Padasalai’s Telegram Groups!

(தமிழ்நாட்டில் குறிப்பிட்டு பதிவுக்காக வைத்திய நேரத்தில் விளக்கும் தொடர்பு குழுக்கள்!

- Padasalai's NEWS - Group
  https://t.me/joinchat/NlfCqVRBNj9hhV4wu6_NqA

- Padasalai's Channel - Group
  https://t.me/padasalaichannel

- Lesson Plan - Group
  https://t.me/joinchat/NlfCqVWwo5iL-21gpzrXLw

- 12th Standard - Group
  https://t.me/Padasalai_12th

- 11th Standard - Group
  https://t.me/Padasalai_11th

- 10th Standard - Group
  https://t.me/Padasalai_10th

- 9th Standard - Group
  https://t.me/Padasalai_9th

- 6th to 8th Standard - Group
  https://t.me/Padasalai_6to8

- 1st to 5th Standard - Group
  https://t.me/Padasalai_1to5

- TET - Group
  https://t.me/Padasalai_TET

- PGTRB - Group
  https://t.me/Padasalai_PGTRB

- TNPSC - Group
  https://t.me/Padasalai_TNPSC
SHRI KRISHNA ACADEMY-NAMAKKAL

COMPUTER APPLICATIONS-MINIMUM MATERIAL 2019-2020

கிருட்கனம்

> அவரை பார்க்குவதற்கு விளக்கம் அளிக்கும் பட்டியலில் குறிப்பிட்டு(Minimum Material) இருக்கும்.
> வகைக் குறைவு மக்களால் விளக்கம் குறிப்பிட்டு அவற்றை முற்பின்று விளக்கம் இருக்கிறது. அவற்றை விளக்கும் பட்டியல் அளிக்கப்படும்.
> அவரை பார்க்குவதற்கு விளக்கமாகவும் குறிப்பிட்டு விளக்கம் குறிப்பிட்டு விளக்கும் பட்டியல் அளிக்கப்படும்.
> குறைவு குறைவு மக்கள் அறிமுகப்படுத்தப்படும் விளக்கும் பட்டியல் அளிக்கப்படும்.
> புதுமய விளக்கம் முற்பின்று அறிமுக விளக்கம் விளக்கும் பட்டியல் அளிக்கப்படும்.

CONTACT: 9965531727, 9443231727

SHRI KRISHNA ACADEMY-NAMAKKAL
XII-COMPUTER APPLICATIONS

CHAPTER-01 MULTIMEDIA AND DESKTOP PUBLISHING

Part – I (1 Mark)

Choose the correct answer:

1. ----------- refers to any type of application that involves more than one type of media such as text, graphics video animation and sound
   a) an executable file       b) desktop publishing       c) multimedia       d) hypertext

2. One of the disadvantages of the multimedia is its -----------
   a) cost       b) adaptability       c) usability       d) relativity

3. Expand JPEG
   a) joint photo experts gross
     b) joint photographic experts group
     c) joint processor experts group
     d) joint photographic expression group

4. You need hardware, software and ----------- to make multimedia
   a) network       b) compact disk drive       c) good idea       d) programming knowledge

5. Match the following by choosing the right one
   1. Text  –  TGA
      2. Image  –  MIDI
      3. Sound  –  MPEG
      4. Video  –  RTF
     a) 1, 2, 3, 4     b) 2, 3, 4, 1     c) 4, 1, 2, 3     d) 3, 4, 1, 2

6. Find the odd one on the following which is not an image format
   a) TIFF       b) BMP       c) RTF       d) JPEG

7. ----------- is the process displaying still images they give continuous movement
   a) Text formats       b) Sound       c) MP3       d) Animation

8. The live telecasting of real time program through Internet is known as -----------
   a) web casting       b) web hosting       c) data manipulation       d) none of the above

9. GIF use ----------- color look up table
   a) 13 bit       b) 8 KB       c) 8 MB       d) 8 GB

   RTF file format was introduced by -----------
   a) TCS       b) Microsoft       c) Apple       d) IBM
Part - II

Short Answers:

1. Define Multimedia and their features.

Multimedia allows the users to combine and change data from various sources like image, text, graphics, video, audio and video to a single platform.

