

1. What is Pixel?

- A pixel, short for "picture element," is the smallest controllable element of a digital image. It represents a single point in a raster image, and collectively, pixels form the image when arranged in a grid.

2. Name any two Graphics software.

- Examples of graphics software include Adobe Photoshop, Autodesk Maya, Blender, Adobe Illustrator, and GIMP.

3. What is Random Scan Display?

- Random scan display is a type of display device where the electron beam is directed only to the parts of the screen where an image is to be drawn, as opposed to scanning every point on the screen sequentially. It's also known as vector display.

4. What are hard copy devices?

- Hard copy devices are output devices that produce physical copies of digital images or documents, such as printers and plotters.

5. What are 2D Transformation?

- 2D transformations are operations applied to 2D geometric shapes, such as translation (movement), rotation, scaling (resizing), and shearing (skewing).

6. What is character Attribute?

- Character attributes refer to the properties or characteristics of text, such as font, size, style (bold, italic), color, and alignment.

7. What are Line attributes?

- Line attributes include characteristics such as color, thickness, style (dashed or solid), and visibility.

8. List the line type attributes.

- Line type attributes include color, thickness, style (dashed or solid), and visibility.

9. What is Scaling?

- Scaling is a transformation that enlarges or shrinks objects. It changes the size of an object while preserving its shape.

10. What are output primitives?

- Output primitives are basic geometric shapes, such as points, lines, and polygons, that are used to represent objects in computer graphics.

11. What is 2D Shearing?

- 2D shearing is a transformation that distorts the shape of an object along one axis while leaving the other axis unchanged.

12. What is 3D shearing?

- 3D shearing is a transformation that distorts the shape of 3D objects along one or more axes, similar to 2D shearing but in three dimensions.

13. What is parallel projection?

- Parallel projection is a type of projection where lines from the object being projected are parallel to each other and to the projection plane. It's commonly used in technical drawing and computer graphics.

14. What is dipping?

- "Dipping" doesn't have a specific meaning in the context of computer graphics. It might be a typo or a term not related to this field.

15. What is Circle generating algorithm?

- Circle generating algorithms are methods used to draw circles on a raster display. Examples include Bresenham's circle algorithm and midpoint circle algorithm.

16. What is 3D Transformation?

- 3D transformation involves manipulating the position, orientation, and scale of three-dimensional objects in a virtual 3D space.

17. What is inquiry function?

- An inquiry function is a tool in computer graphics used to obtain information about objects in a scene, such as their properties or positions.

18. Define Image space method.

- Image space method is an approach in computer graphics where transformations are applied directly to the pixels of an image, typically used in raster graphics.

19. What are logical input devices?

- Logical input devices are software-based input mechanisms that allow users to interact with computer graphics applications using logical commands or gestures, rather than physical input devices like keyboards or mice.

20. What are Hidden surface removal?

- Hidden surface removal refers to techniques used in computer graphics to eliminate surfaces or parts of objects that are occluded by other objects in a scene, improving realism and efficiency.

21. What is object space method?

- Object space method is an approach in computer graphics where transformations are applied directly to objects in their own coordinate systems, prior to rendering.

22. What is display method?

- Display method refers to the process of rendering graphical images on a computer screen or other output device, utilizing various techniques and algorithms to generate the desired visual output.

23. Why to remove the hidden surfaces?

- Removing hidden surfaces in computer graphics improves the realism and clarity of rendered scenes by ensuring that only visible surfaces are displayed to the viewer.

24. What is color model?

- A color model is a mathematical model that describes the way colors can be represented as tuples of numbers, typically used in digital imaging and computer graphics to define and manipulate colors. Examples include RGB (Red, Green, Blue), CMYK (Cyan, Magenta, Yellow, Black), and HSL/HSV (Hue, Saturation, Lightness/Value).

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1. What is video display devices?

- Video display devices are hardware components that render visual information generated by a computer, such as monitors, projectors, and television screens.

2. What is Pixel?

- A pixel, short for "picture element," is the smallest controllable element of a digital image. It represents a single point in a raster image, and collectively, pixels form the image when arranged in a grid.

3. What is resolution?

- Resolution refers to the number of pixels or dots per unit of length in a digital image or display device. It determines the level of detail and clarity of the image.

4. What is digitizer?

- A digitizer, also known as a digitizing tablet or graphics tablet, is an input device used to convert analog information, such as handwritten signatures or drawings, into digital data that a computer can process.

5. What is raster scan systems?

- Raster scan systems are display systems that create images by scanning the electron beam across the screen in a predefined pattern, typically row by row.

6. What is word co-ordinate?

- It seems there might be a typo here. Did you mean "world coordinate"? If so, world coordinates refer to the coordinate system used to represent positions and shapes in a virtual 3D space.

7. What is character attributes?

- Character attributes refer to the properties or characteristics of text, such as font, size, style (bold, italic), color, and alignment.

8. Define Grid.

- A grid is a network of evenly spaced horizontal and vertical lines used as a reference for positioning and aligning objects in a graphical environment.

