

Title Page

Project Title : The Startup Ecosystem

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Chapter 1: Software Requirements Specification (SRS)

1. Problem Description

Case Study : The Startup Ecosystem Database

Meaning of Startup

A startup ecosystem is a network of people, organizations, and businesses that work together to create and grow new startups. These ecosystems can be physical or virtual, and can include

- Startups at different stages
- Entrepreneurs
- Investors
- Mentors and advisors
- Educational institutions
- Incubators and accelerators

Startup Ecosystem Database Meaning

A startup ecosystem database is a collection of information about a region's startup ecosystem, including startups, investors, and other stakeholders. These databases can help identify growth opportunities, encourage collaboration, and highlight a specific area's potential.

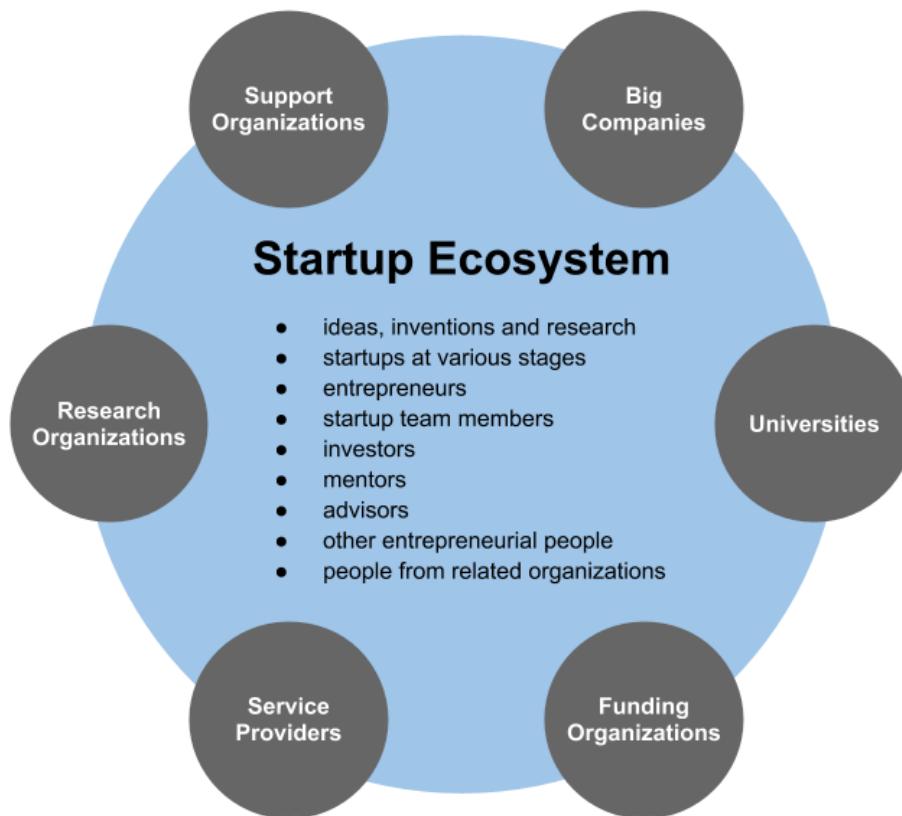
Suggestions

- Wright says : “Startup ecosystems rely on many factors, but people are by far the most important.”

- Startup Genome research shows that founders have unique skills and knowledge that can have outsized impact on the local economy when their talent is supported by key local stakeholders.”

Ref :- <https://www.startupblink.com/blog/building-a-database-for-your-startup-ecosystem/>

Key Elements Of Startup Ecosystem



Ref : <https://www.startupcommons.org/what-is-startup-ecosystem.html>

Challenges for Startups

1. Hiring and Managing Teams

- Difficulty in finding and retaining skilled employees due to competition from larger firms.
- Many founders lack business management experience, impacting operational efficiency.
- Startups often rely on bootstrapped funds or family support, making scaling challenging.

2. Diversity and the Digital Divide

- Understanding and catering to India's diverse customer base is complex.
- Regional differences limit startups' ability to scale nationally and effectively.
- Founders from urban areas may have limited insight into rural customer needs.

3. Market Penetration and Pricing

- High competition and presence of copycats make market entry difficult.
- Indian customers are highly price-sensitive, affecting startups' pricing strategies.
- Challenges in payment collection, especially without digital payment methods.

4. Hiring Qualified Employees

- Difficulty attracting talent due to perceived instability compared to larger corporations.
- Skills gap between academic training and industry requirements necessitates significant training.
- Limited ability to attract international talent due to bureaucratic hurdles.

5. Complex Regulatory Environment

- Navigating bureaucratic and regulatory processes is time-consuming and unpredictable.
- Issues with tax policies, including GST and "Angel Tax," create compliance challenges.

- Lengthy and costly setup processes act as barriers to starting and scaling businesses.

Ref : <https://www.orfonline.org/public/uploads/posts/pdf/20230725154621.pdf>

2. Requirement Collection

Background Reading

Intended Audience

1. Entrepreneurial Talent

- Entrepreneurs are the core of the ecosystem.
- They drive innovation and bring new ideas to life.
- Their vision and ambition push the ecosystem forward.

2. Investment Resources

- Comprises venture capital firms, angel investors, and other funding sources.
- Provides the financial backing necessary for startup growth and scaling.
- Enables startups to access crucial capital at different stages of their journey.

3. Support Infrastructure

- Includes incubators, accelerators, coworking spaces, and service providers.
- Offers physical infrastructure, mentorship, and networking opportunities.
- Provides essential services like legal, marketing, and technical support.

4. Educational Institutions and Research Organizations

- Supply new knowledge, innovation, and a talented workforce.
- Collaborate with startups for research support and technology transfer.
- Play a critical role in the ongoing development of entrepreneurial skills.

5. Government and Policy Framework

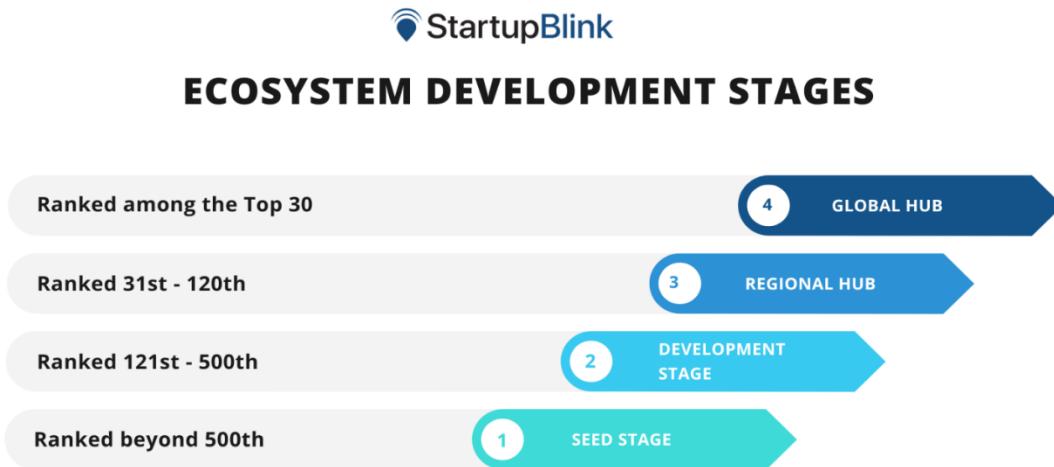
- Local government policies shape the ecosystem's success.
- Includes support like intellectual property protection and economic incentives.
- Affects startups through regulatory environments and policy support.

Ref: <https://augment.org/blog/startup-ecosystem>

Strategies to Build a Startup Ecosystem

- Evaluate the data of your ecosystem
- Provide a Startup-Business Friendly Environment
- Ensure the ecosystem has hubs for networking
- Boost the investment ecosystem
- Promote your ecosystem

Stages in Building a Startup Ecosystem



Product Scope

Startup ecosystems provide a variety of goods and services upon which other people and companies depend on. Thus, the principles of start-up ecosystem management suggest that rather than managing individual people or organizations, resources should be managed at the level of the startup ecosystem itself.

Ref : https://en.wikipedia.org/wiki/Startup_ecosystem

Indicators of growth in the startup ecosystem

- The pace of growth in the startup ecosystem has increased to 15% year-on-year in 2018, while the growth of the number of incubators and accelerators has grown to 11%.
- Significantly, the number of women entrepreneurs stood at 14%, up from 10% and 11% in the previous two years.
- Startups in the country have been able to create an estimated 40,000 new jobs over the year, taking the total jobs in the start-up ecosystem to 1.6-1.7 lakh.
- Bangalore has been listed within the world's 20 leading startup cities in the 2019 Startup Genome Project ranking. It is also ranked as one of the world's five fastest growing startup cities.

Ref : <https://www.startupindia.gov.in/content/sih/en/international/go-to-market-guide/indian-startup-ecosystem.html>

Building a Local Startup Ecosystem

1. Understanding Ecosystem Processes

- Comprehensive knowledge of the ecosystem's dynamics is crucial for its development.
- Failure to identify these processes can hinder the ecosystem's functionality.

2. Availability of Funding and Investment Opportunities

- Access to venture capital, angel investors, and other funding sources is essential for startup growth.
- Investment opportunities fuel innovation and scalability.

3. Presence of a Skilled and Educated Workforce

- A talented workforce with relevant skills is necessary for startup success.
- Collaboration with educational institutions can provide a steady stream of qualified individuals.

4. Access to Resources and Infrastructure

- Startups need access to resources such as technology, office space, and business services.
- A robust infrastructure supports operational efficiency and business growth.

5. Strategic Approach to Ecosystem Development

- Building a local startup ecosystem requires a well-planned strategy to address key factors.
- A coordinated effort among stakeholders helps promote a thriving entrepreneurial environment.

Ref : <https://www.ramotion.com/blog/startup-ecosystem/#section-elements-of-a-startup-ecosystem>

Analyzation of background reading

- **Vision and mission:** A strong vision and mission is essential for a successful startup ecosystem.

- **Stakeholders and programs:** A startup ecosystem needs a variety of stakeholders and supporting programs.
- **Measurements:** A startup ecosystem needs clear measurements to track its growth over time.
- **Local community:** Consider the needs of the local community.
- **Physical, social, and cultural environment:** Consider the physical, social, and cultural environment.
- **Political environment:** Consider the political environment.
- **Economic policies:** Consider the economic policies.
- **Availability of resources and talent:** Consider the availability of resources and talent.
- **Government initiatives:** The government can play a critical role by offering incentives, enabling connectivity, facilitating funding, and implementing a favorable regulatory environment.
- **Funding:** Startup funding is essential, and can come from loans, grants, or family and friends.
- **Ecosystem analysis and knowledge sharing:** Sharing stories of success can help create a culture of success and attract more entrepreneurs, investors, and talent.

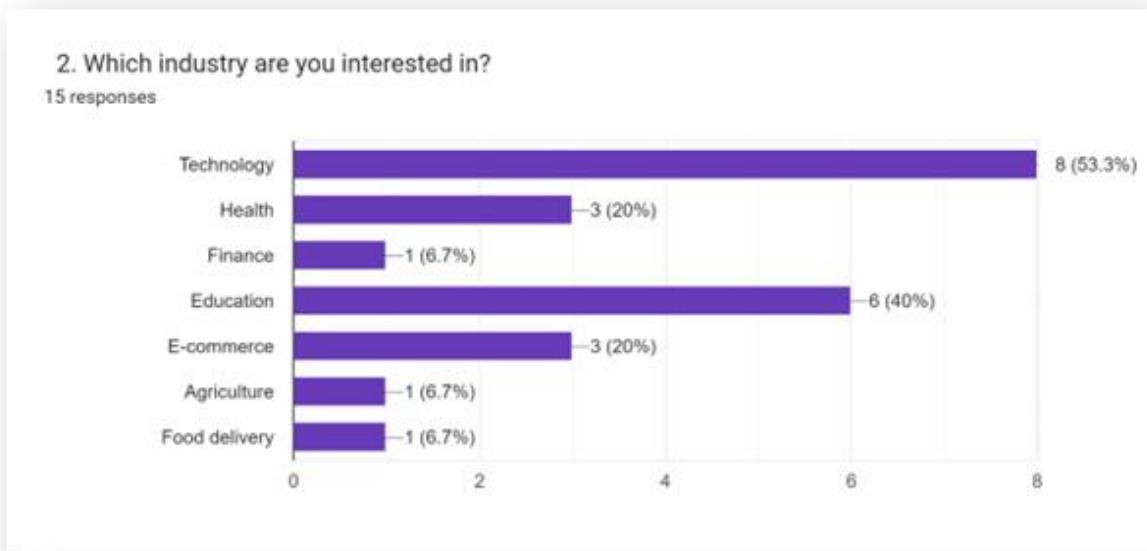
Interviews

- **Mentorship and Expertise:** Develop mentorship programs pairing founders with experienced industry professionals to guide strategic decisions.
- **Improved Funding Access:** Facilitate connections between startups and investors, focusing on seed and growth-stage funding.
- **Resource Sharing Platforms:** Create shared resources to reduce overhead costs for startups.
- **Streamlined Regulations:** Advocate for simplified regulatory requirements for startups to ease compliance and reduce entry barriers.
- **Networking Events:** Host networking events for startups to connect with investors, potential partners, and other entrepreneurs for collaboration opportunities.
- **Talent Acquisition Support:** Assist startups in finding skilled talent through partnerships with universities and job fairs targeting key skills.
- **Innovation and R&D Grants:** Provide or facilitate grants for startups engaged in innovative projects to encourage R&D.
- **Market Access Programs:** Create initiatives that help startups enter new markets, both locally and internationally.
- **Continuous Ecosystem Feedback:** Develop feedback loops with startups to understand their challenges and adapt ecosystem support services accordingly.
- **Data-Driven Insights:** Use analytics to identify trends and success patterns within the ecosystem, sharing these insights to benefit new startups and investors.

Questionnaires/Surveys

Summary Of Responses

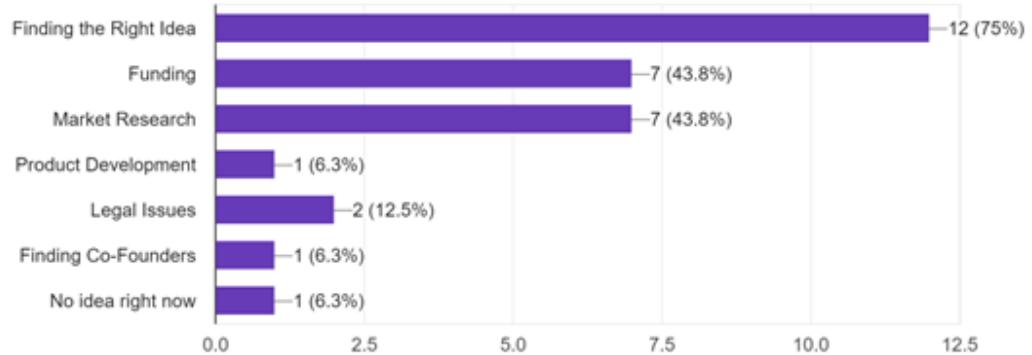
1. Interested Startup Industry



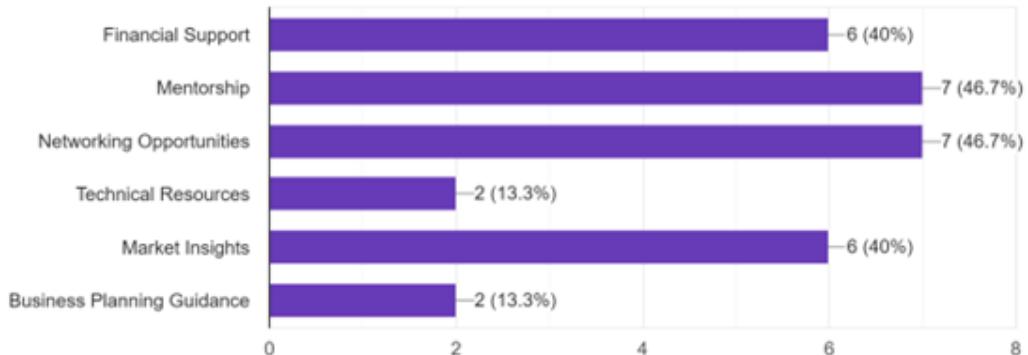
2. Challenges Faced by Startups

5. What are the biggest challenges you face in starting your business?

16 responses

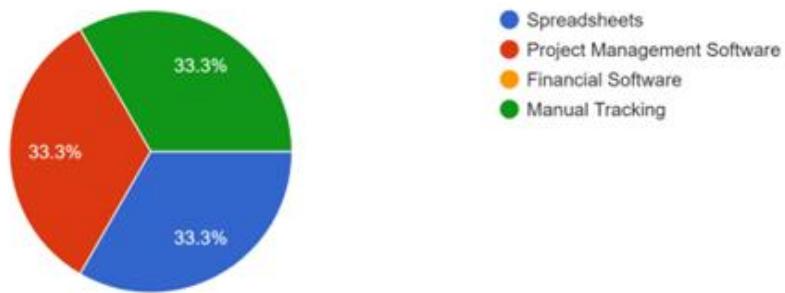
**3. Support Needed by Startups****6. What type of support do you need most to start your business?**

15 responses

**4. Tracking the Startup Progress**

10.How do you currently track your startup's progress towards goals?

3 responses



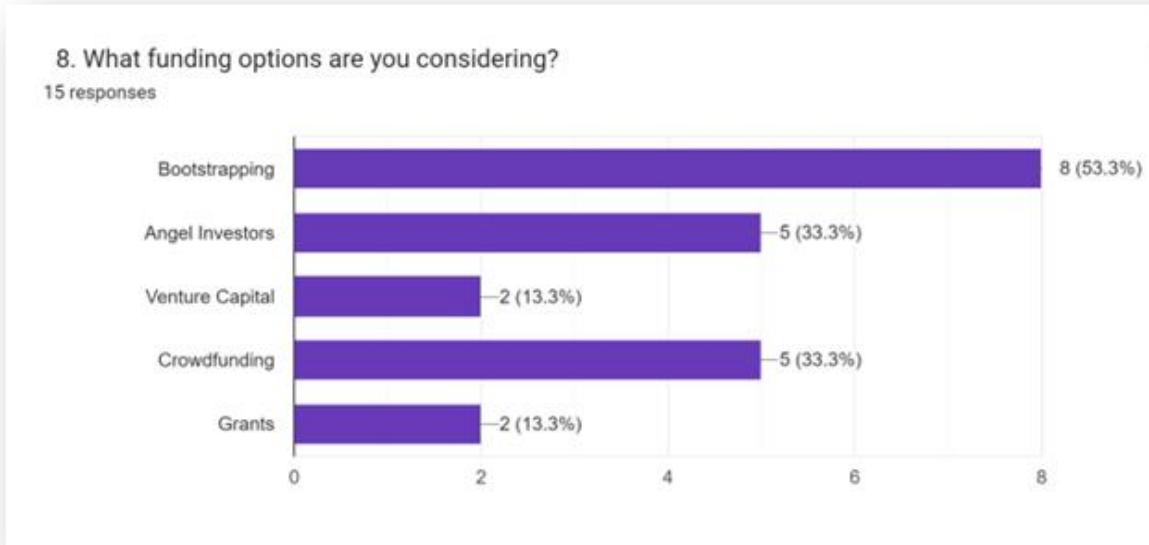
5. Biggest barrier growth

10.What is your biggest concern about starting a startup?