**Features:** latest enriching experience in the field of information sector.

2. List out Multimedia Components
   - Text
   - Images
   - Sound
   - Video and animation

3. Classify the TEXT component in Multimedia
   - Static text
   - Hyper text

4. Classify the IMAGE component in multimedia
   - Raster or Bitmap images
   - Vector images

5. Define Animation and their features

Animation is the process displaying still images so quickly so that they give the impression of continuous movement.

**Features:** Animations may be in two or three-dimensional.

5. List out image file formats
   - TIFF (Tagged Image File Format)
   - BMP (Bitmap)
   - TGA (Tagra)
   - PNG (Portable Network Graphics)

6. List out audio file formats
   - WAV (Waveform Audio File Format)
   - MP3 (MPEG Layer-3 Format)
   - WMA (Windows Media Audio)
   - RA (Real Audio Format)
7. List out video file formats
   - AVI (Audio/Video Interleave)
   - MPEG (Moving Picture Experts Group)

8. Define Multimedia Production
   Assures that the project will be proceed smoothly and certainly ensures that the information reaches the target audience.

9. List out Multimedia Production team members
   - Production Manager
   - Content Specialist
   - Script Writer
   - Text Editor
   - Web Master

Part - III

Explain in Brief Answer:

1. Briefly explain about Multimedia Components
   - Text: Text is the basic component of multimedia
   - Image: Images act as an integral component in multimedia.
   - Video: Video is defined as the display of recorded event, scene etc.

2. Describe the features and techniques of animation
   - Features: Animations may be in two or three-dimensional.
   - Path Animation: moving an object on a screen that has a constant background.
   - Frame Animation: multiple objects are allowed to travel simultaneously.

3. Write roles and responsibilities of Production team members.
   - Script Writer: Video and film scripts represent a linear sequence of events.
   - Text Editor: Text and narration is an integrated part of the application.
   - Multimedia Architect: integrates all the multimedia building blocks.

4. Describe the various file formats in multimedia
   - RTF: Rich Text Format is the primary file format
   - BMP (Bitmap): BMP is used for the high-resolution or large images.
   - MP3 (MPEG Layer-3 Format): MPEG Layer-3 format is the most popular format for storing and downloading music.
5. Explain animation industry and their scope.
   - 2D animation, 3D animation and visual effects for feature films.
   - great deal of employment for those who have the passion for it.
   - Indian animation studies and production houses.

Part - IV

Explain in detail:


   Conceptual Analysis and Planning: Conceptual analysis identifies an appropriate theme, budget and content availability on that selected theme.

   Project design: Once the theme is finalized objectives, goals, and activities are drawn for the multimedia project.

   Pre-production: Based on the planning and design, it is necessary to develop the project.

   Multimedia Production Team: The production team for a high-end multimedia project requires a team effort.

   Documentation: User documentation is a mandatory feature of all multimedia projects.

2. Explain in detail Techniques of Animation

   Path Animation: Path animation involves moving an object on a screen that has a constant background e.g. a cartoon character may move across the screen regardless of any change in the background or the character.

   Frame Animation: In frame animations, multiple objects are allowed to travel simultaneously and the background or the objects also change.

3. Explore the opportunities Animation filed movie industry.
   - Anyone completes a 3D animation course can hope to build a rewarding and satisfying career in the media and entertainment field these days.
   - A number of job opportunities are opening up on a daily basis.
   - Animation and visual effects requirements for massive international projects.
   - The surge in demand for animation and visual effects experts has led to a significant increase in the number of students enrolling for a VFX course.
4. Explain in detail about production team Roles and Responsibilities.

Content Specialist: Content specialist is responsible for performing all research activities concerned with the application’s content.

Script Writer: Video and film scripts represents a linear sequence of events

Text Editor: Text and narration is an integrated part of the application.

Computer Programmer: The computer programmer writes the lines of code or scripts in the appropriate language.

Web Master: The responsibility of the web master is to create and maintain an Internet web page.

5. Explain about different file formats in multimedia files

Plain text: Plain text is the original and popular way of conveying an e-mail

BMP (Bitmap): It is quite large and uncompressed and hence BMP is used for the high-resolution or large images.

TGA (Tagra): It is the first popular format for high-resolution images. TGA is supported by Most of the video-capture boards.

MP3 (MPEG Layer-3 Format): MPEG Layer-3 format is the most popular format for storing and downloading music.

AVI (Audio/Video Interleave): AVI is the video file format for Windows. Here sound and picture elements are stored in alternate interleaved chunks in the file.

