Chapter 1

**INTRODUCTION TO COMPUTER GRAPHICS**

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Computer graphics involves the display, manipulation, and storage of picture

and experiential data for proper visualization using a computer.

* Typical graphics systems comprise a host computer with the support of a fast processor, large memory, frame buffer, and display devices; output devices as color monitors, liquid crystal display, laser printers, plotters, etc.; and input devices (mouse, keyboard, joystick, touch screen, trackball, etc.).

**APPLICATIONS OF COMPUTER GRAPHICS**

1. Computer graphics are used in developing the components of a Graphic User Interface (GUI). These GUI components are used to communicate between the software and the user. Examples of GUI components are menus, icons, cursors, dialog boxes, scroll bars, etc.
2. Computer graphics are used in the corporate sector for representing the sales data and economic data using pi-charts, histogram, graphs, etc.
3. Office automation software use GUI components for a researcher’s report or thesis.
4. Computer graphics are used in the publication of books, magazines, journals, etc.
5. Computer graphics are used in the advertising field to provide graphic features that make advertisements more impactful.
6. Computer graphics are essential in the entertainment and communication industries worldwide, appearing everywhere from TV monitors to mobile phones.
7. Computer graphics are vital to simulation—the imitation of real world processes in a model over time, such as aircraft and car racing simulations. Aircraft simulations train budding pilots before they get hands-on experience in real aircraft.
8. Computer graphics are used in audiovisual teaching aids in education. They improve teaching outcomes in school and help employees develop skills in profession training.
9. Computer graphics are used in the industry for computer-aided design and computer-aided manufacturing (CAD-CAM).

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