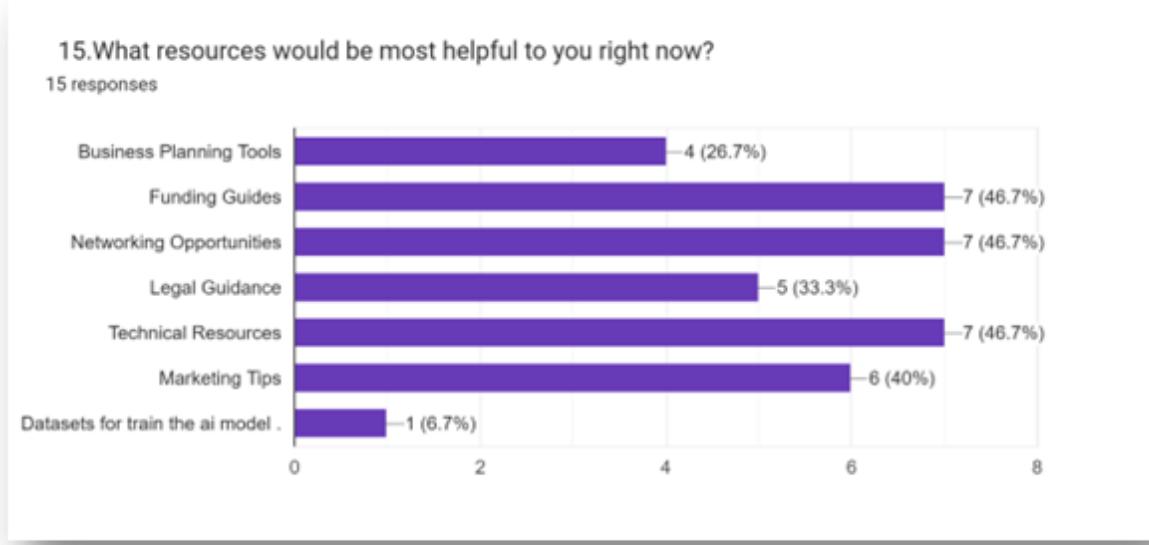
16 responses



6. Funding Options



7. Helpful Resources



Combined Summary from overall responses

- **Funding:** Bootstrapping is the most popular funding option among respondents,

followed by angel investors and crowdfunding. Venture capital and grants are less favored.

- **Resources:** Respondents expressed a strong need for Funding Guides, Networking Opportunities, and Technical Resources. Legal Guidance was also in high demand, while Business Planning Tools and Marketing Tips were less frequently requested.
- **Challenges:** The biggest challenges faced by startups include finding the right idea, securing funding, and navigating market research, legal compliance, and regulations.
- **Support:** Respondents sought various types of support, with Financial Support, Mentorship, and Networking Opportunities being the most requested.
- **Industry Interest:** Technology is the most popular industry for startups, followed by Education and Health.
- **Progress Tracking:** Respondents use a variety of methods to track their startup's progress, including spreadsheets, project management software, and manual tracking.

Overall, the data suggests that startups are seeking a combination of financial resources, mentorship, networking, and industry-specific knowledge to overcome challenges and achieve success.

Observation

Observation Summary

- **Sector Focus:** High interest in technology and education sectors, indicating demand for innovative solutions in these fields.
- **Funding Challenges:** Securing initial capital and ongoing funding is a significant hurdle for many startups, emphasizing the need for better access to investors.
- **Mentorship Needs:** Founders seek mentorship in business strategy, scaling, and market entry, highlighting the importance of connecting with experienced mentors.

- **Support Services:** Startups require support in legal matters, marketing, and strategic guidance, pointing to a need for accessible service platforms.
- **Networking and Community:** Strong demand for networking opportunities to build connections and gain insights from other founders and experts.
- **Market Insights:** Startups value tools that provide competitive analysis and market trend updates to make informed business decisions.
- **Comprehensive Support System:** Overall, the ecosystem needs a robust support structure encompassing funding access, mentorship, market intelligence, and community resources to drive growth and innovation.

3. Fact-Finding Chart

| Objective | Technique | Subject(s) | Time Commitment |
|---|---------------------|--|-----------------|
| To gather information about the startup ecosystem | Background reading | Industry reports, case studies, news Articles | 1-2 days |
| To identify key stakeholders and their roles | Interviews | Founders, investors, mentors, partners, industry experts | 2-4 hours each |
| To understand the challenges faced by startups | Interviews, surveys | Founders, industry experts | 1-2 hours each |
| To assess the current state of the ecosystem | Interviews, surveys | Founders, investors, mentors, industry experts | 1-2 hours each |

| | | | |
|---|-------------------------------|--|----------------|
| To identify gaps in existing resources and support | Interviews, surveys | Founders, industry experts | 1-2 hours each |
| To explore potential areas for innovation and growth | Interviews, surveys | Founders, industry experts | 1-2 hours each |
| To assess the effectiveness of existing initiatives | Interviews, surveys | Founders, investors, mentors, industry experts | 1-2 hours each |
| To identify potential partnerships and collaborations | Interviews, networking events | Founders, investors, mentors, industry experts | 1-2 hours each |
| To understand the regulatory environment | Legal research, interviews | Legal experts, government officials | 1-2 hours |
| To assess the availability of funding and support resources | Interviews, research | Investors, funding organizations, support networks | 1-2 hours each |

4. Requirements List

1. Startup Information

- **Store startup details:** Name, industry, country, date of founding, stage, revenue, number of employees.
- **Track lifecycle stages:** Capture stages such as seed, growth, expansion, exit, etc.

2. Startup Owners Information

- **Founder information:** Capture personal details (name, email, expertise, LinkedIn profile, nationality).
- **Maintain relationships:** Establish and track the relationship between startups and their founders.

3. Investment and Funding Information

- **Funding rounds:** Record each funding round including investment type, amount raised, and funding date.
- **Investor information:** Capture details about investors, their investments, and equity stakes.
- **Valuation and equity:** Track the valuation of startups post-funding and calculate equity stake for each investor.

4. Accelerators and Incubators

- **Accelerator/incubator details:** Store information like name, location, focus area, and contact info.
- **Startup-accelerator relationship:** Track startup participation in accelerators or incubators, including joining and exit dates and program details.

5. Mentors and Advisory Support

- **Mentor information:** Store mentor details (name, email, area of expertise, LinkedIn profile).
- **Mentorship relationships:** Track mentorship relationships between startups and mentors, including start date, end date, and type of mentorship.

6. Partnerships

- **Partnership tracking:** Track partnerships between startups and other organizations, including partnership type and start and end dates.

7. Stakeholders

- **Stakeholder information:** Store information about other stakeholders in the startup ecosystem.

- **Track stakeholder impact:** Track the involvement and impact of stakeholders on the ecosystem.

8. Ecosystem Metrics

- **Metrics and reports:** Provide metrics and reports on the health and growth of the startup ecosystem, such as the number of startups, investments, jobs created, etc.
- **Filtering:** Allow filtering of data based on region, industry, or stage of development.

9. Events and Networking Opportunities

- **Event tracking:** Allow startups to register for and track events, workshops, and networking opportunities.
- **Notifications:** Provide notifications or reminders for relevant events in the ecosystem.

10. Challenges and Barriers

- **Track startup challenges:** Capture challenges startups face, including regulatory issues, talent shortage, or market penetration barriers.
- **Solutions:** Log potential solutions or strategies to overcome these challenges.

11. Government and Regulatory Support

- **Government support:** Track government frameworks and policies that support startups.
- **Legal compliance:** Capture legal and regulatory compliance details for startups.

12. Knowledge Sharing and Resources

- **Educational materials:** Provide resources like educational content, reports, success stories, and guidelines for entrepreneurs.
- **Knowledge sharing:** Allow startups to share their journey, best practices, and success stories with the community.

5. User Privileges

User Classes and Privileges

1. Startup CEO

- **Role:** Chief Executive Officer
- **Privileges:**
 - Full access to all startup data, including financials, team members, and strategic documents.
 - Ability to add, modify, or remove team members.
 - Authority to manage funding rounds and interact with investors.
 - Access to performance analytics of the startup, including revenue, growth metrics, and investor engagement.
 - Control over partnership agreements and contractual obligations.

2. Team Lead

- **Role:** Head of a specific department
- **Privileges:**
 - Access to department-specific data, including project progress, team performance, and resources.
 - Authority to manage tasks and assign work to team members within their department.
 - Ability to view team member performance metrics and provide feedback.
 - Limited access to financial data relevant to their department, such as budgets for projects or initiatives.

3. Team Member

Role: Employee contributing to the startup's projects

- **Privileges:**
 - Access to tasks, project plans, and collaborative tools related to their work.
 - Ability to update their progress on tasks and projects.

- o View access to relevant performance metrics for their role.
- o No access to sensitive financial data or information about other team members beyond their immediate team.

4. Investor

- **Role:** Individual or entity that provides funding to the startup
- **Privileges:**
 - o Access to investment portfolios and details about funding rounds they are involved in.
 - o Ability to view financial reports, including revenue and growth projections of the startup.
 - o Limited access to startup performance metrics, focusing primarily on their investment interests.
 - o No access to internal team operations or proprietary project details.

5. Accelerator Program Manager

- **Role:** Overseer of accelerator programs that support startups
- **Privileges:**
 - o Access to information about startups enrolled in the program, including progress reports and mentorship assignments.
 - o Ability to assign mentors and review feedback from mentors about the startups.
 - o View access to financial metrics and success metrics of the participating startups.
 - o Can track and manage resources allocated to startups within the accelerator.

6. Mentor

- **Role:** Experienced professional providing guidance to startups
- **Privileges:**
 - o Access to mentorship records and startup progress in areas of their expertise.

- o Ability to provide feedback and advice to the startups they are mentoring.
- o Can view performance metrics related to their mentees' growth and achievements.
- o No access to financial data or sensitive operational information outside their mentorship scope.

7. System Administrator

- **Role:** Responsible for overall system maintenance and user management
- **Privileges:**
 - o Full access to all system data, including user management and permissions.
 - o Authority to add, modify, or remove users from the system, including changing roles and permissions.
 - o Ability to run data backups and restore data as needed.
 - o Monitor system usage and enforce security protocols to protect sensitive information.

8. Government Stakeholder

- **Role:** Government officials interested in the startup ecosystem
- **Privileges:**
 - o Access to aggregate data on startup performance, funding, and job creation within the ecosystem.
 - o Ability to view reports on startup health and trends affecting the ecosystem.
 - o Limited access to information on initiatives supporting startups, without access to individual startup financial data.

9. Ecosystem Analyst

- **Role:** Individuals analyzing the startup ecosystem for research and development
- **Privileges:**
 - o Access to aggregate data and analytics regarding startup growth, investment trends, and ecosystem performance.
 - o Ability to create reports and present findings based on available data.

- o No access to sensitive or proprietary data of individual startups or personal data of users.

Chapter 2 : Database Design

1. Noun Analysis

Table - Accepted Noun & Verbs list

| Candidate Entity Set | Attribute Set | Candidate Relationship Set |
|----------------------|--|---|
| Startup | Startup_ID (PK), Name, Industry, Stage, Founded_Date, Location, Funding_Amount, Employee_Count | Connected to Founders, Investments, Mentors, Accelerators, Partnerships |

| | | |
|---------------------------------|--|--|
| | | |
| Founder | Founder_ID (PK), fName, lName, Role, LinkedIn_Profile, Startup_ID (FK) | Connects to Startups through Founding |
| Investor | Investor_ID (PK), Name, Type, Investment_Stage_Preference, Location | Connects to Startups via Investments |
| Investment | Investment_ID (PK), Investor_ID (FK), Startup_ID (FK), Amount, Date, Stage | Connects Investors and Startups |
| Mentor | Mentor_ID (PK), Name, Expertise, Affiliation, LinkedIn_Profile | Connects to Startups for Mentorship |
| Accelerator | Accelerator_ID (PK), Name, Location, Industry_Focus, Batch_Size, Program_Duration | Connects to Startups through Enrollment |
| Partnership | Partnership_ID (PK), Startup_ID (FK), Partner_Organization_ID (FK), Type, Start_Date, End_Date | Connects Startups with Partner Organizations |
| Ecosystem Resource | Resource_ID (PK), Name, Type, Provider, Contact_Info | Connected to Startups for support |
| Industry | Industry_ID (PK), Name, Sector, Description | Categorizes Startups by Industry |
| Mentor Contact Info | Mentor_ID (FK), phone_no | Holds Mentor Contact Details |
| Accelerator Contact Info | Accelerator_ID (FK), phone_no | Holds Accelerator Contact Details |
| Investor Contact Info | Investor_ID (FK), phone_no | Holds Investor Contact Details |

| | | |
|----------------------------|---|------------------------------------|
| Startup-Mentor | Startup_ID (FK), Mentor_ID (FK), Date_Joined | Connects Startups and Mentors |
| Startup-Accelerator | Startup_ID (FK), Accelerator_ID (FK), Date_Joined | Connects Startups and Accelerators |

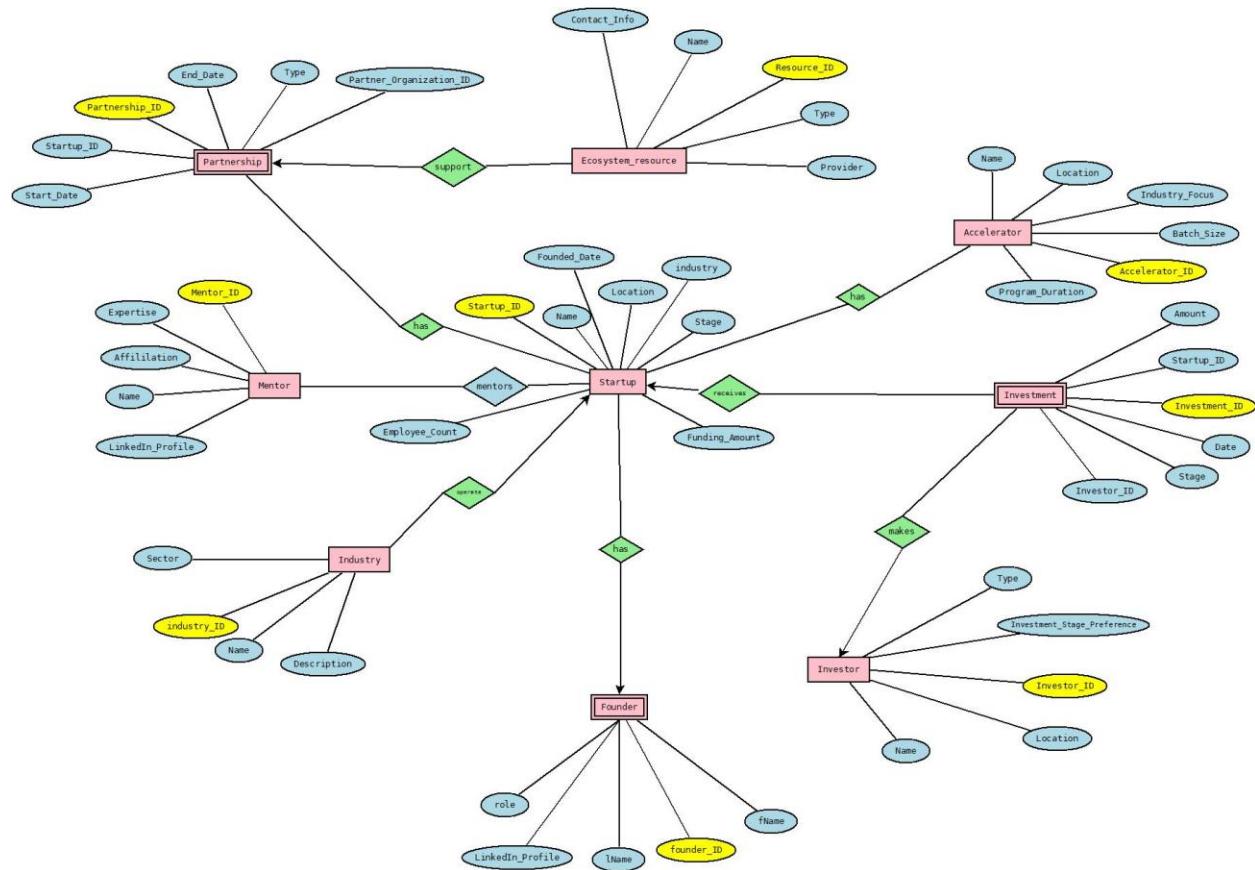
Relationships For ER Diagram Design

| Entity 1 | Entity 2 | Relationship Type | Intermediate Table (if any) | Description |
|----------|-------------|-------------------|-----------------------------|---|
| Startup | Founder | One-to-Many | - | Each startup can have multiple founders, and each founder is associated with only one startup. |
| Startup | Investor | Many-to-Many | Investment | An investor can invest in multiple startups, and a startup can receive funding from multiple investors. |
| Startup | Mentor | Many-to-Many | Startup_Mentor | Mentors can work with multiple startups, and startups can have guidance from multiple mentors. |
| Startup | Accelerator | Many-to-Many | Startup_Accelerator | Each startup can join multiple accelerators, and each accelerator can have multiple startups. |
| Startup | Partnership | One-to-Many | Partnership | Each partnership involves one startup and one partner organization, |