ADDITIONAL QUESTIONS

1 MARK:

1. ------ plays vital role in terms of presenting information to the users.
(a) video   (b) audio     (c) multimedia application    (d) Text
2. The word multimedia consist of ------ words
(a) 3       (b) 2        (c) 4     (d) 5
3. Multimedia consist of two words ------ and ------
(a) Multi, media  (b) manly, media     (c) multiple, medium  (d) multi, medium
4. ------ works good with online viewing applications like world wide web.
   a) TIFF    b) PNG    c) TGA    d) JPEG
5. ------ is a free standing furnished equipped multimedia computer.
   a) Kiosk   b) multimedia   c) video    d) image
CHAPTER 02 - AN INTRODUCTION TO ADOBE PAGEMAKER

Part I

Choose the correct answer:

1. DTP stands for -----------
   (a) Desktop Publishing       (b) Desktop Publication
   (c) Doctor To Patient        (d) Desktop Printer

2. ----------- is a DTP software.
   (a) Lotus 1-2-3 (b) PageMaker (c) Maya          (d) Flash

3. Which menu contains the New option?
   (a) File menu (b) Edit menu    (c) Layout menu  (d) Type menu

4. In PageMaker Window, the area outside of the dark border is referred to as -----------
   (a) page     (b) pasteboard    (c) blackboard  (d) dashboard

5. Shortcut to close a document in PageMaker is -----------
   (a) Ctrl + A (b) Ctrl + B       (c) Ctrl + C    (d) Ctrl + W

6. A ----------- tool is used for magnifying the particular portion of the area.
   (a) Text tool (b) Line tool    (c) Zoom tool   (d) Hand tool

7. ----------- tool is used for drawing boxes.
   (a) Line     (b) Ellipse        (c) Rectangle   (d) Text

8. Place option is present in ----------- menu.
   (a) File     (b) Edit           (c) Layout     (d) Window

9. To select an entire document using the keyboard, press -----------
   (a) Ctrl + A (b) Ctrl + B       (c) Ctrl + C    (d) Ctrl + D

10. Character formatting consists of which of the following text properties?
    (a) Bold      (b) Italic        (c) Underline   (d) All of these

11. Which tool lets you edit text?
    (a) Text tool (b) Type tool    (c) Crop tool   (d) Hand tool

12. Shortcut to print a document in PageMaker is -----------
    (a) Ctrl + A (b) Ctrl + P       (c) Ctrl + C    (d) Ctrl + V

13. Adobe PageMaker is a Page layout software.

14. Title Bar is the topmost part of the PageMaker window.

15. Scrolling is the process of moving up and down or left and right through the document window.
16. **Ellipse** tool is used to draw a circle.

17. The Insert pages option is available on clicking the **Layout** menu.

18. Match the following.

<table>
<thead>
<tr>
<th>Action</th>
<th>(i)</th>
<th>(ii)</th>
<th>(iii)</th>
<th>(iv)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cut</td>
<td>Ctrl + Z</td>
<td></td>
<td>Ctrl + X</td>
<td></td>
</tr>
<tr>
<td>Copy</td>
<td>Ctrl + V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paste</td>
<td>Ctrl + X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undo</td>
<td>Ctrl + C</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

19. Choose the odd man out.

   i. Adobe PageMaker, QuarkXPress, Adobe InDesign, Audacity
   ii. File, Edit, Layout, Type, Zip
   iii. Pointer Tool, Line tool, Hide Tool, Hand Tool
   iv. Bold, Italic, Portrait, Underline

20. Choose the correct statement.

   i. (a) Text can be selected using mouse only.
      (b) Text can be selected using mouse or the keyboard.
   ii. (a) DTP is an abbreviation for Desktop publishing.
      (b) DTP is an abbreviation for Desktop publication.

21. Choose the correct pair

   (a) Edit and Cut     (b) Edit and New     (c) Undo and Copy     (d) Undo and Redo

**Part - II**

**Short Answers:**

1. **What is desktop publishing?**
   Desktop publishing (abbreviated DTP) is the creation of page layouts for documents using DTP software.

2. **Give some examples of DTP software.**
   Adobe PageMaker, Adobe InDesign, QuarkXPress

3. **Write the steps to open PageMaker.**
   Start All Programs → Adobe → PageMaker 7.0 → Adobe PageMaker 7.0.

