**Operating System:**
1-Managing computers sources
2-establishing user interface(GUI,Text mode user interface )
3-Executing and providing services for application software

| **Kernel:** | loads into memory other operating systems programs. |
| **Booting (Reboot):** | Loading the kernel from disk storage. |

| **GUI(Graphical User Interface):** | Windows, Mac OS, Linux |
| **Text mode user interface (Command Line):** | Unix, MS-DOS, Linux |
| **(>)Prompt:** | Waiting for you to enter command |

### Microsoft Windows (Icons, menus, pulldown menus, pop up menus):
Operating Environment; (Shell: MS-DOS)

<table>
<thead>
<tr>
<th><strong>95-98</strong></th>
<th><strong>ME Edition</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ plug and play</td>
<td>✓ Multimedia support, media player, movie maker</td>
</tr>
<tr>
<td>✓ OLE(Object Linking and Embedding)</td>
<td>✓ Auto update, reliability is increased</td>
</tr>
<tr>
<td>✓ Internet/Intranet browser capabilities</td>
<td>✓ Home network support, (Multiple users can share a single internet connection)</td>
</tr>
<tr>
<td>✓ Support state of art, multimedia</td>
<td>✓ network support</td>
</tr>
<tr>
<td>✓ Support huge drives</td>
<td></td>
</tr>
<tr>
<td>✓ TV viewer and broadcast ability</td>
<td></td>
</tr>
<tr>
<td>✓ Wizards</td>
<td></td>
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</tbody>
</table>

### Windows CE:

- Embedded Pocket PDAS
- Industrial
- Internet Connectivity

### Mac OS:
1984, Apelles Macintosh
Served as a model for most of GUI Risc Arch

### NOS (NETWORK Operating Systems):
Hardisk, Printer Sharing
Client/Server
Security
Stable

### Windows NT:
- Heavy Duty
- Stability
- Network
- Server
- Network Operating System
- Required More memory, Processor power

### Windows 2000:
- Improved GUI
- More privacy for individuals
- Network Servers
- Plug and Play (+Nt)

### Windows XP:
- Improved User Interface
- Improved Multimedia
- Network Servers, MP3, CD record, Digital Camera
- Extensive personalization
- Multiple User support

### Linux (1991 Linus Torvalds):
- Stable
- Network (security)
- Free
- Security
- GUI improved
- Several Packages
- OPEN source
- Dual Boot
- More terminal at the same time

### UNIX:
- Multiuser time sharing op.system(1971)
- Used on DEC mini computers, Bell Labs
- 1970 Bell give to universities and students
- Internet Server (Most ISP)