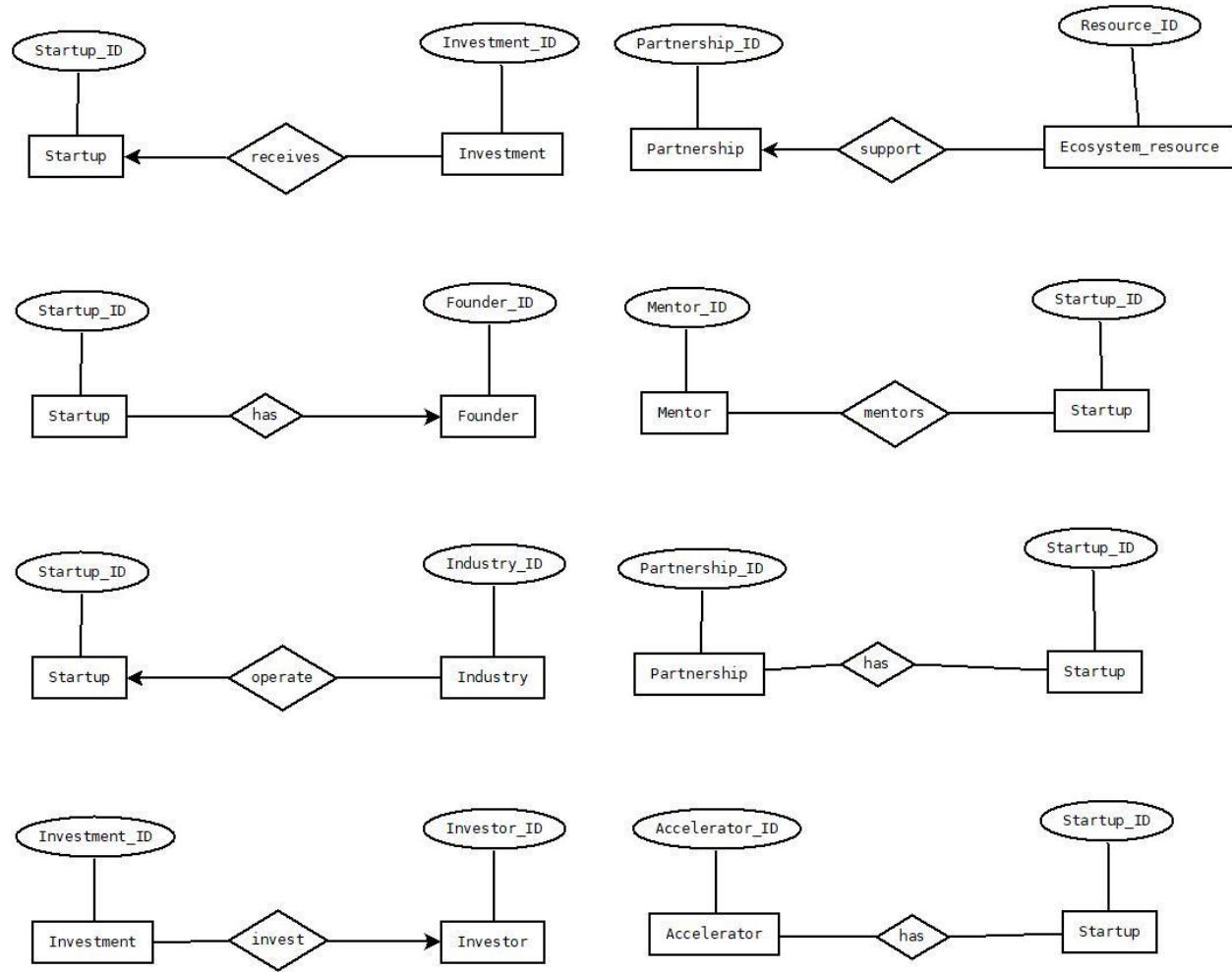
| | | | | |
|-------------|--------------------------|-------------|---|--|
| | | | | but a startup can have multiple partnerships. |
| Accelerator | Ecosystem Resource | Implicit | - | Accelerators can be part of an ecosystem and provide specific resources to startups. |
| Industry | Startup | One-to-Many | - | Each startup is associated with an industry, while an industry can contain multiple startups. |
| Mentor | Mentor_contact_info | One-to-Many | - | Each mentor can have multiple contact entries stored in the Mentor_contact_info table. |
| Accelerator | Accelerator_contact_info | One-to-Many | - | Each accelerator can have multiple contact entries stored in the Accelerator_contact_info table. |
| Investor | Investor_contact_info | One-to-Many | - | Each investor can have multiple contact entries stored in the Investor_contact_info table. |

2. Schema and ER Diagram Design

Entity Relationship Diagram



Schema Diagram



3. ER Diagram Improvement

Identify Entity Types

| Entity | Type | Reason |
|---------|---------------|--|
| Startup | Strong Entity | Has a primary key (Startup_ID) and exists independently. |
| Founder | Strong Entity | |

| | | |
|--------------------------|---------------|---|
| | | Has a primary key (Founder_ID) and is directly associated with Startup. |
| Investor | Strong Entity | Has a primary key (Investor_ID) and exists independently. |
| Investment | Weak Entity | Depends on both Investor and Startup entities for context, forming a many-to-many relationship. |
| Mentor | Strong Entity | Has a primary key (Mentor_ID) and exists independently. |
| Accelerator | Strong Entity | Has a primary key (Accelerator_ID) and exists independently. |
| Partnership | Weak Entity | Relies on the Startup and Ecosystem_Resource entities, forming a one-to-many relationship with Startup. |
| Ecosystem_Resource | Strong Entity | Has a primary key (Resource_ID) and exists independently. |
| Industry | Strong Entity | Has a primary key (Industry_ID) and exists independently. |
| Mentor_contact_info | Weak Entity | Dependent on Mentor, holding additional contact info, forming a one-to-many relationship. |
| Accelerator_contact_info | Weak Entity | |

| | | |
|-----------------------|--------------------|--|
| | | Dependent on Accelerator, holding additional contact info, forming a one-to-many relationship. |
| Investor_contact_info | Weak Entity | Dependent on Investor, holding additional contact info, forming a one-to-many relationship. |
| Startup_Mentor | Associative Entity | Represents a many-to-many relationship between Startup and Mentor. |
| Startup_Accelerator | Associative Entity | Represents a many-to-many relationship between Startup and Accelerator. |

Identify Relationship Types

| Entity 1 | Entity 2 | Relationship Type | Details |
|----------|----------|-------------------|--|
| Startup | Founder | One-to-Many | Each Startup can have multiple Founders, but each Founder is associated with only one Startup. |
| Startup | Investor | Many-to-Many | Represented by the Investment table, allowing multiple investors for a startup and multiple startups for an investor. |
| Startup | Mentor | Many-to-Many | Represented by Startup_Mentor, where a mentor can work with multiple startups, and startups can have multiple mentors. |

| | | | |
|-------------|--------------------------|----------------------|---|
| Startup | Accelerator | Many-to-Many | Represented by <i>Startup_Accelerator</i> , where each startup can join multiple accelerators, and each accelerator can have multiple startups. |
| Startup | Partnership | One-to-Many | Each partnership involves one startup and one partner organization. A startup can have multiple partnerships. |
| Accelerator | Ecosystem_Resource | Implicit/Associative | Implicit relationship where accelerators are part of the ecosystem providing resources to startups. |
| Industry | Startup | One-to-Many | Each startup belongs to one industry, but an industry can have multiple startups. |
| Mentor | Mentor_contact_info | One-to-Many | Each mentor can have multiple contact entries. |
| Accelerator | Accelerator_contact_info | One-to-Many | Each accelerator can have multiple contact entries. |
| Investor | Investor_contact_info | One-to-Many | Each investor can have multiple contact entries. |

ER Diagram Analysis

- Enhanced Relationships:** Associative tables (*Startup_Mentor*) track many-to-many relationships and can include additional details like mentor roles or timestamps.

2. **Attribute Refinement:** Entities like *Investment* and *Accelerator* could benefit from attributes like "Equity_Percentage" (for *Investment*) and "Success_Rate" (for *Accelerator*) to capture critical data insights.
3. **Optional Relationships:** Certain relationships, such as *Startup-Mentor*, are marked as optional to reflect varying startup stages, improving flexibility.

4. Mapping ER Model to Relational Model

Each entity and relationship mapped to a relational schema.

Startup

| Attributes | DataTypes | Constraints |
|----------------|-----------|------------------|
| Startup_ID | int | PK |
| Industry | varchar | NOT NULL |
| Location | varchar | NOT NULL |
| Stage | varchar | NOT NULL |
| Funding_Amount | int | NOT NULL |
| Name | varchar | NOT NULL, UNIQUE |
| Founded_Date | date | NOT NULL, CHECK |
| Employee_Count | int | NOT NULL |

Founder

| Attributes | DataTypes | Constraints |
|------------|-----------|-------------|
| | | |

| | | |
|------------------|---------|-----------------|
| Founder_ID | int | PK |
| fName | varchar | NOT NULL |
| IName | varchar | NOT NULL |
| Role | varchar | NOT NULL |
| Startup_ID | int | FK ref startup |
| LinkedIn_Profile | varchar | NOT NULL,UNIQUE |

Investor

| Attributes | DataTypes | Constraints |
|-----------------------------|-----------|-----------------|
| Investor_id | int | PK |
| Type | varchar | NOT NULL |
| Investment_Stage_Preference | varchar | NOT NULL |
| Name | varchar | NOT NULL,UNIQUE |
| Location | int | NOT NULL |

Investment

| Attributes | DataTypes | Constraints |
|---------------|-----------|-----------------|
| Investment_ID | int | PK |
| Investor_ID | int | FK ref investor |
| Amount | int | NOT NULL |
| Date | date | NOT NULL |
| Stage | varchar | NOT NULL |

Mentor

| Attributes | DataTypes | Constraints |
|------------------|-----------|------------------|
| Mentor_id | int | PK |
| Name | varchar | NOT NULL |
| Expertise | varchar | NOT NULL |
| Affiliation | varchar | NOT NULL |
| LinkedIn_Profile | varchar | NOT NULL, UNIQUE |

Accelerator

| Attributes | DataTypes | Constraints |
|------------------|-----------|------------------|
| Accelerator_ID | int | PK |
| Name | varchar | NOT NULL, UNIQUE |
| Location | varchar | NOT NULL |
| Industry_focus | varchar | NOT NULL |
| Batch_Size | int | NOT NULL |
| Program_Duration | int | NOT NULL |

Partnership

| Attributes | DataTypes | Constraints |
|----------------|-----------|----------------|
| Partnership_ID | int | PK |
| Startup_ID | varchar | FK ref startup |

| | | |
|-------------------------|---------|------------------------------------|
| Partner_Organization_ID | INT | FK ref partnership_organization |
| Type | varchar | NOT NULL |
| Start_Date | date | NOT NULL |
| End_Date | date | NOT_NULL,check |

Ecosystem Resource

| Attributes | DataTypes | Constraints |
|--------------|-----------|---------------------|
| Resource_ID | int | PK |
| Name | varchar | NOT NULL |
| Type | varchar | NOT NULL |
| Provider | varchar | NOT NULL |
| Contact_info | int | NOT NULL, UNIQUE |

Industry

| Attributes | DataTypes | Constraints |
|-------------|-----------|-------------|
| Industry_ID | int | PK |
| Name | varchar | NOT NULL |
| Sector | varchar | NULL |
| Description | text | NOT NULL |

Mentor_Contact_Info

| Attributes | DataTypes | Constraints |
|------------|-----------|--------------|
| Mentor_ID | int | Composite PK |
| Phone_no | int | Composite PK |
| Join_date | date | NOT NULL |

Accelerator_Contact_Info

| Attributes | DataTypes | Constraints |
|----------------|-----------|--------------|
| Accelerator_ID | int | Composite PK |
| Phone_no | int | Composite PK |
| Join_date | date | NOT NULL |

Investor_Contact_Info

| Attributes | DataTypes | Constraints |
|-------------|-----------|--------------|
| Investor_ID | int | Composite PK |
| Phone_no | int | Composite PK |
| Join_date | date | NOT NULL |

Startup_Mentor

| Attribute | Data Type | Constraints |
|-------------|-----------|--|
| Startup_ID | INT | Composite PK, FK (References Startup.Startup_ID) |
| Mentor_ID | INT | Composite PK, FK (References Mentor.Mentor_ID) |
| Date_joined | DATE | NOT NULL |

Startup_Accelerator

Schemas written in format R1(A1,A2,...,An)R1(A1, A2, ..., An)R1(A1,A2,...,An)
with primary keys underlined.

- **R1: Startup** (Startup_ID, Name, Industry, Stage, Founded_Date, Location, Funding_Amount, Employee_Count)
- **R2: Founder** (Founder_ID, fName, lName, Role, LinkedIn_Profile, Startup_ID)
- **R3: Investor** (Investor_ID, Name, Type, Investment_Stage_Preference, Location)
- **R4: Investment** (Investment_ID, Investor_ID, Startup_ID, Amount, Date, Stage)
- **R5: Mentor** (Mentor_ID, Name, Expertise, Affiliation, LinkedIn_Profile)
- **R6: Accelerator** (Accelerator_ID, Name, Location, Industry_Focus, Batch_Size, Program_Duration)
- **R7: Partnership** (Partnership_ID, Startup_ID, Partner_Organization_ID, Type, Start_Date, End_Date)
- **R8: Ecosystem_Resource** (Resource_ID, Name, Type, Provider, Contact_Info)
- **R9: Industry** (Industry_ID, Name, Sector, Description)
- **R10: Mentor_contact_info** (Mentor_ID, phone_no)
- **R11: Accelerator_contact_info** (Accelerator_ID, phone_no)
- **R12: Investor_contact_info** (Investor_ID, phone_no)

- **R13: Startup_Mentor** (Startup_ID, Mentor_ID, Date_joined)
- **R14: Startup_Accelerator** (Startup_ID, Accelerator_ID, Date_joined)

5. Create DDL Scripts

1. Startup Table

```
CREATE TABLE Startup (
    Startup_ID INT PRIMARY KEY,
    Name VARCHAR(255) NOT NULL,
    Industry VARCHAR(100),
    Stage VARCHAR(50),
    Founded_Date DATE,
    Location VARCHAR(100),
    Funding_Amount DECIMAL(15, 2) CHECK (Funding_Amount >= 0),
    Employee_Count INT CHECK (Employee_Count >= 0)
);
```

2. Founder Table

```
CREATE TABLE Founder (
    Founder_ID INT PRIMARY KEY,
    fName VARCHAR(255) NOT NULL,
    lName VARCHAR(255) NOT NULL,
    Role VARCHAR(100),
    LinkedIn_Profile VARCHAR(255),
```

```
Startup_ID INT,  
FOREIGN KEY (Startup_ID) REFERENCES Startup(Startup_ID)  
);
```

3. Investor Table

```
CREATE TABLE Investor (  
Investor_ID INT PRIMARY KEY,  
Name VARCHAR(255) NOT NULL,  
Type VARCHAR(50) NOT NULL,  
Investment_Stage_Preference VARCHAR(50),  
Location VARCHAR(100)  
);
```

4. Investment Table

```
CREATE TABLE Investment (  
Investment_ID INT PRIMARY KEY,  
Investor_ID INT,  
Startup_ID INT,  
Amount DECIMAL(15, 2) CHECK (Amount >= 0),  
Date DATE,  
Stage VARCHAR(50),  
FOREIGN KEY (Investor_ID) REFERENCES Investor(Investor_ID),  
FOREIGN KEY (Startup_ID) REFERENCES Startup(Startup_ID)  
);
```

5. Mentor Table

```
CREATE TABLE Mentor (
```

```

Mentor_ID INT PRIMARY KEY,
Name VARCHAR(255) NOT NULL,
Expertise VARCHAR(100),
Affiliation VARCHAR(100),
LinkedIn_Profile VARCHAR(255)
);

```

6. Accelerator Table

```

CREATE TABLE Accelerator (
    Accelerator_ID INT PRIMARY KEY,
    Name VARCHAR(255) NOT NULL,
    Location VARCHAR(100),
    Industry_Focus VARCHAR(100),
    Batch_Size INT CHECK (Batch_Size > 0),
    Program_Duration INT CHECK (Program_Duration > 0)
);

```

7. Partnership Table

```

CREATE TABLE Partnership (
    Partnership_ID INT PRIMARY KEY,
    Startup_ID INT,
    Partner_Organization_ID INT,
    Type VARCHAR(50),
    Start_Date DATE,
    End_Date DATE CHECK (End_Date >= Start_Date),
    FOREIGN KEY (Startup_ID) REFERENCES Startup(Startup_ID),
    FOREIGN KEY (Partner_Organization_ID) REFERENCES
        Ecosystem_Resource(Resource_ID)
);

```

```
);
```

8. Ecosystem Resource Table

```
CREATE TABLE Ecosystem_Resource (  
    Resource_ID INT PRIMARY KEY,  
    Name VARCHAR(255) NOT NULL,  
    Type VARCHAR(50),  
    Provider VARCHAR(100),  
    Contact_Info VARCHAR(255)  
);
```

9. Industry Table

```
CREATE TABLE Industry (  
    Industry_ID INT PRIMARY KEY,  
    Name VARCHAR(100) NOT NULL,  
    Sector VARCHAR(100),  
    Description TEXT  
);
```

10. Mentor Contact Info Table

```
CREATE TABLE Mentor_Contact_Info (  
    Mentor_ID INT,  
    Phone_No VARCHAR(15),  
    PRIMARY KEY (Mentor_ID, Phone_No),  
    FOREIGN KEY (Mentor_ID) REFERENCES Mentor(Mentor_ID)  
);
```

11. Accelerator Contact Info Table

```
CREATE TABLE Accelerator_Contact_Info (
    Accelerator_ID INT,
    Phone_No VARCHAR(15),
    PRIMARY KEY (Accelerator_ID, Phone_No),
    FOREIGN KEY (Accelerator_ID) REFERENCES Accelerator(Accelerator_ID)
);
```

12. Investor_Contact_Info Table

```
CREATE TABLE Investor_Contact_Info (
    Investor_ID INT,
    Phone_No VARCHAR(15),
    PRIMARY KEY (Investor_ID, Phone_No),
    FOREIGN KEY (Investor_ID) REFERENCES Investor(Investor_ID)
);
```

13. Startup_Mentor Table

```
CREATE TABLE Startup_Mentor (
    Startup_ID INT,
    Mentor_ID INT,
    Date_Joined DATE,
    PRIMARY KEY (Startup_ID, Mentor_ID),
    FOREIGN KEY (Startup_ID) REFERENCES Startup(Startup_ID),
    FOREIGN KEY (Mentor_ID) REFERENCES Mentor(Mentor_ID)
);
```

14. Startup_Accelerator Table

```
CREATE TABLE Startup_Accelerator (
    Startup_ID INT,
    Accelerator_ID INT,
    Date_Joined DATE,
    PRIMARY KEY (Startup_ID, Accelerator_ID),
    FOREIGN KEY (Startup_ID) REFERENCES Startup(Startup_ID),
    FOREIGN KEY (Accelerator_ID) REFERENCES Accelerator(Accelerator_ID)
);
```

Chapter 3: Normalization of Database

1. Normalization and Schema Refinement

Original Design of Database

1. Startup

- **Schema:** Startup(Startup_ID, Name, Industry, Stage, Founded_Date, Location, Funding_Amount, Employee_Count)

- **Primary Key:** Startup_ID
- **Description:** The Startup table stores details about individual startups, including their industry, stage, funding, and location.

2. Founder

- **Schema:** Founder(Founder_ID, fName, lName, Role, LinkedIn_Profile, Startup_ID)
- **Primary Key:** Founder_ID
- **Foreign Key:** Startup_ID references Startup(Startup_ID)
- **Description:** The Founder table keeps records of founders associated with each startup, linking them to the Startup table.

3. Investor

- **Schema:** Investor(Investor_ID, Name, Type, Investment_Stage_Preference, Location)
- **Primary Key:** Investor_ID
- **Description:** The Investor table contains information on investors, their types (e.g., angel investor, venture capital), preferred investment stages, and location.

4. Investment

- **Schema:** Investment(Investment_ID, Investor_ID, Startup_ID, Amount, Date, Stage)
- **Primary Key:** Investment_ID
- **Foreign Keys:**
 - Investor_ID references Investor(Investor_ID)
 - Startup_ID references Startup(Startup_ID)
- **Description:** The Investment table records investment transactions between investors and startups, including the amount, date, and stage of investment.

5. Mentor

- **Schema:** Mentor(Mentor_ID, Name, Expertise, Affiliation, LinkedIn_Profile)
- **Primary Key:** Mentor_ID

- **Description:** This table holds information about mentors, their expertise, affiliations, and LinkedIn profiles.

6. Accelerator

- **Schema:** Accelerator(Accelerator_ID, Name, Location, Industry_Focus, Batch_Size, Program_Duration)
- **Primary Key:** Accelerator_ID
- **Description:** The Accelerator table contains details about accelerators and incubators, including their industry focus, batch size, and program duration.