4. **How do you create a New document in PageMaker?**
   Choose File→New in the menu bar. (or) Press Ctrl + N in the keyboard.
5. What is a Pasteboard in PageMaker?
The area outside of the dark border is referred to as the pasteboard.

6. Write about the Menu bar of PageMaker.
File, Edit, Layout, Type, Element, Utilities, View, Window, Help.

7. Differentiate Ellipse tool from Ellipse frame tool.

<table>
<thead>
<tr>
<th>Ellipse Tool</th>
<th>Ellipse frame Tool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used to draw circles and ellipses.</td>
<td>Used to create elliptical placeholders for text and graphics.</td>
</tr>
</tbody>
</table>

8. What is text editing?
Editing means making changes to the text.

9. What is text block?
   - A text block contains text you type, paste, or import.
   - All text in PageMaker resides inside containers called text blocks.

10. What is threading text blocks?
    A Text block can be connected to other text block so that the text in one text block can flow into another text block.

11. What is threading text?
The process of connecting text among Text blocks is called threading text.

12. How do you insert a page in PageMaker?
    - Choose Layout → Insert Pages in the menu bar. Type the number of pages you want to insert.
    - Click on Insert.

Part - III

Explain in Brief Answer:
   Adobe PageMaker is a page layout software. It is used to design and produce documents that can be printed.

2. Mention three tools in PageMaker and write their keyboard shortcuts.(Any 3)
   1. Pointer Tool - F9
   2. Rotating Tool - Shift + F2
   3. Line Tool - Shift + F3
3. Write the use of any three tools in PageMaker along with symbols.

<table>
<thead>
<tr>
<th>Tool</th>
<th>Toolbox</th>
<th>Cursor</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pointer Tool</td>
<td><img src="image1" alt="Pointer Tool" /></td>
<td><img src="image2" alt="Pointer Tool" /></td>
<td>Used to select, move, and resize text objects and graphics.</td>
</tr>
<tr>
<td>Text Tool</td>
<td><img src="image3" alt="Text Tool" /></td>
<td><img src="image4" alt="Text Tool" /></td>
<td>Used to type, select, and edit text.</td>
</tr>
<tr>
<td>Rotating tool</td>
<td><img src="image5" alt="Rotating tool" /></td>
<td><img src="image6" alt="Rotating tool" /></td>
<td>Used to select and rotate objects.</td>
</tr>
</tbody>
</table>

4. How do you rejoin split blocks?
   1. Place the cursor on the bottom handle of the second text block, click and drag the bottom handle up to the top.
   2. Then place the cursor on the bottom handle of the first text block, and click and drag the bottom handle down if necessary.

5. How do you link frames containing text?
   1. Draw a second frame with the Frame tool of your choice.
   2. Click the first frame to select it.
   3. Click on the red triangle to load the text icon.
   4. Click the second frame.
   5. Choose Element → Frame → Attach Content on the Menu bar.

6. What is the use of Master Page?
   Any text or object that you place on the master page will appear on the entire document pages to which the master is applied.

7. How do you insert page numbers in Master pages?
   1. Click on Master Pages icon.
   2. Then click on Text Tool.
   3. Press Ctrl + Alt + P.
   4. The page number displays as ‘LM’ on the left master page.
   5. Press Ctrl + Alt + P.
   6. The page number displays as ‘RM’ on the right master page.
Part - IV

Explain in detail:

