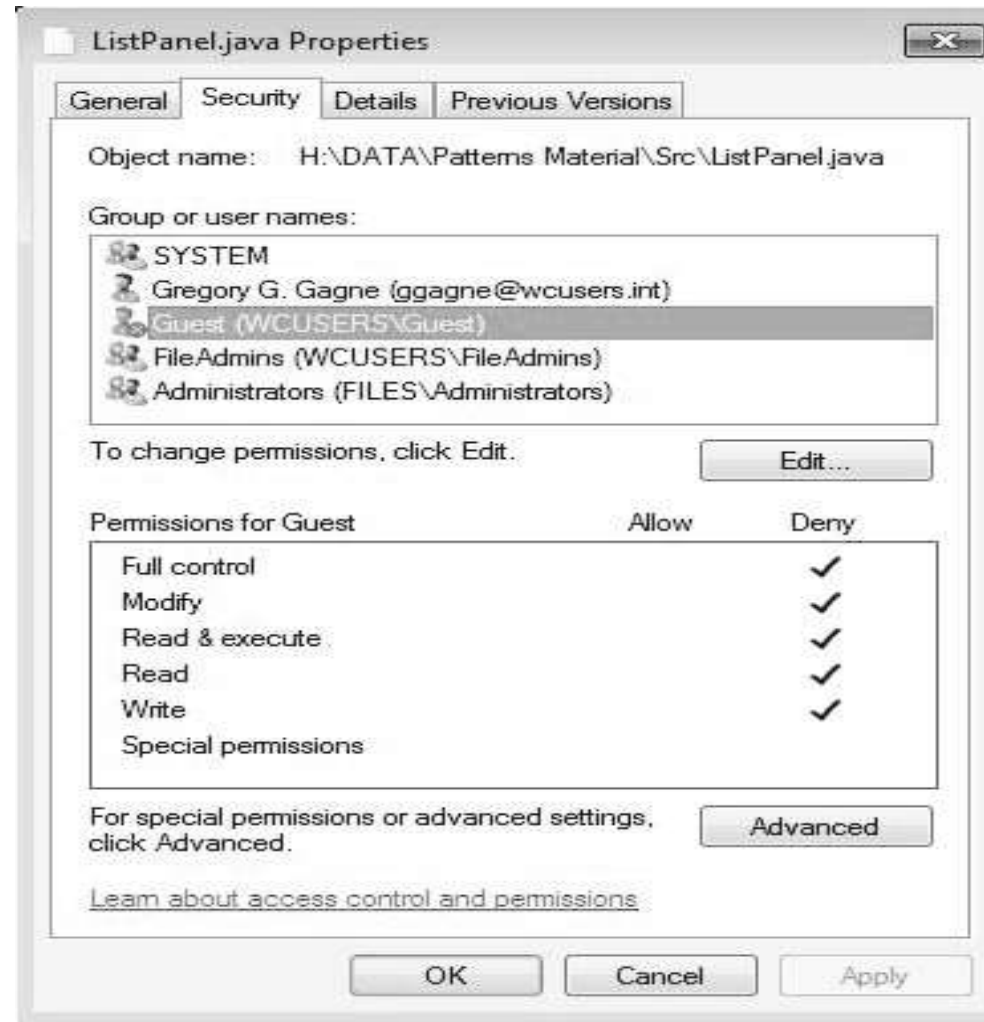- For a particular file (say *game*) or subdirectory, define an appropriate access.

```
owner   group   public


chmod  761  game
```
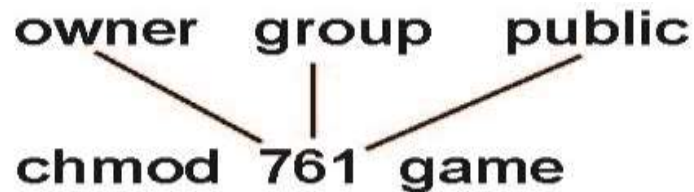
Attach a group to a file

```
chgrp       G       game
```

Windows 7 Access-Control List Management

A Sample UNIX Directory Listing

-rw-rw-r--	1 pbg	staff	31200	Sep 3 08:30	intro.ps
drwx------	5 pbg	staff	512	Jul 8 09.33	private/
drwxrwxr-x	2 pbg	staff	512	Jul 8 09:35	doc/
drwxrwx---	2 pbg	student	512	Aug 3 14:13	student-proj/
-rw-r--r--	1 pbg	staff	9423	Feb 24 2003	program.c
-rwxr-xr-x	1 pbg	staff	20471	Feb 24 2003	program
drwx--x--x	4 pbg	faculty	512	Jul 31 10:31	lib/
drwx------	3 pbg	staff	1024	Aug 29 06:52	mail/
drwxrwxrwx	3 pbg	staff	512	Jul 8 09:35	test/

REFERENCES

TEXT BOOKS:

T1   Silberschatz, Galvin, and Gagne, "Operating System Concepts", Ninth Edition, Wiley India Pvt Ltd, 2009.)

T2.   Andrew S. Tanenbaum, "Modern Operating Systems", Fourth Edition, Pearson Education, 2010

REFERENCES:

R1   Gary Nutt, "Operating Systems", Third Edition, Pearson Education, 2004.

R2   Harvey M. Deitel, "Operating Systems", Third Edition, Pearson Education, 2004.

 R3   Abraham Silberschatz, Peter Baer Galvin and Greg Gagne, "Operating System Concepts", 9th Edition, John Wiley and Sons Inc., 2012.

R4.   William Stallings, "Operating Systems – Internals and Design Principles", 7th Edition, Prentice Hall, 2011