7. Partnership

- **Schema:** Partnership(Partnership_ID, Startup_ID, Partner_Organization_ID, Type, Start_Date, End_Date)
- **Primary Key:** Partnership_ID
- **Foreign Keys:**
 - Startup_ID references Startup(Startup_ID)
 - Partner_Organization_ID references Ecosystem_Resource(Resource_ID)
- **Description:** The Partnership table documents partnerships between startups and external ecosystem resources, specifying the type of partnership, start and end dates.

8. Ecosystem_Resource

- **Schema:** Ecosystem_Resource(Resource_ID, Name, Type, Provider, Contact_Info)
- **Primary Key:** Resource_ID
- **Description:** This table stores information on various resources available in the ecosystem, such as funding, legal, or marketing support, with contact details for each provider.

9. Industry

- **Schema:** Industry(Industry_ID, Name, Sector, Description)
- **Primary Key:** Industry_ID

- **Description:** The Industry table categorizes industries, listing their names, sectors, and descriptions.

10. Mentor_Contact_Info

- **Schema:** Mentor_Contact_Info(Mentor_ID, Phone_No)
- **Primary Key:** (Mentor_ID, Phone_No)
- **Foreign Key:** Mentor_ID references Mentor(Mentor_ID)
- **Description:** This table records multiple contact numbers for each mentor.

11. Accelerator_Contact_Info

- **Schema:** Accelerator_Contact_Info(Accelerator_ID, Phone_No)
- **Primary Key:** (Accelerator_ID, Phone_No)
- **Foreign Key:** Accelerator_ID references Accelerator(Accelerator_ID)
- **Description:** This table allows for multiple contact numbers for each accelerator.

12. Investor_Contact_Info

- **Schema:** Investor_Contact_Info(Investor_ID, Phone_No)
- **Primary Key:** (Investor_ID, Phone_No)
- **Foreign Key:** Investor_ID references Investor(Investor_ID)
- **Description:** This table holds contact numbers for each investor, enabling multiple contacts per investor.

13. Startup_Mentor

- **Schema:** Startup_Mentor(Startup_ID, Mentor_ID, Date_Joined)
- **Primary Key:** (Startup_ID, Mentor_ID)
- **Foreign Keys:**
 - Startup_ID references Startup(Startup_ID)
 - Mentor_ID references Mentor(Mentor_ID)
- **Description:** This join table represents a many-to-many relationship between startups and mentors, with the date each mentor joined the startup.

14. Startup_Accelerator

- **Schema:** Startup_Accelerator(Startup_ID, Accelerator_ID, Date_Joined)
- **Primary Key:** (Startup_ID, Accelerator_ID)
- **Foreign Keys:**
 - Startup_ID references Startup(Startup_ID)
 - Accelerator_ID references Accelerator(Accelerator_ID)
- **Description:** This table represents a many-to-many relationship between startups and accelerators, tracking when each startup joined an accelerator program.

Dependency Analysis

■ Identification of primary keys, foreign keys, and functional dependencies.

1. Startup Table

- **Primary Key:** Startup_ID
- **Functional Dependencies:**
 - $\text{Startup_ID} \rightarrow (\text{Name}, \text{Industry}, \text{Stage}, \text{Founded_Date}, \text{Location}, \text{Funding_Amount}, \text{Employee_Count})$
 - Explanation: Each Startup_ID uniquely determines all other attributes in the Startup table, such as Name, Industry, and Funding_Amount.
- **Foreign Keys:** None

2. Founder Table

- **Primary Key:** Founder_ID
- **Foreign Key:** Startup_ID references Startup(Startup_ID)
- **Functional Dependencies:**
 - $\text{Founder_ID} \rightarrow (\text{fName}, \text{lName}, \text{Role}, \text{LinkedIn_Profile}, \text{Startup_ID})$
 - Explanation: Each founder is uniquely identified by Founder_ID, which determines their first name, last name, role, LinkedIn profile, and associated startup (Startup_ID).

3. Investor Table

- **Primary Key:** Investor_ID
- **Functional Dependencies:**
 - Investor_ID → (Name, Type, Investment_Stage_Preference, Location)
 - Explanation: Each Investor_ID uniquely determines attributes like Name, Type, and Location.
- **Foreign Keys:** None

4. Investment Table

- **Primary Key:** Investment_ID
- **Foreign Keys:**
 - Investor_ID references Investor(Investor_ID)
 - Startup_ID references Startup(Startup_ID)
- **Functional Dependencies:**
 - Investment_ID → (Investor_ID, Startup_ID, Amount, Date, Stage)
 - Explanation: Each investment is uniquely identified by Investment_ID, determining the associated Investor_ID, Startup_ID, investment Amount, date, and stage.

5. Mentor Table

- **Primary Key:** Mentor_ID
- **Functional Dependencies:**
 - Mentor_ID → (Name, Expertise, Affiliation, LinkedIn_Profile)
 - Explanation: Each mentor is uniquely identified by Mentor_ID, which determines all other mentor attributes.
- **Foreign Keys:** None

6. Accelerator Table

- **Primary Key:** Accelerator_ID

- **Functional Dependencies:**
 - Accelerator_ID → (Name, Location, Industry_Focus, Batch_Size, Program_Duration)
 - Explanation: Each Accelerator_ID uniquely determines attributes like Name, Location, Industry_Focus, etc.
- **Foreign Keys:** None

7. Partnership Table

- **Primary Key:** Partnership_ID
- **Foreign Keys:**
 - Startup_ID references Startup(Startup_ID)
 - Partner_Organization_ID references Ecosystem_Resource(Resource_ID)
- **Functional Dependencies:**
 - Partnership_ID → (Startup_ID, Partner_Organization_ID, Type, Start_Date, End_Date)
 - Explanation: Each partnership is uniquely identified by Partnership_ID, determining the associated startup and partner organization, as well as the type, start, and end dates.

8. Ecosystem Resource Table

- **Primary Key:** Resource_ID
- **Functional Dependencies:**
 - Resource_ID → (Name, Type, Provider, Contact_Info)
 - Explanation: Each ecosystem resource is uniquely identified by Resource_ID, determining attributes like Name, Type, and Provider.
- **Foreign Keys:** None

9. Industry Table

- **Primary Key:** Industry_ID
- **Functional Dependencies:**

- Industry_ID → (Name, Sector, Description)
- Explanation: Each industry is uniquely identified by Industry_ID, which determines attributes such as Name, Sector, and Description.
- **Foreign Keys:** None

10. Mentor Contact Info Table

- **Primary Key:** (Mentor_ID, Phone_No)
- **Foreign Key:** Mentor_ID references Mentor(Mentor_ID)
- **Functional Dependencies:**
 - (Mentor_ID, Phone_No) → (Mentor_ID, Phone_No)
 - Explanation: Mentor_ID and Phone_No together form a composite primary key, identifying each unique phone number associated with a mentor.

11. Accelerator Contact Info Table

- **Primary Key:** (Accelerator_ID, Phone_No)
- **Foreign Key:** Accelerator_ID references Accelerator(Accelerator_ID)
- **Functional Dependencies:**
 - (Accelerator_ID, Phone_No) → (Accelerator_ID, Phone_No)
 - Explanation: Accelerator_ID and Phone_No together form a composite primary key, uniquely identifying each phone number associated with an accelerator.

12. Investor Contact Info Table

- **Primary Key:** (Investor_ID, Phone_No)
- **Foreign Key:** Investor_ID references Investor(Investor_ID)
- **Functional Dependencies:**
 - (Investor_ID, Phone_No) → (Investor_ID, Phone_No)
 - Explanation: Investor_ID and Phone_No together form a composite primary key, uniquely identifying each phone number associated with an investor.

13. Startup Mentor Table

- **Primary Key:** (Startup_ID, Mentor_ID)

- **Foreign Keys:**
 - Startup_ID references Startup(Startup_ID)
 - Mentor_ID references Mentor(Mentor_ID)
- **Functional Dependencies:**
 - $(\text{Startup_ID}, \text{Mentor_ID}) \rightarrow (\text{Startup_ID}, \text{Mentor_ID}, \text{Date_Joined})$
 - Explanation: The combination of Startup_ID and Mentor_ID uniquely determines the mentor's joining date for each startup.

14. Startup_Accelerator Table

- **Primary Key:** (Startup_ID, Accelerator_ID)
- **Foreign Keys:**
 - Startup_ID references Startup(Startup_ID)
 - Accelerator_ID references Accelerator(Accelerator_ID)

2. Redundancy and Anomalies Documentation

Redundancies

| Schema | Table | Columns with Redundancy | Type of Redundancy | Description |
|--------|-------------|-------------------------|-----------------------|---|
| SE | Founder | Startup_ID | Repetition | Multiple founders can reference the same Startup_ID, repeating information about the startup. |
| SE | Investment | Investor_ID, Startup_ID | Partial Dependency | The Investor_ID and Startup_ID might be repeated for each investment transaction. |
| SE | Accelerator | Location | Transitive Dependency | Accelerators in the same location may |

| | | | | |
|----|-----------------------|--|------------|---|
| | | | | repeatedly list the same location. |
| SE | Partnership | Startup_ID, Partner_Organization_ID | Repetition | Partnerships may involve multiple instances with the same Startup_ID or Partner_Organization_ID |
| SE | Ecosystem_Resource | Contact_Info | Repetition | Contact information is limited to one entry, potentially causing duplication if multiple contacts are required. |
| SE | Mentor_contact_info | Mentor_ID, phone_no | Repetition | A mentor may have multiple phone numbers, causing repetition of Mentor_ID |
| SE | Investor_contact_info | Investor_ID, phone_no | Repetition | Investors with multiple contacts will have repeating Investor_ID entries. |
| SE | Startup_Mentor | Startup_ID, Mentor_ID | Repetition | Mentors associated with multiple startups cause Mentor_ID And Startup_ID repetition. |
| SE | Startup_Accelerator | Startup_ID, Accelerator_ID | Repetition | The same startup may be linked to multiple accelerators, causing repetition of Startup_ID |

Anomalies

| Table | Type of Anomaly | Description |
|---------|-----------------|-------------|
| Founder | Insert | |

| | | |
|---------------------|--------|---|
| | | Adding a new founder requires associating them with an existing Startup_ID , even if the startup has not yet been added. |
| Investment | Delete | Deleting a single investment can cause the loss of historical funding data tied to Investor_ID And Startup_ID |
| Accelerator | Update | Updating Location for one accelerator does not automatically update similar locations for other accelerators in the same area |
| Partnership | Insert | A new partnership may be difficult to add if the Partner_Organization_ID does not exist in Ecosystem_Resource |
| Ecosystem_Resource | Delete | Removing a resource could delete key data needed by Partnership and cause loss of partnerships. |
| Mentor_contact_info | Insert | Adding multiple phone numbers for the same mentor requires duplicating Mentor_ID |
| Startup_Mentor | Delete | Removing a relationship between a mentor and startup |

| | | |
|---------------------|--------|--|
| | | could result in a loss of mentorship history. |
| Startup_Accelerator | Update | Changing Accelerator_ID for a startup's history would require updating all related entries manually. |

3. Normalization Process

1NF – Enforcing scalar values.

1. Startup Table

The Startup table already meets 1NF requirements, as each attribute (e.g., Startup_ID, Name, Industry, etc.) holds only a single value per row. No adjustments needed.

2. Founder Table

This table also meets 1NF, as each attribute holds only one value per record (e.g., Founder_ID, fName, lName, etc.).

3. Investor Table

The Investor table is already in 1NF, with attributes like Investor_ID, Name, Type, and Location containing atomic values.

4. Investment Table

The Investment table adheres to 1NF, with attributes like Investment_ID, Investor_ID, Startup_ID, and Amount each containing scalar values.

5. Mentor Table

The Mentor table is in 1NF with single-valued attributes like Mentor_ID, Name, Expertise, and Affiliation.

6. Mentor_Contact_Info Table

Initially, Mentor could have had multiple phone numbers (a multi-valued attribute). By creating a separate Mentor_Contact_Info table, we achieve 1NF by storing each phone number as a separate row.

7. Accelerator_Contact_Info Table

Similar to Mentor, the Accelerator entity could have multiple contact numbers. This was addressed by separating contact information into the Accelerator_Contact_Info table, thus maintaining 1NF.

8. Investor_Contact_Info Table

To ensure 1NF, the Investor table's contact numbers were moved into a separate Investor_Contact_Info table, allowing each contact number to be recorded in a single-valued format.

All other tables (e.g., Accelerator, Partnership, Ecosystem_Resource, Startup_Mentor, and Startup_Accelerator) already adhere to 1NF, as each field holds atomic values.

2NF – Eliminating partial dependencies.

1. Tables with Composite Primary Keys:

- **Startup_Mentor** and **Startup_Accelerator** tables both have composite primary keys, with (Startup_ID, Mentor_ID) and (Startup_ID, Accelerator_ID), respectively. In these tables, all non-key attributes should depend on the entire composite primary key.
- **No Partial Dependencies Identified:** Each non-key attribute in these tables, such as Date_Joined, depends on the entire composite primary key, so they already meet 2NF requirements.

2. Other Tables:

- **Single-Attribute Primary Keys:** Tables with single-attribute primary keys (e.g., Startup, Founder, Investor, Mentor, etc.) automatically meet 2NF requirements because there are no composite primary keys, meaning no partial dependencies can exist.
- **Dependency Structure:** Each non-key attribute depends entirely on the primary key in tables like Startup, Investment, and Mentor, so no additional changes are necessary for 2NF compliance.

Redundancy Analysis for 2NF

Startup Table

- **Redundancy:** The Location attribute in the Startup table might be repeated for multiple startups situated in the same location.
- **Description:** Multiple startups may be located in the same city, which leads to repeated entries of the Location attribute. This redundancy does not violate 2NF, as each non-key attribute depends on the primary key (Startup_ID), but it can be further optimized in 3NF.

Accelerator Table

- **Redundancy:** The Location attribute might also be repeated for multiple accelerators in the same city or region.
- **Description:** Just as with the Startup table, having the Location field in the Accelerator table can lead to data duplication if multiple accelerators are located in the same place. This redundancy does not violate 2NF but will be addressed when moving to 3NF.

Investment Table

- **Redundancy:** The Stage attribute, which indicates the investment stage (e.g., Seed, Series A), might be repeated for each investment that falls under the same stage.

- **Description:** Investment stages are often shared across multiple investments, leading to redundancy in the Stage attribute. This does not violate 2NF but could be further normalized by creating a separate Investment_Stage table in 3NF to avoid repetition.

Mentor Contact Info, Accelerator Contact Info, and Investor Contact Info Tables

- **Redundancy:** In each of these tables, the entity IDs (Mentor_ID, Accelerator_ID, and Investor_ID) are repeated for every unique phone number.
- **Description:** Each mentor, accelerator, or investor may have multiple phone numbers, resulting in repeated entries for the entity ID in these contact information tables. While this structure adheres to 2NF, it could be further refined in 3NF by using unique identifiers for each contact entry.

Partnership Table

- **Redundancy:** The Type attribute, which specifies the partnership type (e.g., Strategic, R&D), may appear multiple times if similar partnerships are formed across different startups.
- **Description:** Repetition of the Type attribute can occur if multiple partnerships of the same type are recorded for different startups. This redundancy can be minimized by creating a Partnership_Type table in 3NF to store unique partnership types.

Investor Table

- **Redundancy:** The Location attribute of investors may be repeated if multiple investors are from the same location.
- **Description:** The Location attribute, while not violating 2NF, could lead to data duplication if multiple investors reside in the same city or region. This redundancy could be removed by creating a Location table and referencing it in the Investor table in 3NF.

3NF/BCNF – Removing transitive dependencies.

Startup Table

- **Transitive Dependency:** Location could be a transitive dependency if multiple startups share the same location.
- **Solution:** Create a separate Location table to store unique locations and reference it in the Startup table.
- **New Structure:**
 - **Location Table:** Location(Location_ID, City, State, Country)
 - **Startup Table (updated):** Startup(Startup_ID, Name, Industry, Stage, Founded_Date, Location_ID, Funding_Amount, Employee_Count)
 - **Dependencies:**
 - Location_ID → (City, State, Country) in the Location table
 - Startup_ID → (Name, Industry, Stage, Founded_Date, Location_ID, Funding_Amount, Employee_Count) in the updated Startup table

Accelerator Table

- **Transitive Dependency:** Location is a transitive dependency here as well, potentially duplicated across multiple records.
- **Solution:** Use the new Location table and reference Location_ID in the Accelerator table.
- **New Structure:**
 - **Accelerator Table (updated):** Accelerator(Accelerator_ID, Name, Location_ID, Industry_Focus, Batch_Size, Program_Duration)

Investor Table

- **Transitive Dependency:** The Location attribute can also be duplicated in the Investor table.
- **Solution:** Use Location_ID in Investor to reference the Location table.
- **New Structure:**
 - **Investor Table (updated):** Investor(Investor_ID, Name, Type, Investment_Stage_Preference, Location_ID)

Investment Table

- **Transitive Dependency:** Stage is a transitive dependency if multiple investments share the same stage (e.g., Seed, Series A).
- **Solution:** Create an Investment_Stage table and reference it in the Investment table.
- **New Structure:**
 - **Investment_Stage Table:** Investment_Stage(Stage_ID, Stage_Name)
 - **Investment Table** (updated): Investment(Investment_ID, Investor_ID, Startup_ID, Amount, Date, Stage_ID)
- **Dependencies:**
 - Stage_ID → Stage_Name in the Investment_Stage table
 - Investment_ID → (Investor_ID, Startup_ID, Amount, Date, Stage_ID) in the updated Investment table

Partnership Table

- **Transitive Dependency:** Type is a transitive dependency if multiple partnerships share the same type (e.g., Strategic, R&D).
- **Solution:** Create a Partnership_Type table and reference it in the Partnership table.
- **New Structure:**
 - **Partnership_Type Table:** Partnership_Type(Type_ID, Type_Name)
 - **Partnership Table** (updated): Partnership(Partnership_ID, Startup_ID, Partner_Organization_ID, Type_ID, Start_Date, End_Date)
- **Dependencies:**
 - Type_ID → Type_Name in the Partnership_Type table
 - Partnership_ID → (Startup_ID, Partner_Organization_ID, Type_ID, Start_Date, End_Date) in the updated Partnership table

Chapter 4: Implementation of Database

1. Revised DDL Scripts

1. Startup Table

```
CREATE TABLE Startup (
    Startup_ID INT PRIMARY KEY,
    Name VARCHAR(255) NOT NULL,
    Industry VARCHAR(100),
    Stage VARCHAR(50),
    Founded_Date DATE,
    Location VARCHAR(100),
    Funding_Amount DECIMAL(15, 2) CHECK (Funding_Amount >= 0),
    Employee_Count INT CHECK (Employee_Count >= 0)
);
```

2. Founder Table

```
CREATE TABLE Founder (
    Founder_ID INT PRIMARY KEY,
    fName VARCHAR(255) NOT NULL,
    lName VARCHAR(255) NOT NULL,
    Role VARCHAR(100),
    LinkedIn_Profile VARCHAR(255),
    Startup_ID INT,
    FOREIGN KEY (Startup_ID) REFERENCES Startup(Startup_ID)
);
```

3. Investor Table

```
CREATE TABLE Investor (
    Investor_ID INT PRIMARY KEY,
    Name VARCHAR(255) NOT NULL,
    Type VARCHAR(50) NOT NULL,
    Investment_Stage_Preference VARCHAR(50),
    Location VARCHAR(100)
);
```