9. Write the necessity of inquiry function.

- Inquiry functions are necessary in computer graphics to provide users with information about objects in a scene, facilitating tasks such as object selection, manipulation, and analysis.

10. What is Clipping?

- Clipping is the process of removing portions of an object that fall outside of a specified region or viewing window.

11. Define view port.

- A view port is a rectangular region on a computer screen that defines the portion of a larger virtual space or scene that is currently visible to the user.

12. What is raster system?

- A raster system is a display system that creates images by scanning the electron beam across the screen in a predefined pattern, typically row by row.

13. What is perspective projection?

- Perspective projection is a type of projection in which objects appear smaller as they are farther away from the viewer, simulating the way humans perceive depth.

14. What is 3D reflection?

- 3D reflection is a transformation that flips objects across a specified plane, similar to how a mirror reflects objects in the real world.

15. What is shearing?

- Shearing is a transformation that distorts the shape of an object by shifting its parallel sides by different amounts along a specified axis.

16. What is Animation?

- Animation is the process of creating the illusion of motion and change by rapidly displaying a sequence of static images or frames.

17. What is cueing?

- Cueing in computer graphics refers to providing visual or auditory cues to users to guide their interactions with graphical interfaces or to enhance the understanding of displayed information.

18. List the two Field of A-buffer method.

- The A-buffer method is a hidden surface removal algorithm that stores lists of fragments for each pixel. The "fields" in the A-buffer typically include depth values and color values.

19. What is Back-Face detection?

- Back-face detection is a technique used in 3D computer graphics to determine which surfaces of a 3D object are visible to the viewer and which are hidden from view.

20. What is depth cueing methods?

- Depth cueing methods are techniques used in computer graphics to convey depth perception by adjusting the color, brightness, or clarity of objects based on their distance from the viewer.

21. What is new reference point?

- A new reference point is a point in space used as a basis for performing transformations or calculations in computer graphics.

22. What is 2D Transformation?

- 2D transformations are operations applied to 2D geometric shapes, such as translation (movement), rotation, scaling (resizing), and shearing (skewing).

23. What is 3D transformation?

- 3D transformation involves manipulating the position, orientation, and scale of three-dimensional objects in a virtual 3D space.

24. What is Polygon Meshes?

- Polygon meshes are collections of polygons, such as triangles or quadrilaterals, connected to form the surface of a 3D object in computer graphics.

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1. Write down the application fields of computer graphics.

- Application fields of computer graphics include animation, visual effects, video games, virtual reality, computer-aided design (CAD), medical imaging, scientific visualization, and more.

2. What is a Resolution?

- Resolution refers to the number of pixels or dots per unit of length in a digital image or display device. It determines the level of detail and clarity of the image.

3. Write any two input devices.

- Examples of input devices include keyboards, mice, graphics tablets, touchscreens, joysticks, scanners, and microphones.

4. What is a Raster Scan Display?

- A raster scan display is a type of display device where the electron beam scans across the screen from top to bottom, left to right, painting each pixel sequentially. It's the most common type of display used in computer monitors and TVs.

5. Define DDA.

- DDA stands for Digital Differential Analyzer, which is a line drawing algorithm used in computer graphics to generate straight lines between two given points.

6. What are 3D Transformation?

- 3D transformation involves manipulating the position, orientation, and scale of three-dimensional objects in a virtual 3D space.

7. What are the basic line attributes?

- Basic line attributes include color, thickness, style (dashed or solid), and visibility.

8. What are Character attributes?

- Character attributes refer to the properties or characteristics of text, such as font, size, style (bold, italic), color, and alignment.

9. What is transformation?

- Transformation in computer graphics refers to the process of changing the position, orientation, or scale of objects in a virtual space.

10. What is a 2D Transformation?

- 2D transformations are operations applied to 2D geometric shapes, such as translation (movement), rotation, scaling (resizing), and shearing (skewing).

11. What is Rotation?

- Rotation is a transformation that changes the orientation of an object around a specified axis or point in space.

12. What is a 3D Shearing?

- 3D shearing is a transformation that distorts the shape of 3D objects along one or more axes, similar to 2D shearing but in three dimensions.

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17. Define Grid.

- A grid is a network of evenly spaced horizontal and vertical lines used as a reference for positioning and aligning objects in a graphical environment.

18. What is a Direct view storage tube?

- A Direct View Storage Tube (DVST) is a type of display device that uses a cathode-ray tube (CRT) to directly draw images on the screen without the need for refreshing, making it suitable for storing and displaying static images.

19. What are polygon tables?

- Polygon tables are data structures used in computer graphics to store information about the vertices, edges, and faces of polygons in a scene, facilitating efficient rendering and manipulation of polygonal objects.

20. What are the examples of output devices?

- Examples of output devices include computer monitors, printers, plotters, projectors, and speakers.

21. Define scaling with 3D Objects.

- Scaling with 3D objects refers to the transformation of objects in three-dimensional space to change their size while maintaining their proportions along each axis.

22. What is a CRT?

- CRT stands for Cathode Ray Tube, which is a vacuum tube containing an electron gun and a fluorescent screen used to display images in older television sets and computer monitors.

23. Why to remove the hidden surfaces?

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