1. Explain the tools in PageMaker toolbox. (Any 5)

<table>
<thead>
<tr>
<th>Tool</th>
<th>Toolbox</th>
<th>Cursor</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pointer Tool</td>
<td>![Pointer Tool icon]</td>
<td>![Pointer Tool cursor]</td>
<td>Used to select, move, and resize text objects and graphics.</td>
</tr>
<tr>
<td>Text tool</td>
<td>![Text tool icon]</td>
<td>![Text tool cursor]</td>
<td>Used to type, select, and edit text.</td>
</tr>
<tr>
<td>Rotating tool</td>
<td>![Rotating tool icon]</td>
<td>![Rotating tool cursor]</td>
<td>Used to select and rotate objects.</td>
</tr>
<tr>
<td>Cropping tool</td>
<td>![Cropping tool icon]</td>
<td>![Cropping tool cursor]</td>
<td>Used to trim imported graphics.</td>
</tr>
<tr>
<td>Line tool</td>
<td>![Line tool icon]</td>
<td>![Line tool cursor]</td>
<td>Used to draw straight lines in any direction.</td>
</tr>
<tr>
<td>Constrained line tool</td>
<td>![Constrained line tool icon]</td>
<td>![Constrained line tool cursor]</td>
<td>Used to draw vertical or horizontal lines.</td>
</tr>
<tr>
<td>Rectangle tool</td>
<td>![Rectangle tool icon]</td>
<td>![Rectangle tool cursor]</td>
<td>Used to draw squares and rectangles.</td>
</tr>
<tr>
<td>Rectangle frame tool</td>
<td>![Rectangle frame tool icon]</td>
<td>![Rectangle frame tool cursor]</td>
<td>Used to create rectangular placeholders for text and graphics.</td>
</tr>
<tr>
<td>Ellipse tool</td>
<td>![Ellipse tool icon]</td>
<td>![Ellipse tool cursor]</td>
<td>Used to draw circles and ellipses.</td>
</tr>
<tr>
<td>Ellipse frame tool</td>
<td>![Ellipse frame tool icon]</td>
<td>![Ellipse frame tool cursor]</td>
<td>Used to create elliptical placeholders for text and graphics.</td>
</tr>
<tr>
<td>Polygon tool</td>
<td>![Polygon tool icon]</td>
<td>![Polygon tool cursor]</td>
<td>Used to draw polygons.</td>
</tr>
<tr>
<td>Polygon frame tool</td>
<td>![Polygon frame tool icon]</td>
<td>![Polygon frame tool cursor]</td>
<td>Used to create polygonal placeholders for text and graphics.</td>
</tr>
<tr>
<td>Hand tool</td>
<td>![Hand tool icon]</td>
<td>![Hand tool cursor]</td>
<td>Used to scroll the page (an alternative to the scroll bar).</td>
</tr>
<tr>
<td>Zoom tool</td>
<td>![Zoom tool icon]</td>
<td>![Zoom tool cursor]</td>
<td>Used to magnify or reduce an area of the page.</td>
</tr>
</tbody>
</table>

2. Write the steps to place the text in a frame.

1. Click on one of a Frame tool from the Toolbox.
2. Draw a frame with one of PageMaker’s Frame tools
3. Click on File.
4. Click on Place.
5. Locate the document that contains the text you want to place, select it.
6. Click on Open.
7. Click in a frame to place the text in it.

3. How can you convert text in a text block to a frame?

1. Draw the frame of your choice using one of the PageMaker’s Frame tool.
2. Select the text block you want to insert in the frame.
3. Click the frame while pressing the Shift key. Now both elements will be selected.
4. Choose Element → Frame → Attach Content on the Menu bar.
5. Now the text appears in the frame.
4. Write the steps to draw a star using polygon tool?
   1. Click on the Polygon tool from the toolbox. The cursor changes to a crosshair.
   2. Click and drag anywhere on the screen.
   3. Release the mouse button when the Polygon is of the desired size.
   4. Choose Element → Polygon Settings in the menu bar.
   5. Type 5 in the Number of sides text box.
   6. Type 50% in Star inset textbox.
   7. Click OK.

ADDITIONAL QUESTIONS

1 MARK:

1. A new document called -------- opens on the screen
   a) new file          b) untitled -1       c) document       d) new document
2. The -------- key must not be pressed at the end of the each line in text block.
   a) Shift           b) Enter             c) Esc           d) Ctrl
3. The ---- key must be pressed at the end of the paragraph (or) when a blank line is to be
   inserted.
   a) Shift           b) Enter             c) Esc           d) Ctrl
4. The handles are called ----------------
   a) Window         b) Windowshades    c) modifier       d) maker
5. ------- key is used to delete the character in the after (or) forward (or) right to the
   insertion point.
   a) Ctrl           b) delete          c) backspace     d) shift

CHAPTER-03 INTRODUCTION TO DATABASE MANAGEMENT SYSTEM

Part - I

Choose the correct answer:

1. Which language is used to request information from a Database?
   a) Relational       b) Structural       c) Query         d) Compiler
2. The -------- diagram gives a logical structure of the database graphically?
   a) Entity-Relationship       b) Entity
   c) Architectural Representation       d) Database
3. An entity set that does not have enough attributes to form primary key is known as
   a) Strong entity set  b) **Weak entity set**  c) Identity set  d) Owner set

4. ----------- Command is used to delete a database.
   a) Delete database database_name  b) Delete database_name
   **c) drop database database_name**  d) drop database_name