4. Investment Table

```
CREATE TABLE Investment (
    Investment_ID INT PRIMARY KEY,
    Investor_ID INT,
    Startup_ID INT,
    Amount DECIMAL(15, 2) CHECK (Amount >= 0),
```

```

Date DATE,
Stage VARCHAR(50),
FOREIGN KEY (Investor_ID) REFERENCES Investor(Investor_ID),
FOREIGN KEY (Startup_ID) REFERENCES Startup(Startup_ID)
);

```

5. Mentor Table

```

CREATE TABLE Mentor (
    Mentor_ID INT PRIMARY KEY,
    Name VARCHAR(255) NOT NULL,
    Expertise VARCHAR(100),
    Affiliation VARCHAR(100),
    LinkedIn_Profile VARCHAR(255)
);

```

6. Accelerator Table

```

CREATE TABLE Accelerator (
    Accelerator_ID INT PRIMARY KEY,
    Name VARCHAR(255) NOT NULL,
    Location VARCHAR(100),
    Industry_Focus VARCHAR(100),
    Batch_Size INT CHECK (Batch_Size > 0),
    Program_Duration INT CHECK (Program_Duration > 0)
);

```

7. Partnership Table

```

CREATE TABLE Partnership (

```

```

Partnership_ID INT PRIMARY KEY,
Startup_ID INT,
Partner_Organization_ID INT,
Type VARCHAR(50),
Start_Date DATE,
End_Date DATE CHECK (End_Date >= Start_Date),
FOREIGN KEY (Startup_ID) REFERENCES Startup(Startup_ID),
FOREIGN KEY (Partner_Organization_ID) REFERENCES
    Ecosystem_Resource(Resource_ID)
);

```

8. Ecosystem Resource Table

```

CREATE TABLE Ecosystem_Resource (
    Resource_ID INT PRIMARY KEY,
    Name VARCHAR(255) NOT NULL,
    Type VARCHAR(50),
    Provider VARCHAR(100),
    Contact_Info VARCHAR(255)
);

```

9. Industry Table

```

CREATE TABLE Industry (
    Industry_ID INT PRIMARY KEY,
    Name VARCHAR(100) NOT NULL,
    Sector VARCHAR(100),
    Description TEXT
);

```

10. Mentor_Contact_Info Table

```
CREATE TABLE Mentor_Contact_Info (
    Mentor_ID INT,
    Phone_No VARCHAR(15),
    PRIMARY KEY (Mentor_ID, Phone_No),
    FOREIGN KEY (Mentor_ID) REFERENCES Mentor(Mentor_ID)
);
```

11. Accelerator_Contact_Info Table

```
CREATE TABLE Accelerator_Contact_Info (
    Accelerator_ID INT,
    Phone_No VARCHAR(15),
    PRIMARY KEY (Accelerator_ID, Phone_No),
    FOREIGN KEY (Accelerator_ID) REFERENCES Accelerator(Accelerator_ID)
);
```

12. Investor_Contact_Info Table

```
CREATE TABLE Investor_Contact_Info (
    Investor_ID INT,
    Phone_No VARCHAR(15),
    PRIMARY KEY (Investor_ID, Phone_No),
    FOREIGN KEY (Investor_ID) REFERENCES Investor(Investor_ID)
);
```

13. Startup_Mentor Table

```
CREATE TABLE Startup_Mentor (
    Startup_ID INT,
```

```
Mentor_ID INT,  
Date_Joined DATE,  
PRIMARY KEY (Startup_ID, Mentor_ID),  
FOREIGN KEY (Startup_ID) REFERENCES Startup(Startup_ID),  
FOREIGN KEY (Mentor_ID) REFERENCES Mentor(Mentor_ID)  
);
```

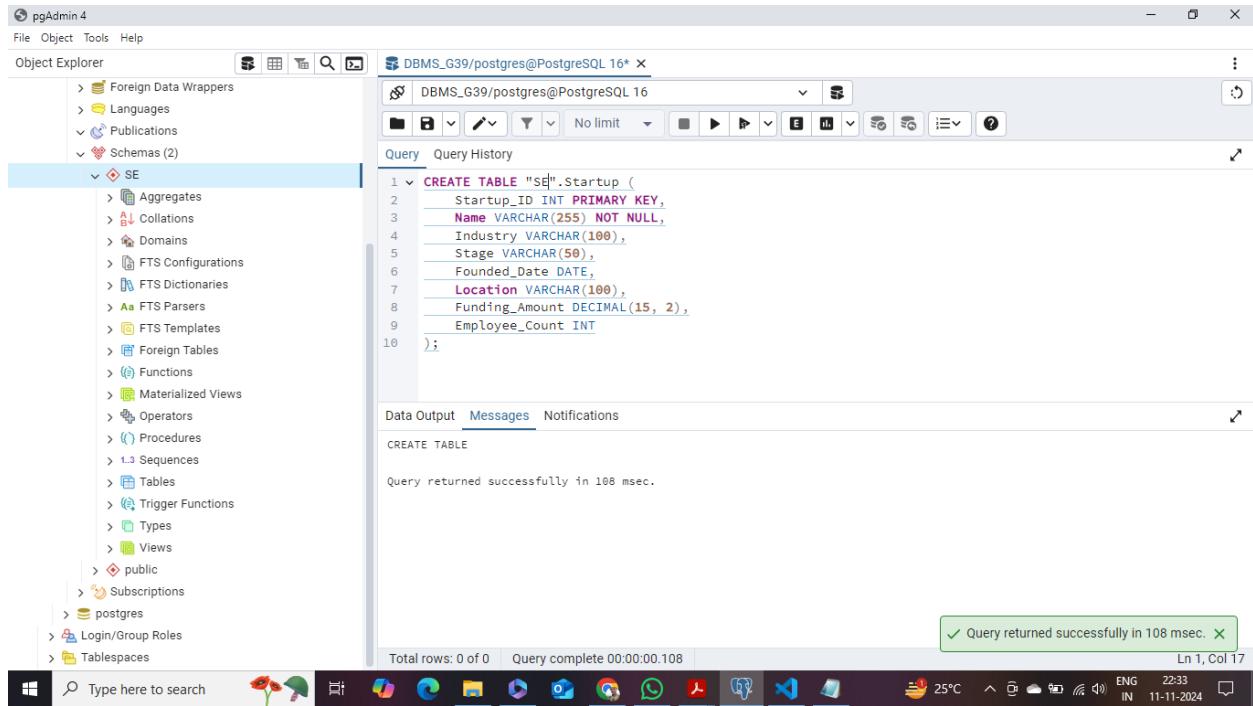
14. Startup Accelerator Table

```
CREATE TABLE Startup_Accelerator (  
    Startup_ID INT,  
    Accelerator_ID INT,  
    Date_Joined DATE,  
    PRIMARY KEY (Startup_ID, Accelerator_ID),  
    FOREIGN KEY (Startup_ID) REFERENCES Startup(Startup_ID),  
    FOREIGN KEY (Accelerator_ID) REFERENCES Accelerator(Accelerator_ID)  
);
```

2. Database Population

CREATE Table

Startup Table



The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying the schema structure under the 'SE' schema. The right pane is the Query Editor, showing the SQL code for creating the 'Startup' table:

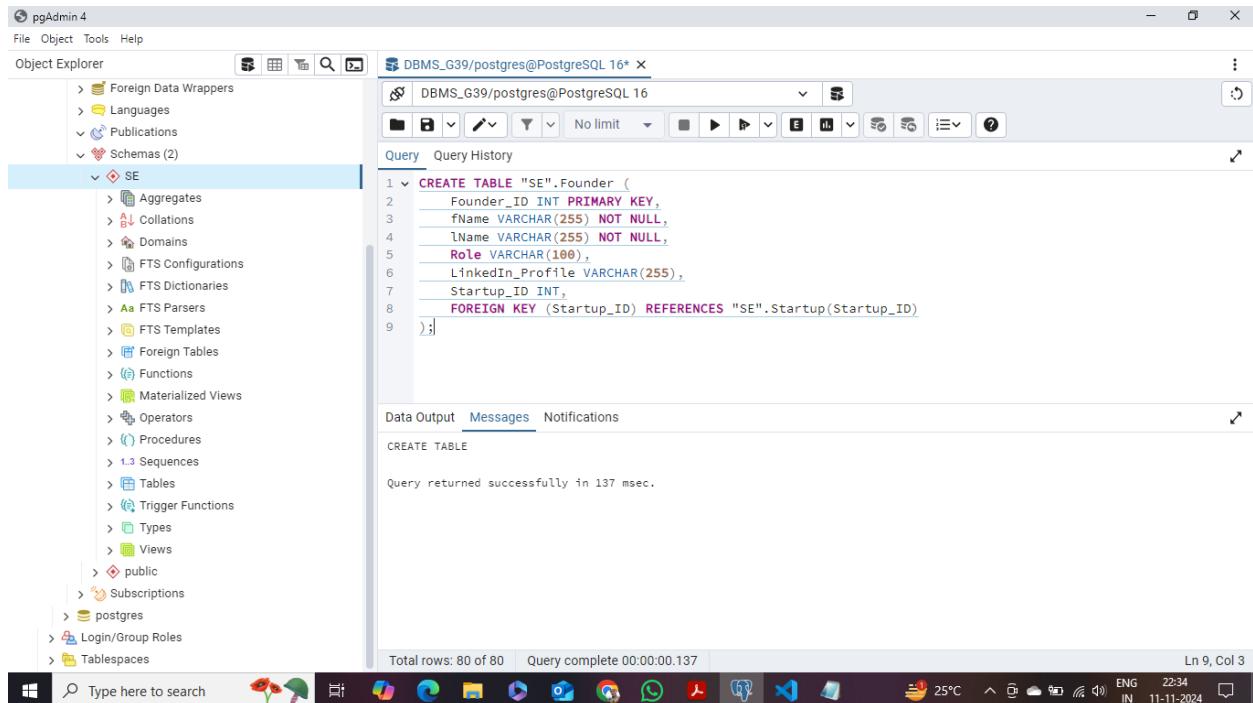
```

1 v CREATE TABLE "SE".Startup (
2   Startup_ID INT PRIMARY KEY,
3   Name VARCHAR(255) NOT NULL,
4   Industry VARCHAR(100),
5   Stage VARCHAR(50),
6   Founded_Date DATE,
7   Location VARCHAR(100),
8   Funding_Amount DECIMAL(15, 2),
9   Employee_Count INT
10 );

```

The status bar at the bottom indicates 'Query returned successfully in 108 msec.' and 'Ln 1, Col 17'.

Founder Table



The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying the schema structure under the 'SE' schema. The right pane is the Query Editor, showing the SQL code for creating the 'Founder' table:

```

1 v CREATE TABLE "SE".Founder (
2   Founder_ID INT PRIMARY KEY,
3   fName VARCHAR(255) NOT NULL,
4   lName VARCHAR(255) NOT NULL,
5   Role VARCHAR(100),
6   LinkedIn_Profile VARCHAR(255),
7   Startup_ID INT,
8   FOREIGN KEY (Startup_ID) REFERENCES "SE".Startup(Startup_ID)
9 );

```

The status bar at the bottom indicates 'Query returned successfully in 137 msec.' and 'Ln 9, Col 3'.

Investor Table

The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying the schema 'SE' which contains various database objects like Aggregates, Collations, Domains, FTS Configurations, etc. The right pane is the Query Editor, showing the SQL code for creating the 'Investor' table:

```

1 v CREATE TABLE "SE".Investor (
2   Investor_ID INT PRIMARY KEY,
3   Name VARCHAR(255) NOT NULL,
4   Type VARCHAR(50),
5   Investment_Stage_Preference VARCHAR(50),
6   Location VARCHAR(100)
7 );

```

The status bar at the bottom indicates 'Total rows: 80 of 80' and 'Query complete 00:00:00.075'. A message box in the bottom right corner says 'Query returned successfully in 75 msec.' with 'Ln 1, Col 17'.

Investment Table

The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying the schema 'SE' which contains various database objects like Aggregates, Collations, Domains, FTS Configurations, etc. The right pane is the Query Editor, showing the SQL code for creating the 'Investment' table:

```

1 v CREATE TABLE "SE".Investment (
2   Investment_ID INT PRIMARY KEY,
3   Investor_ID INT,
4   Startup_ID INT,
5   Amount DECIMAL(15, 2),
6   Date DATE,
7   Stage VARCHAR(50),
8   FOREIGN KEY (Investor_ID) REFERENCES "SE".Investor(Investor_ID),
9   FOREIGN KEY (Startup_ID) REFERENCES "SE".Startup(Startup_ID)
10 );

```

The status bar at the bottom indicates 'Total rows: 80 of 80' and 'Query complete 00:00:00.072'. A message box in the bottom right corner says 'Query returned successfully in 72 msec.' with 'Ln 9, Col 44'.

Mentor Table

The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying the schema structure under the 'SE' schema. The right pane is the Query Editor, showing the SQL code for creating the 'Mentor' table:

```

1 v CREATE TABLE "SE".Mentor (
2   Mentor_ID INT PRIMARY KEY,
3   Name VARCHAR(255) NOT NULL,
4   Expertise VARCHAR(100),
5   Affiliation VARCHAR(100),
6   LinkedIn_Profile VARCHAR(255)
7 );

```

The status bar at the bottom indicates 'Total rows: 80 of 80' and 'Query complete 00:00:00.074'. A green message box in the bottom right corner says 'Query returned successfully in 74 msec.' with 'Ln 5, Col 30'.

Accelerator Table

The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying the schema structure under the 'SE' schema. The right pane is the Query Editor, showing the SQL code for creating the 'Accelerator' table:

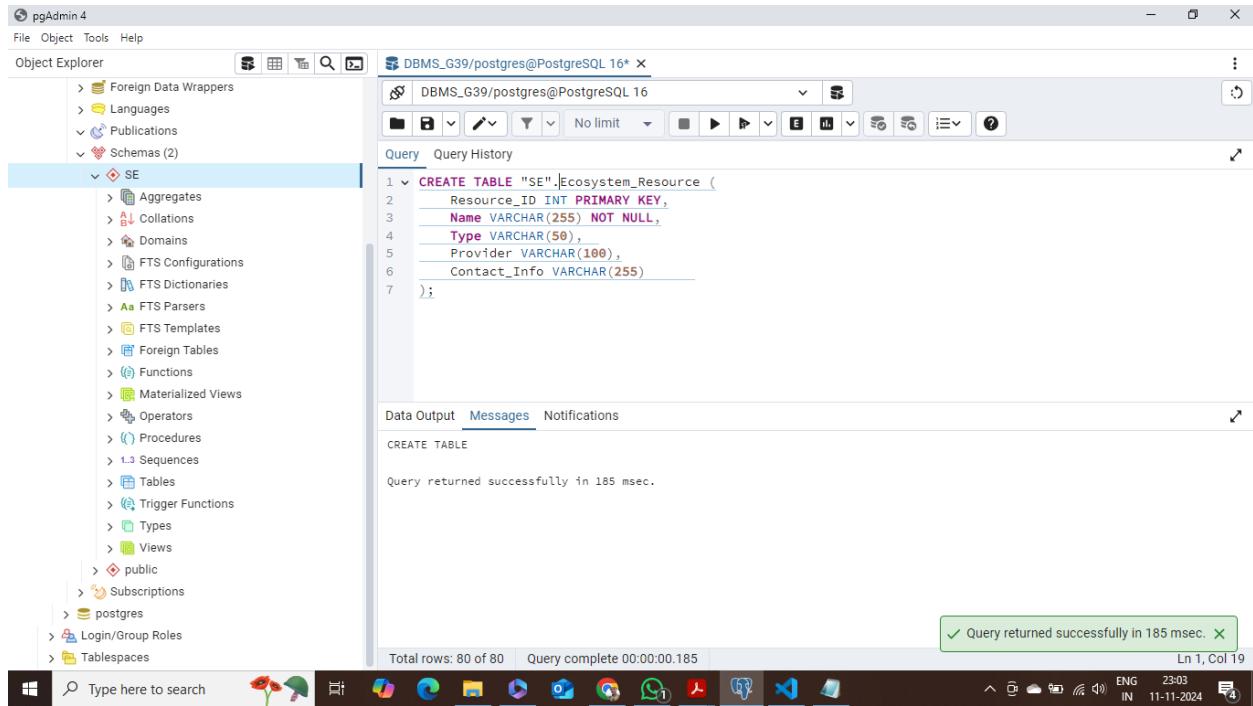
```

1 v CREATE TABLE "SE".Accelerator (
2   Accelerator_ID INT PRIMARY KEY,
3   Name VARCHAR(255) NOT NULL,
4   Location VARCHAR(100),
5   Industry_Focus VARCHAR(100),
6   Batch_Size INT,
7   Program_Duration INT
8 );

```

The status bar at the bottom indicates 'Total rows: 80 of 80' and 'Query complete 00:00:00.129'. A green message box in the bottom right corner says 'Query returned successfully in 129 msec.' with 'Ln 7, Col 26'.

Ecosystem_Resource Table



The screenshot shows the pgAdmin 4 interface with the following details:

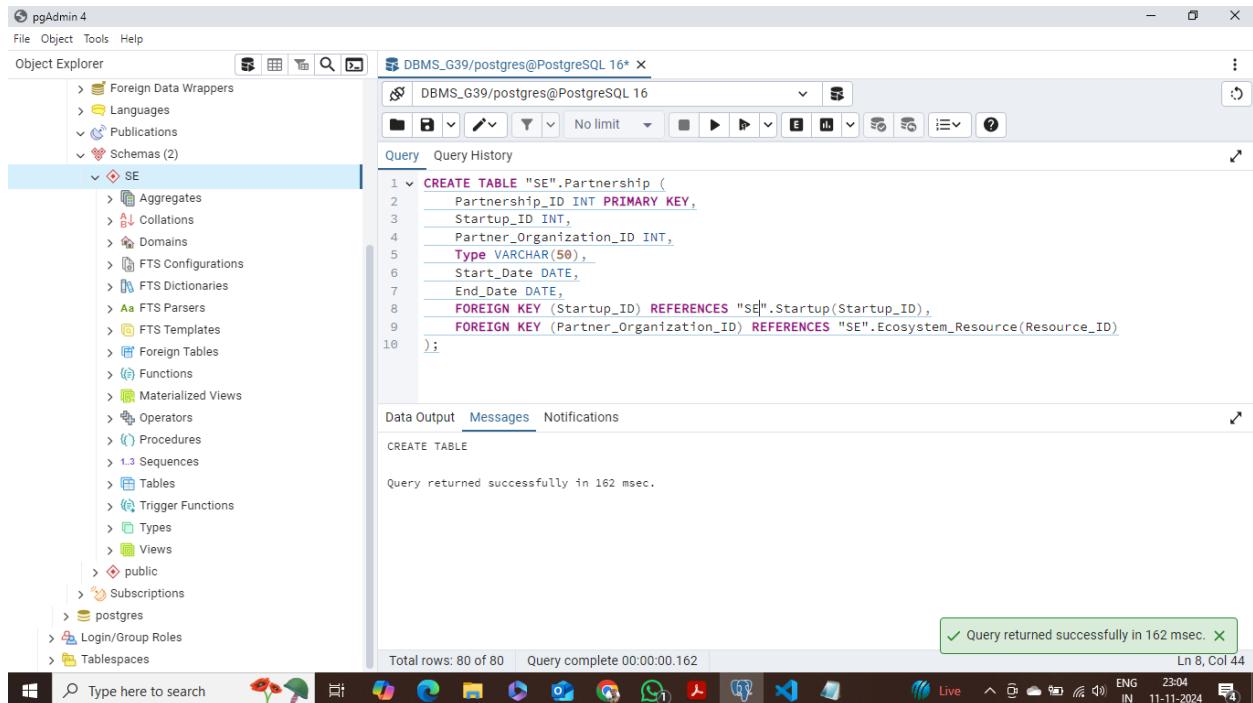
- File Bar:** File, Object, Tools, Help.
- Object Explorer:** Foreign Data Wrappers, Languages, Publications, Schemas (2), SE (selected), Aggregates, Collations, Domains, FTS Configurations, FTS Dictionaries, FTS Parsers, FTS Templates, Foreign Tables, Functions, Materialized Views, Operators, Procedures, Sequences, Tables, Trigger Functions, Types, Views, public, Subscriptions, postgres, Login/Group Roles, Tablespaces.
- Query Editor:** DBMS_G39/postgres@PostgreSQL 16*
- SQL Query:**

```

1 v CREATE TABLE "SE".Ecosystem_Resource (
2   Resource_ID INT PRIMARY KEY,
3   Name VARCHAR(255) NOT NULL,
4   Type VARCHAR(50),
5   Provider VARCHAR(100),
6   Contact_Info VARCHAR(255)
7 );

```
- Data Output:** CREATE TABLE
- Messages:** Query returned successfully in 185 msec.
- Notifications:**
- Status Bar:** Total rows: 80 of 80, Query complete 00:00:00.185, Ln 1, Col 19.
- System Bar:** Windows Start, Task View, File Explorer, Edge, File, Settings, Taskbar icons, Live, ENG IN 23:03 11-11-2024.

Partnership Table



The screenshot shows the pgAdmin 4 interface with the following details:

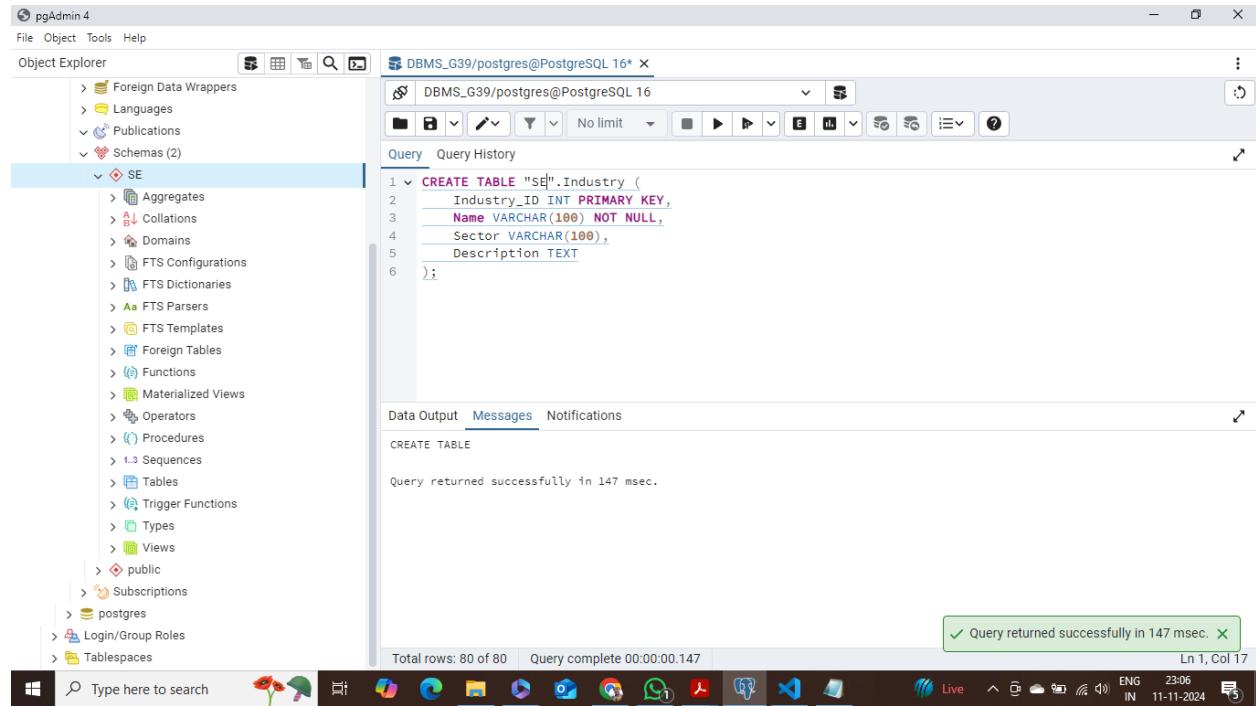
- File Bar:** File, Object, Tools, Help.
- Object Explorer:** Foreign Data Wrappers, Languages, Publications, Schemas (2), SE (selected), Aggregates, Collations, Domains, FTS Configurations, FTS Dictionaries, FTS Parsers, FTS Templates, Foreign Tables, Functions, Materialized Views, Operators, Procedures, Sequences, Tables, Trigger Functions, Types, Views, public, Subscriptions, postgres, Login/Group Roles, Tablespaces.
- Query Editor:** DBMS_G39/postgres@PostgreSQL 16*
- SQL Query:**

```

1 v CREATE TABLE "SE".Partnership (
2   Partnership_ID INT PRIMARY KEY,
3   Startup_ID INT,
4   Partner_Organization_ID INT,
5   Type VARCHAR(50),
6   Start_Date DATE,
7   End_Date DATE,
8   FOREIGN KEY (Startup_ID) REFERENCES "SE".Startup(Startup_ID),
9   FOREIGN KEY (Partner_Organization_ID) REFERENCES "SE".Ecosystem_Resource(Resource_ID)
10 );

```
- Data Output:** CREATE TABLE
- Messages:** Query returned successfully in 162 msec.
- Notifications:**
- Status Bar:** Total rows: 80 of 80, Query complete 00:00:00.162, Ln 8, Col 44.
- System Bar:** Windows Start, Task View, File Explorer, Edge, File, Settings, Taskbar icons, Live, ENG IN 23:04 11-11-2024.

Industry Table



The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying the schema structure under the 'SE' schema. The right pane is the Query Editor, showing the SQL code for creating the 'Industry' table:

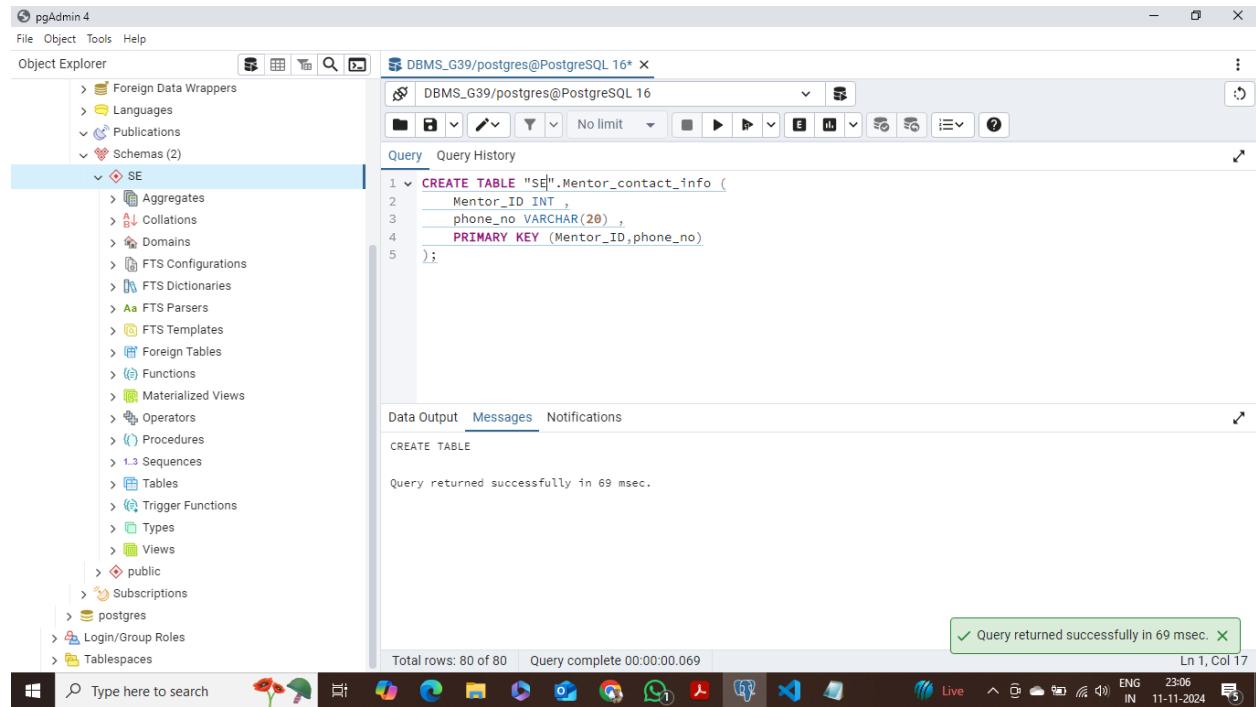
```

1 v CREATE TABLE "SE".Industry (
2   Industry_ID INT PRIMARY KEY,
3   Name VARCHAR(100) NOT NULL,
4   Sector VARCHAR(100),
5   Description TEXT
6 );

```

The status bar at the bottom indicates 'Total rows: 80 of 80' and 'Query complete 00:00:00.147'. A message box in the bottom right corner says 'Query returned successfully in 147 msec.'.

Mentor_Contact_Info Table



The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying the schema structure under the 'SE' schema. The right pane is the Query Editor, showing the SQL code for creating the 'Mentor_contact_info' table:

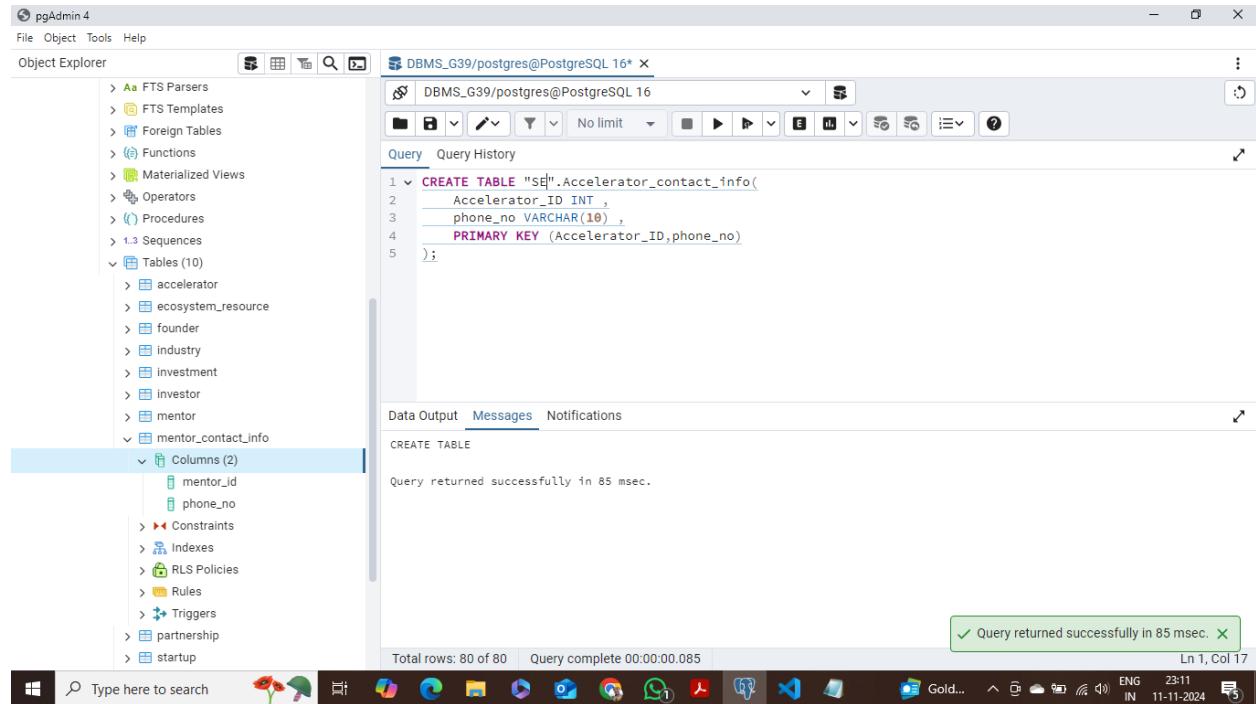
```

1 v CREATE TABLE "SE".Mentor_contact_info (
2   Mentor_ID INT ,
3   phone_no VARCHAR(20) ,
4   PRIMARY KEY (Mentor_ID,phone_no)
5 );

```

The status bar at the bottom indicates 'Total rows: 80 of 80' and 'Query complete 00:00:00.069'. A message box in the bottom right corner says 'Query returned successfully in 69 msec.'.

Accelerator_Contact_Info Table



The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying a tree structure of database objects. The right pane is the Query Editor, showing a SQL query for creating a table:

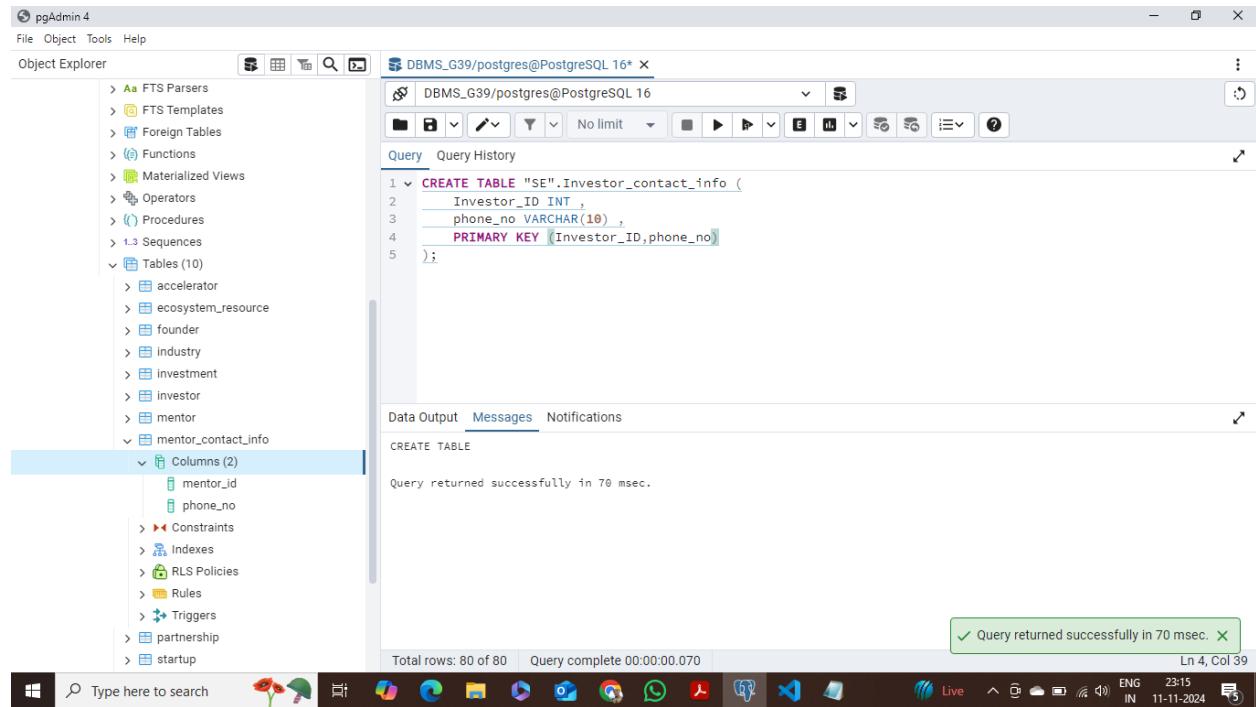
```

1 ✓ CREATE TABLE "SE".Accelerator_contact_info(
2   Accelerator_ID INT ,
3   phone_no VARCHAR(10) ,
4   PRIMARY KEY (Accelerator_ID,phone_no)
5 );

```

The message area at the bottom right indicates: "Query returned successfully in 85 msec." and "Total rows: 80 of 80 Query complete 00:00:00.085". The status bar at the bottom right shows "Ln 1, Col 17".

Investor_Contact_Info Table



The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying a tree structure of database objects. The right pane is the Query Editor, showing a SQL query for creating a table:

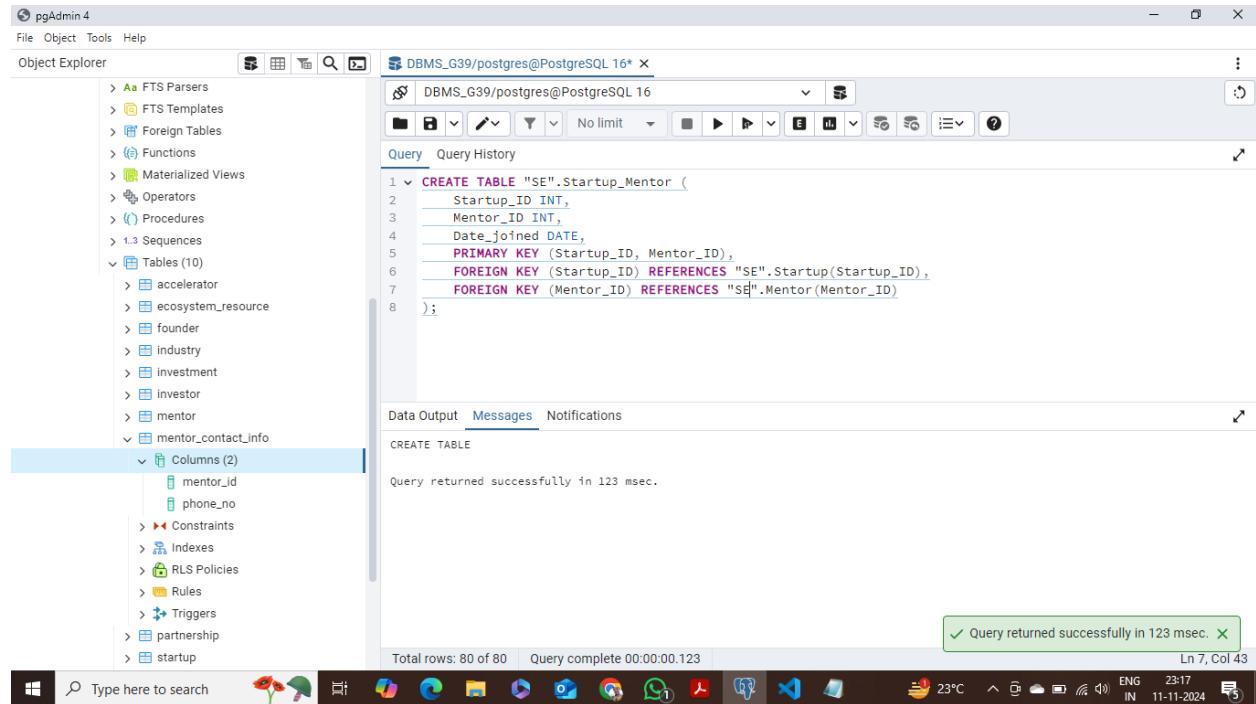
```

1 ✓ CREATE TABLE "SE".Investor_contact_info (
2   Investor_ID INT ,
3   phone_no VARCHAR(10) ,
4   PRIMARY KEY (Investor_ID,phone_no)
5 );

```

The message area at the bottom right indicates: "Query returned successfully in 70 msec." and "Total rows: 80 of 80 Query complete 00:00:00.070". The status bar at the bottom right shows "Ln 4, Col 39".