5. Which type of below DBMS is MySQL?
   a) Object Oriented  b) Hierarchical  c) **Relational**  d) Network

6. MySQL is freely available and is open source.
   a) True  b) False

7. ----------- represents a “tuple” in a relational database?
   a) Table  b) **Row**  c) Column  d) Object

8. Communication is established with MySQL using
   a) **SQL**  b) Network calls  c) Java  d) API’s

9. Which is the MySQL instance responsible for data processing?
   a) MySQL Client  b) MySQL Server  c) **SQL**  d) Server Daemon Program

10. The structure representing the organizational view of entire database is known as -------- in MySQL database.
    a) Schema  b) **View**  c) Instance  d) Table

**Part - II**

**Short Answers:**

1. **Define Data Model and list the types of data model used.**
   logical structure of a database, including the relationships and constraints.

   **Types:**
   - Hierarchical Database Model
   - Network model
   - Relational model
   - Object-oriented database model

2. **List few disadvantages of file processing system.**
   - Data Duplication
   - High Maintenance
   - Security

Single valued attribute: A single valued attribute contains only one value for the attribute.

A multi valued attribute: A multi valued attribute has more than one value for that particular attribute.

4. List any two DDL and DML commands with its Syntax.

DDL Commands:
- **CREATE**:
  
  **Syntax**: CREATE database databasename;

- **DROP**:
  
  **Syntax**: DROP database databasename;

DML Commands:
- **INSERT**:
  
  **Syntax**: INSERT INTO tablename VALUES (value1, value2, value3);

- **DELETE**:
  
  **Syntax**: DELETE from tablename;

5. What are the ACID properties?

- A- Atomicity
- C- Consistency
- I- Isolation
- D- Durability.

6. Which command is used to make permanent changes done by a transaction?

  TCL Command helps to save the change into database permanently. COMMIT, ROLLBACK, SET TRANSACTION and SAVEPOINT commands belongs to this category.

7. What is view in SQL?

  A view is the result set of a stored query on the data.

8. Write the difference between SQL and MySQL.

<table>
<thead>
<tr>
<th></th>
<th>SQL</th>
<th>MySQL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SQL</strong></td>
<td>SQL is a query language.</td>
<td>MYSQL is a database software.</td>
</tr>
<tr>
<td><strong>MySQL</strong></td>
<td>To query and operate database system.</td>
<td>data handling, storing, modifying, deleting, in a tabular format.</td>
</tr>
</tbody>
</table>
9. What is Relationship and List its types.
Relationship exists between two entities.
- One-to-One relationship
- One-to-Many relationship
- Many-to-Many relationship

10. State few advantages of Relational databases.
- Avoids Data duplication
- Fast data retrieval
- High Availability

Part - III

Explain in Brief Answer:

1. Explain on Evolution of DBMS.
- The concept of storing the data started before 40 years in various formats.
- In earlier days they have used punched card technology to store the data.
  Then files were used.
- The file systems were known as predecessor of database system.

2. What is relationship in databases? List its types.
Relationship exists between two entities.
- One-to-One relationship
- One-to-Many relationship
- Many-to-Many relationship

3. Discuss on Cardinality in DBMS.
It is defined as the number of items that must be included in a relationship.
- one to one
- one to many
- many to many

4. List any 5 privileges available in MySQL for the User.
- `Select_priv` - User can select rows from database tables.
- `Insert_priv` - User can insert rows into database tables.
- `Update_priv` - User can update rows of database tables.
- `Delete_priv` - User can delete rows of database tables.
- `Create_priv` - User can create new
4. Write few commands used by DBA to control the entire database.

**USE Database:**

Syntax: `mysql > use Database;`

**SHOW Databases :**

Syntax: `mysql > show databases;`

**SHOW Tables**

Syntax: `mysql > show tables;`

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**Part - IV**

**Explain in detail:**

1. **Discuss on various database models available in DBMS.**

   **Hierarchical Database Model:**
   
   Each record has information in parent/child relationship like a tree structure.

   **Network model:**
   
   Network model is similar to Hierarchical model except that in this model each member can have more than one owner.

   **Relational model:**
   
   Relational model is defined with two terminologies Instance and Schema.

   **Object-oriented database model:**
   
   Object-oriented model uses small, reusable software known as Objects. These are stored in object oriented database.