Startup_Mentor Table



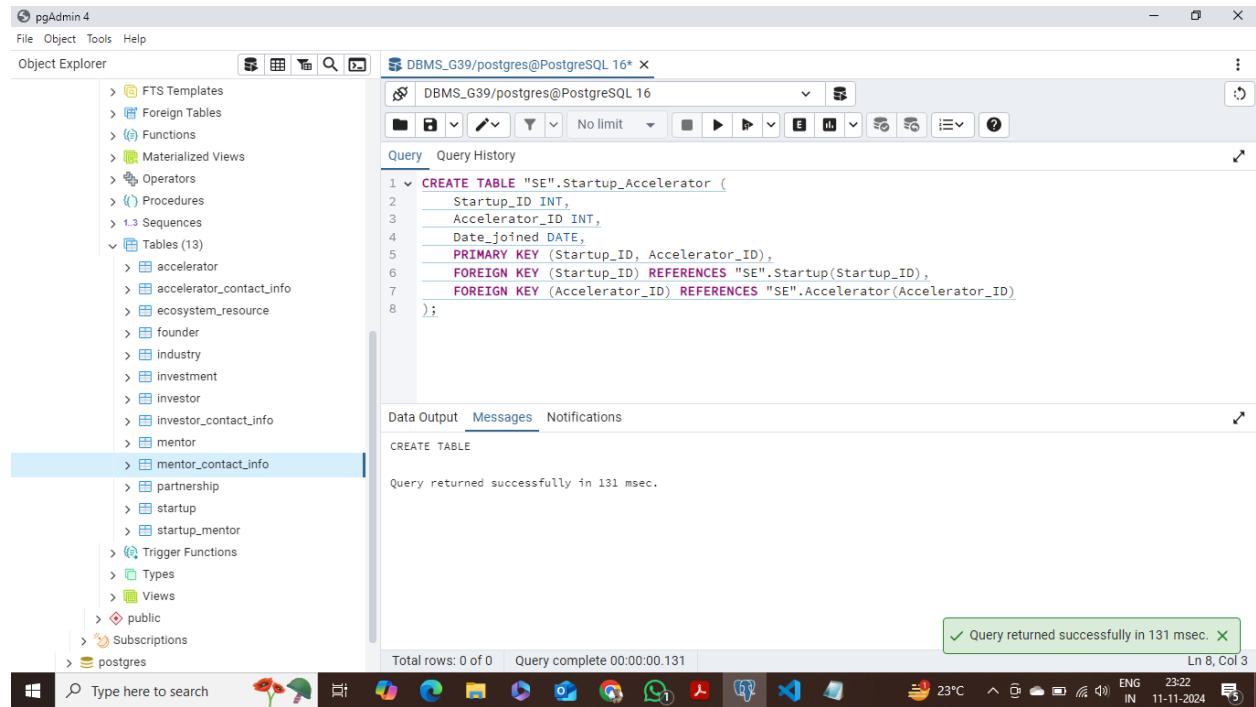
The screenshot shows the pgAdmin 4 interface with the following details:

- Object Explorer:** Shows a tree view of database objects. Under "Tables (10)", the "mentor_contact_info" table is selected, revealing its columns: mentor_id and phone_no.
- Query Editor:** Displays the SQL code for creating the "Startup_Mentor" table:


```

CREATE TABLE "SE".Startup_Mentor (
    Startup_ID INT,
    Mentor_ID INT,
    Date_joined DATE,
    PRIMARY KEY (Startup_ID, Mentor_ID),
    FOREIGN KEY (Startup_ID) REFERENCES "SE".Startup(Startup_ID),
    FOREIGN KEY (Mentor_ID) REFERENCES "SE".Mentor(Mentor_ID)
);
      
```
- Data Output:** Shows the message: "Query returned successfully in 123 msec."
- Messages:** Shows the message: "Total rows: 80 of 80 Query complete 00:00:00.123"
- System Bar:** Includes system icons like taskbar, search bar, and system status (23°C, ENG IN, 11-11-2024).

Startup_Accelerator Table



The screenshot shows the pgAdmin 4 interface with the following details:

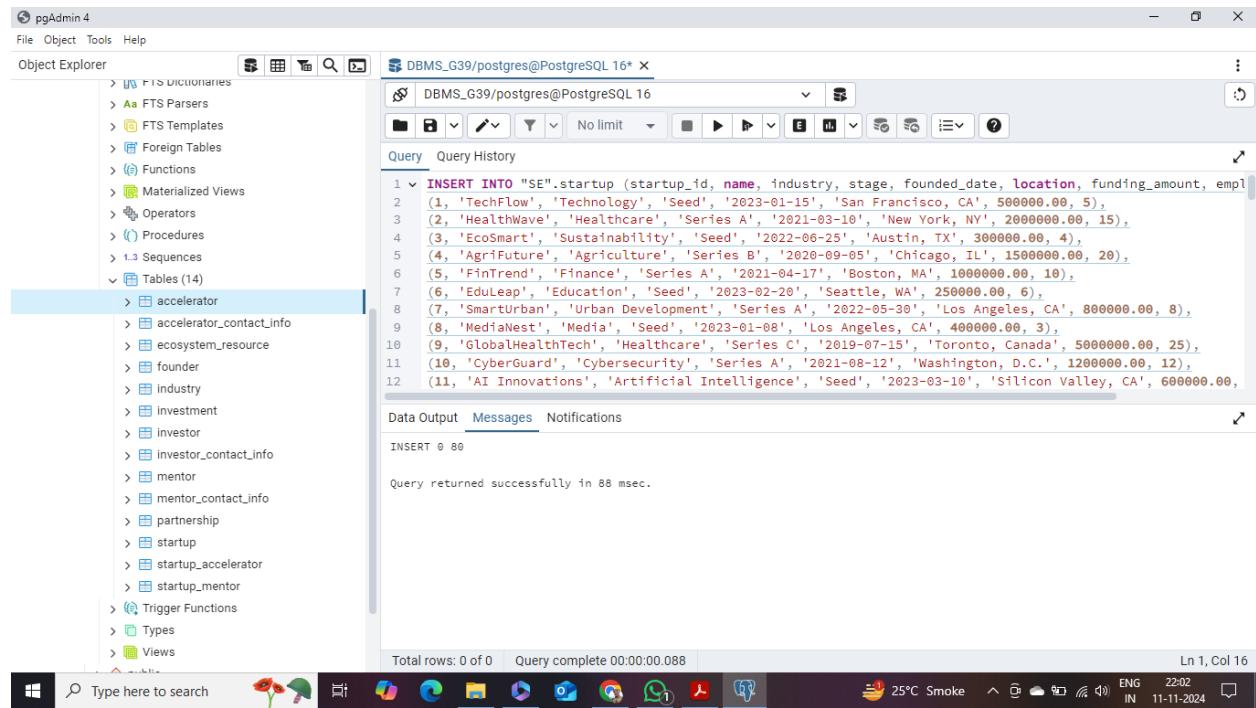
- Object Explorer:** Shows a tree view of database objects. Under "Tables (13)", the "mentor_contact_info" table is selected.
- Query Editor:** Displays the SQL code for creating the "Startup_Accelerator" table:


```

CREATE TABLE "SE".Startup_Accelerator (
    Startup_ID INT,
    Accelerator_ID INT,
    Date_joined DATE,
    PRIMARY KEY (Startup_ID, Accelerator_ID),
    FOREIGN KEY (Startup_ID) REFERENCES "SE".Startup(Startup_ID),
    FOREIGN KEY (Accelerator_ID) REFERENCES "SE".Accelerator(Accelerator_ID)
);
      
```
- Data Output:** Shows the message: "Query returned successfully in 131 msec."
- Messages:** Shows the message: "Total rows: 0 of 0 Query complete 00:00:00.131"
- System Bar:** Includes system icons like taskbar, search bar, and system status (23°C, ENG IN, 11-11-2024).

INSERT Statements

Startup Table



```

INSERT INTO startup (startup_id, name, industry, stage, founded_date, location, funding_amount, employee_count) VALUES
(1, 'TechFlow', 'Technology', 'Seed', '2023-01-15', 'San Francisco, CA', 500000.00, 5),
(2, 'HealthWave', 'Healthcare', 'Series A', '2021-03-10', 'New York, NY', 2000000.00, 15),
(3, 'EcoSmart', 'Sustainability', 'Seed', '2022-06-25', 'Austin, TX', 300000.00, 4),
(4, 'AgriFuture', 'Agriculture', 'Series B', '2020-09-05', 'Chicago, IL', 1500000.00, 20),
(5, 'FinTrend', 'Finance', 'Series A', '2021-04-17', 'Boston, MA', 1000000.00, 10),
(6, 'EduLeap', 'Education', 'Seed', '2023-02-20', 'Seattle, WA', 250000.00, 6),
(7, 'SmartUrban', 'Urban Development', 'Series A', '2022-05-30', 'Los Angeles, CA', 800000.00, 8),
(8, 'MediaNest', 'Media', 'Seed', '2023-01-08', 'Los Angeles, CA', 400000.00, 3),
(9, 'GlobalHealthTech', 'Healthcare', 'Series C', '2019-07-15', 'Toronto, Canada', 5000000.00, 25),
(10, 'CyberGuard', 'Cybersecurity', 'Series A', '2021-08-12', 'Washington, D.C.', 1200000.00, 12),
(11, 'AI Innovations', 'Artificial Intelligence', 'Seed', '2023-03-10', 'Silicon Valley, CA', 600000.00, 7),
(12, 'FoodieTech', 'Food Technology', 'Series A', '2020-11-21', 'San Diego, CA', 900000.00, 9),
(13, 'IoT Connect', 'Internet of Things', 'Seed', '2023-04-05', 'New York, NY', 350000.00, 5),
(14, 'Space Ventures', 'Aerospace', 'Series B', '2019-10-30', 'Houston, TX', 2500000.00, 15),

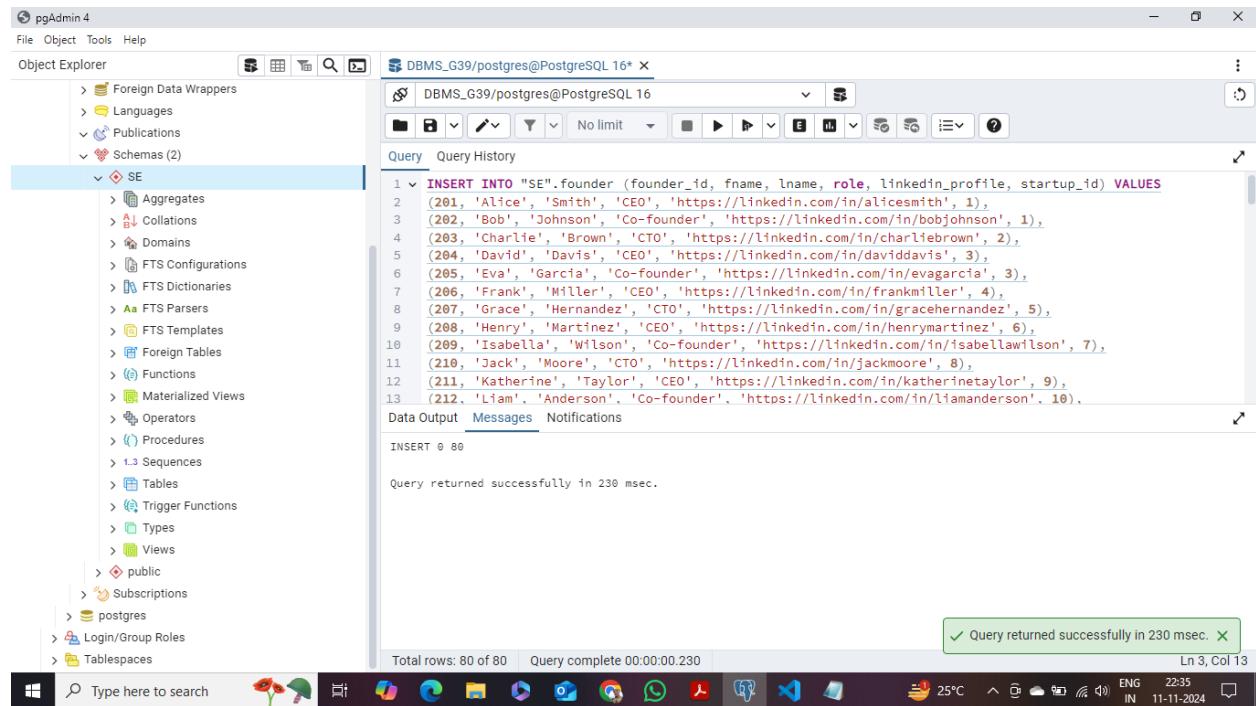
```

(15, 'EcomMagic', 'E-commerce', 'Series A', '2021-05-02', 'Miami, FL', 850000.00, 10),
(16, 'CreativeMinds', 'Media & Entertainment', 'Seed', '2023-02-15', 'Los Angeles, CA', 200000.00, 4),
(17, 'Blockchain Experts', 'Blockchain', 'Series A', '2022-06-17', 'Singapore', 3000000.00, 20),
(18, 'VR Experiences', 'Virtual Reality', 'Seed', '2023-03-28', 'Los Angeles, CA', 500000.00, 6),
(19, 'Digital Health Solutions', 'Healthcare', 'Series B', '2020-08-14', 'Berlin, Germany', 1800000.00, 14),
(20, 'Impact Ventures', 'Social Impact', 'Seed', '2023-05-01', 'London, UK', 400000.00, 5),
(21, 'TravelGenie', 'Travel & Tourism', 'Series A', '2021-07-22', 'Barcelona, Spain', 700000.00, 8),
(22, 'FinBuddy', 'Finance', 'Seed', '2022-12-05', 'Dublin, Ireland', 250000.00, 3),
(23, 'CleanEnergy Solutions', 'Clean Technology', 'Series A', '2020-09-10', 'Vancouver, Canada', 1300000.00, 11),
(24, 'Startup Hub', 'Various', 'Seed', '2023-01-20', 'Austin, TX', 300000.00, 6),
(25, 'FashionTech', 'Fashion', 'Series A', '2021-04-12', 'Paris, France', 600000.00, 5),
(26, 'TechNest', 'Technology', 'Seed', '2023-02-22', 'Tokyo, Japan', 750000.00, 9),
(27, 'EduTech Innovations', 'Education', 'Series B', '2021-05-30', 'Melbourne, Australia', 1200000.00, 12),
(28, 'Wearable Innovations', 'Wearables', 'Seed', '2023-04-15', 'Los Angeles, CA', 400000.00, 4),
(29, 'SportsConnect', 'Sports', 'Series A', '2022-11-02', 'New York, NY', 900000.00, 10),
(30, 'Mobility Solutions', 'Transportation', 'Seed', '2023-03-12', 'San Francisco, CA', 600000.00, 7),
(31, 'Robotics Innovations', 'Robotics', 'Series A', '2021-07-18', 'Bangalore, India', 1500000.00, 15),
(32, 'Telecom Innovations', 'Telecommunications', 'Seed', '2022-10-05', 'Chicago, IL', 800000.00, 8),
(33, 'GameTech', 'Gaming', 'Series A', '2021-09-30', 'Seattle, WA', 1100000.00, 9),
(34, 'SustainableLiving', 'Sustainability', 'Seed', '2023-01-11', 'Toronto, Canada', 450000.00, 6),
(35, 'MediaSpark', 'Media', 'Series B', '2020-12-01', 'San Diego, CA', 2000000.00, 15),
(36, 'BioInnovations', 'Biotechnology', 'Seed', '2023-05-10', 'Boston, MA', 300000.00, 4),
(37, 'SmartHome Solutions', 'Home Automation', 'Series A', '2021-08-20', 'San Francisco, CA', 950000.00, 10),

- (38, 'AgriTech Hub', 'Agriculture', 'Seed', '2023-04-30', 'Atlanta, GA', 500000.00, 5),
 (39, 'Impact Accelerator', 'Social Entrepreneurship', 'Series B', '2019-05-15', 'Amsterdam, Netherlands', 2200000.00, 20),
 (40, 'VR/AR Innovations', 'Virtual/Augmented Reality', 'Seed', '2023-03-07', 'Los Angeles, CA', 350000.00, 7),
 (41, 'Investment Network', 'Finance', 'Series A', '2021-11-12', 'New York, NY', 1400000.00, 12),
 (42, 'HealthTech Innovators', 'Healthcare', 'Seed', '2022-10-22', 'Dublin, Ireland', 300000.00, 8),
 (43, 'TechGlobal', 'Technology', 'Series A', '2020-06-19', 'Singapore', 1800000.00, 14),
 (44, 'ElderCare Innovations', 'Healthcare', 'Seed', '2023-02-28', 'Sydney, Australia', 400000.00, 5),
 (45, 'SmartFashion', 'Fashion', 'Series B', '2021-03-05', 'Paris, France', 1000000.00, 10),
 (46, 'EnergyHub', 'Energy', 'Seed', '2022-09-17', 'Berlin, Germany', 600000.00, 6),
 (47, 'PetCare Innovations', 'Pets', 'Series A', '2021-08-30', 'Austin, TX', 800000.00, 9),
 (48, 'Youth Ventures', 'Social Impact', 'Seed', '2023-01-25', 'Mumbai, India', 500000.00, 3),
 (49, 'AI Accelerator', 'Artificial Intelligence', 'Series B', '2021-06-14', 'Los Angeles, CA', 3000000.00, 20),
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Founder Table