2. **List the basic concepts of ER Model with suitable example.**

   1. **Entity or Entity type**
   
   2. **Attributes**
   
   3. **Relationship**

   **Entity or Entity type:**

   An Entity can be anything a real-world object or animation.

   **Attributes:** An attribute is the information about that entity and it will describe, quantify, qualify, classify, and specify an entity.

   **Types of attributes:**

   1. **Key Attribute**
   
   2. **Simple Attributes**
   
   3. **Composite Attributes**
4. Single Valued Attribute
5. Multi Valued Attribute

**Relationship**: In ER Model, relationship exists between two entities.
- One-to-One relationship
- One-to-Many relationship
- Many-to-Many relationship

2. **Discuss in detail on various types of attributes in DBMS.**
1. Key Attribute
2. Simple Attributes
3. Composite Attributes
4. Single Valued Attribute
5. Multi Valued Attribute

**Key Attribute**: describes a unique characteristic of an entity.

**Simple Attribute**: It will be having a single value for their entity.

**For Example**: consider the name as the attribute for the entity employee and here the value for that attribute is a single value.

**Composite Attributes**: The composite attributes can be subdivided into simple attributes without change in the meaning of that attribute.

**For Example**: The employee is the entity with the composite attribute Name which are sub-divided into two simple attributes first and last name.

**Single Valued Attributes**: A single valued attribute contains only one value for the attribute.

**For example**: Age - It is a single value for a person

**Multi Valued Attributes**: A multi valued attribute has more than one value for that particular attribute.

**For example**: Degree - A person can hold n number of degrees

3. **Write a note on open source software tools available in MySQL Administration.**

**PHPMYADMIN (Web Admin)**: The main feature is providing web interface, importing data from CSV and exporting data to various formats.

**MySQL Workbench (Desktop Application)**: It is a database tool used by developers and DBA’s mainly for visualization. This tool helps in data modeling, development of SQL, server configuration and backup for MySQL in a better way.
HeidiSQL (Desktop Application): This open source tool helps in the administration of better database systems.

4. Explain in detail on Sub Queries with suitable examples.

Sub queries:
1. Subqueries are always written within the parentheses.
2. Always place the Subquery on the right side of the comparison operator.
3. ORDER BY clause is not used in sub query, since Subqueries cannot manipulate the results internally.

<table>
<thead>
<tr>
<th>EmpID</th>
<th>Name</th>
<th>Age</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
<td>Ram</td>
<td>35</td>
<td>15000</td>
</tr>
<tr>
<td>102</td>
<td>Gopal</td>
<td>41</td>
<td>30000</td>
</tr>
<tr>
<td>103</td>
<td>Priya</td>
<td>32</td>
<td>13000</td>
</tr>
<tr>
<td>104</td>
<td>Hari</td>
<td>37</td>
<td>20000</td>
</tr>
</tbody>
</table>

SELECT * from Employee where EmpID IN(101,103)

<table>
<thead>
<tr>
<th>EmpID</th>
<th>Name</th>
<th>Age</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>101</td>
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<td>35</td>
<td>15000</td>
</tr>
<tr>
<td>103</td>
<td>Priya</td>
<td>32</td>
<td>13000</td>
</tr>
</tbody>
</table>

Similarly the sub queries are used with INSERT, UPDATE and DELETE.

**ADDITIONAL QUESTIONS**

1 MARK:
1. Same data is used by multiple resources for processing in known as --------
   a) data duplication   b) repetition   c) iteration   d) maintenance
2. The most popular relational database is --------
   a) SQL   b) MySQL   c) oracle   d) query
3. Match the following
   a) simple attribute - more than one value for particular attribute
   b) composite - only one value for the attribute
   d) single valued - divided into simple attributes
   d) multi valued - single value
   a) 4 3 2 1   b) 4 2 3 1   c) 3 4 1 2   d) 3 1 2 4
4. MySQL is founded by ---------------
   a) monty widenius   b) Vinton cerf   c) Charles Babbage   d) Ray Tamlinson

5. SQL is stands for ---------
   a) structured query language   b) structure query language
   c) standard query language   d) stable query language

2 MARK:
1. Define DBMS.
   A database management system (DBMS) is system software for creating and managing databases.

2. Define degree of consistency
   To prevent the conflict in database update, the transactions are isolated from other user and serialized. This is also known as Degree of Consistency.

3. What is backup?
   It is a program or process of copying table contents into a file for future reference