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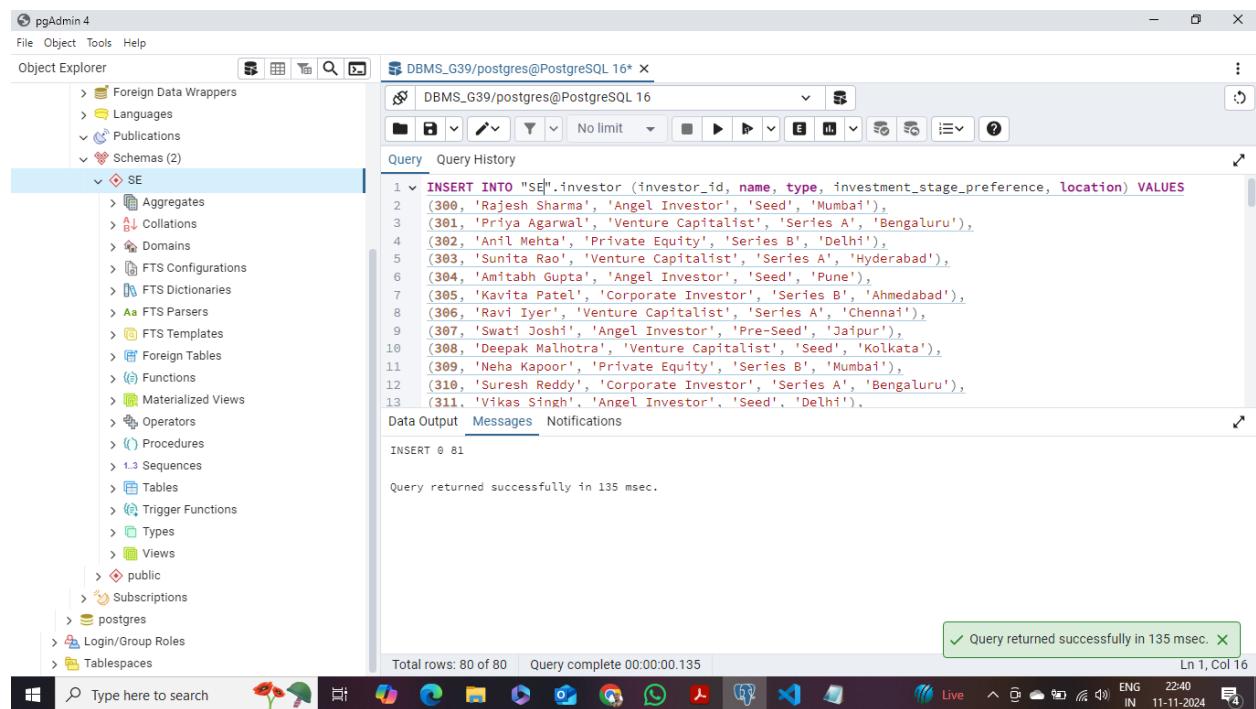
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(256, 'Diana', 'Cook', 'CEO', 'https://linkedin.com/in/dianacook', 53),
(257, 'Edward', 'Ford', 'Co-founder', 'https://linkedin.com/in/edwardford', 53),
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(259, 'George', 'Fisher', 'CEO', 'https://linkedin.com/in/georgefisher', 55),
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(261, 'Ian', 'Ellison', 'CTO', 'https://linkedin.com/in/ianellison', 56),
(262, 'Jessica', 'Brock', 'CEO', 'https://linkedin.com/in/jessicabrock', 57),
(263, 'Kevin', 'Chavez', 'Co-founder', 'https://linkedin.com/in/kevincchavez', 57),
(264, 'Laura', 'Owens', 'CTO', 'https://linkedin.com/in/lauraowens', 58),
(265, 'Mark', 'Larson', 'CEO', 'https://linkedin.com/in/marklarson', 59),
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(267, 'Oscar', 'Wagner', 'CTO', 'https://linkedin.com/in/oscarwagner', 60),
(268, 'Paige', 'Dixon', 'CEO', 'https://linkedin.com/in/paigedixon', 61),
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 (272, 'Tom', 'Mason', 'Co-founder', 'https://linkedin.com/in/tommason', 63),
 (273, 'Uma', 'George', 'CTO', 'https://linkedin.com/in/umageorge', 64),
 (274, 'Violet', 'Lowe', 'CEO', 'https://linkedin.com/in/violetlowe', 65),
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 (276, 'Xena', 'Bryant', 'CTO', 'https://linkedin.com/in/xenabryant', 67),
 (277, 'Yara', 'Fernandez', 'CEO', 'https://linkedin.com/in/yarafrnandez', 68),
 (278, 'Zoe', 'Bradley', 'Co-founder', 'https://linkedin.com/in/zoebradley', 68),
 (279, 'Aaron', 'Fitzgerald', 'CTO', 'https://linkedin.com/in/aaronfitzgerald', 69),
 (280, 'Beth', 'Leonard', 'CEO', 'https://linkedin.com/in/bethleonard', 70);

Investor Table



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File Object Tools Help
Object Explorer
  > Foreign Data Wrappers
  > Languages
  < Publications
  < Schemas (2)
    < SE
      > Aggregates
      > Collations
      > Domains
      > FTS Configurations
      > FTS Dictionaries
      > FTS Parsers
      > FTS Templates
      > Foreign Tables
      > Functions
      > Materialized Views
      > Operators
      > Procedures
      > 1.3 Sequences
      > Tables
      > Trigger Functions
      > Types
      > Views
      > public
      > Subscriptions
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    6   (304, 'Amitabh Gupta', 'Angel Investor', 'Seed', 'Pune'),
    7   (305, 'Kavita Patel', 'Corporate Investor', 'Series B', 'Ahmedabad'),
    8   (306, 'Ravi Iyer', 'Venture Capitalist', 'Series A', 'Chennai'),
    9   (307, 'Swati Joshi', 'Angel Investor', 'Pre-Seed', 'Jaipur'),
    10  (308, 'Deepak Malhotra', 'Venture Capitalist', 'Seed', 'Kolkata'),
    11  (309, 'Neha Kapoor', 'Private Equity', 'Series B', 'Mumbai'),
    12  (310, 'Suresh Reddy', 'Corporate Investor', 'Series A', 'Bengaluru'),
    13  (311, 'Vikas Singh', 'Angel Investor', 'Seed', 'Delhi').
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(302, 'Anil Mehta', 'Private Equity', 'Series B', 'Delhi'),
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(322, 'Jyoti Bhat', 'Private Equity', 'Series B', 'Ahmedabad'),
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(327, 'Rajiv Sinha', 'Venture Capitalist', 'Series A', 'Mumbai'),

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(329, 'Kunal Roy', 'Corporate Investor', 'Series B', 'Pune'),
(330, 'Shivani Rathi', 'Private Equity', 'Series A', 'Bengaluru'),
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(332, 'Megha Purohit', 'Venture Capitalist', 'Series A', 'Kolkata'),
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(335, 'Ashish Patil', 'Angel Investor', 'Seed', 'Chennai'),
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Investment Table

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pgAdmin 4
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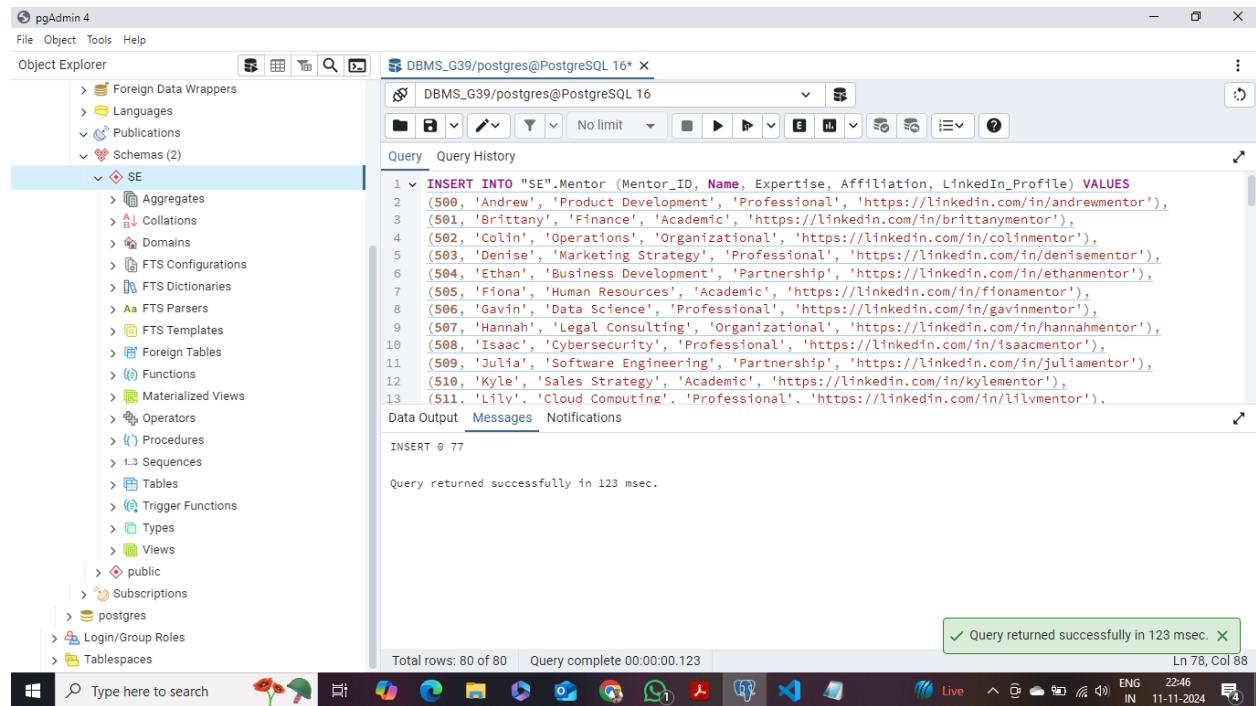
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(1019, 319, 10, '600000.00', '2024-03-10', 'Series A'),
(1020, 320, 11, '550000.00', '2024-03-20', 'Seed'),
(1021, 321, 12, '300000.00', '2024-04-05', 'Seed'),
(1022, 322, 12, '400000.00', '2024-04-25', 'Series A'),
(1023, 323, 13, '500000.00', '2024-05-10', 'Series B'),
(1024, 324, 13, '450000.00', '2024-05-30', 'Series B'),
(1025, 325, 14, '600000.00', '2024-06-15', 'Seed'),
(1026, 326, 15, '300000.00', '2024-06-28', 'Series A'),
(1027, 327, 16, '350000.00', '2024-07-10', 'Series A'),
(1028, 328, 17, '450000.00', '2024-07-25', 'Seed'),
(1029, 329, 18, '550000.00', '2024-08-10', 'Seed'),
(1030, 330, 19, '700000.00', '2024-08-20', 'Series B'),
(1031, 331, 20, '500000.00', '2024-09-01', 'Seed'),
(1032, 332, 20, '250000.00', '2024-09-15', 'Series A'),
(1033, 333, 21, '450000.00', '2024-09-30', 'Series A'),
(1034, 334, 22, '550000.00', '2024-10-10', 'Seed'),
(1035, 335, 23, '750000.00', '2024-10-20', 'Seed'),
(1036, 336, 23, '300000.00', '2024-11-01', 'Series A'),

(1037, 337, 24, '200000.00', '2024-11-15', 'Series B'),
(1038, 338, 25, '400000.00', '2024-11-30', 'Seed'),
(1039, 339, 26, '500000.00', '2024-12-10', 'Seed'),
(1040, 340, 26, '300000.00', '2024-12-20', 'Series A'),
(1041, 341, 27, '550000.00', '2024-12-30', 'Series B'),
(1042, 342, 28, '600000.00', '2025-01-10', 'Seed'),
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(1044, 344, 29, '350000.00', '2025-01-30', 'Series A'),
(1045, 345, 30, '500000.00', '2025-02-10', 'Seed'),
(1046, 346, 30, '200000.00', '2025-02-20', 'Seed'),
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(1048, 348, 32, '600000.00', '2025-03-15', 'Series B'),
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(1050, 350, 34, '500000.00', '2025-04-10', 'Seed'),
(1051, 351, 34, '300000.00', '2025-04-25', 'Series A'),
(1052, 352, 35, '550000.00', '2025-05-10', 'Seed'),
(1053, 353, 36, '750000.00', '2025-05-25', 'Series A'),
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(1058, 358, 40, '500000.00', '2025-08-10', 'Series A'),
(1059, 359, 41, '350000.00', '2025-08-20', 'Seed'),
(1060, 360, 42, '650000.00', '2025-08-30', 'Series B'),
(1061, 361, 43, '500000.00', '2025-09-10', 'Seed'),
(1062, 362, 44, '750000.00', '2025-09-20', 'Series A'),
(1063, 363, 45, '300000.00', '2025-09-30', 'Seed'),

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| (1064, 364, 46, '450000.00', '2025-10-10', 'Seed'), |
| (1065, 365, 47, '550000.00', '2025-10-20', 'Series A'), |
| (1066, 366, 48, '750000.00', '2025-10-30', 'Series B'), |
| (1067, 367, 49, '500000.00', '2025-11-10', 'Seed'), |
| (1068, 368, 50, '650000.00', '2025-11-20', 'Series A'), |
| (1069, 369, 50, '250000.00', '2025-11-30', 'Series B'), |
| (1070, 370, 51, '750000.00', '2025-12-10', 'Seed'), |
| (1071, 371, 52, '300000.00', '2025-12-20', 'Series A'), |
| (1072, 372, 53, '250000.00', '2025-12-30', 'Series A'), |
| (1073, 373, 54, '500000.00', '2026-01-10', 'Seed'), |
| (1074, 374, 55, '300000.00', '2026-01-20', 'Seed'), |
| (1075, 375, 56, '600000.00', '2026-02-10', 'Series B'), |
| (1076, 376, 57, '750000.00', '2026-02-20', 'Seed'), |
| (1077, 377, 58, '500000.00', '2026-02-28', 'Seed'), |
| (1078, 378, 59, '400000.00', '2026-03-10', 'Series A'), |
| (1079, 379, 60, '600000.00', '2026-03-20', 'Series B'); |

Mentor Table



```

INSERT INTO "SE".Mentor (Mentor_ID, Name, Expertise, Affiliation, LinkedIn_Profile) VALUES
(500, 'Andrew', 'Product Development', 'Professional', 'https://linkedin.com/in/andrewmentor'),
(501, 'Brittany', 'Finance', 'Academic', 'https://linkedin.com/in/brittanymentor'),
(502, 'Colin', 'Operations', 'Organizational', 'https://linkedin.com/in/colinmentor'),
(503, 'Denise', 'Marketing Strategy', 'Professional', 'https://linkedin.com/in/denisementor'),
(504, 'Ethan', 'Business Development', 'Partnership', 'https://linkedin.com/in/ethanmentor'),
(505, 'Fiona', 'Human Resources', 'Academic', 'https://linkedin.com/in/fionamentor'),
(506, 'Gavin', 'Data Science', 'Professional', 'https://linkedin.com/in/gavinmentor'),
(507, 'Hannah', 'Legal Consulting', 'Organizational', 'https://linkedin.com/in/hannahmentor'),
(508, 'Isaac', 'Cybersecurity', 'Professional', 'https://linkedin.com/in/isaacmentor'),
(509, 'Julia', 'Software Engineering', 'Partnership', 'https://linkedin.com/in/juliamentor'),
(510, 'Kyle', 'Sales Strategy', 'Academic', 'https://linkedin.com/in/kylementor'),
(511, 'Lily', 'Cloud Computing', 'Professional', 'https://linkedin.com/in/lilymentor'),
(512, 'Marcus', 'Artificial Intelligence', 'Organizational', 'https://linkedin.com/in/marcusmentor'),
(513, 'Nora', 'Investment Strategy', 'Professional', 'https://linkedin.com/in/noramenter'),
(514, 'Oscar', 'Supply Chain Management', 'Academic', 'https://linkedin.com/in/oscarmentor'),

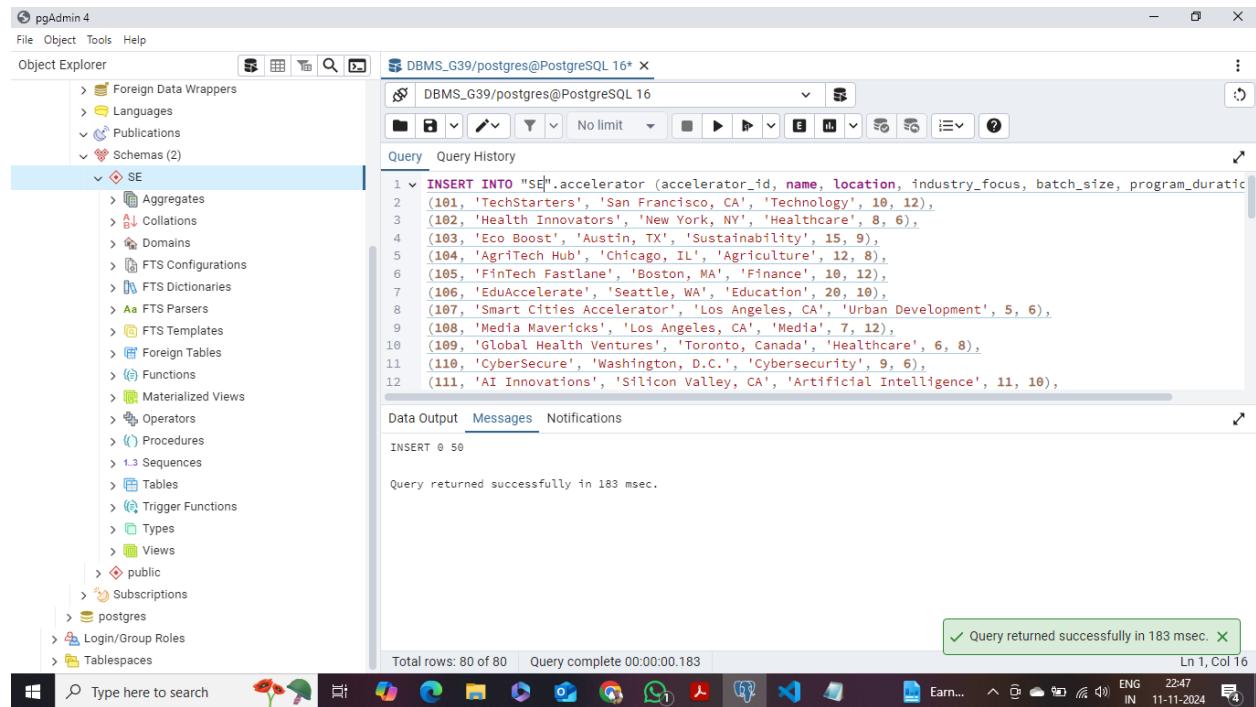
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(515, 'Paula', 'Machine Learning', 'Partnership', 'https://linkedin.com/in/paulamentor'),
(516, 'Quentin', 'Product Design', 'Organizational', 'https://linkedin.com/in/quentinmentor'),
(517, 'Rachel', 'Corporate Strategy', 'Professional', 'https://linkedin.com/in/rachelmentor'),
(518, 'Steve', 'Healthcare', 'Academic', 'https://linkedin.com/in/stementor'),
(519, 'Tina', 'Renewable Energy', 'Partnership', 'https://linkedin.com/in/tinamentor'),
(520, 'Umar', 'E-commerce', 'Organizational', 'https://linkedin.com/in/umarmentor'),
(521, 'Violet', 'Marketing Research', 'Professional', 'https://linkedin.com/in/violetmentor'),
(522, 'Wesley', 'User Experience', 'Academic', 'https://linkedin.com/in/wesleymentor'),
(523, 'Xander', 'Blockchain', 'Partnership', 'https://linkedin.com/in/xandermentor'),
(524, 'Yvonne', 'Real Estate', 'Organizational', 'https://linkedin.com/in/yvonnementor'),
(525, 'Zachary', 'Ethics', 'Professional', 'https://linkedin.com/in/zacharymentor'),
(526, 'Alicea', 'Telecommunications', 'Academic', 'https://linkedin.com/in/aliceamentor'),
(527, 'Ben', 'Retail Strategy', 'Organizational', 'https://linkedin.com/in/benmentor'),
(528, 'Cathy', 'Content Strategy', 'Professional', 'https://linkedin.com/in/cathymentor'),
(529, 'Darius', 'Biotechnology', 'Academic', 'https://linkedin.com/in/dariusmentor'),
(530, 'Elena', 'Fashion', 'Partnership', 'https://linkedin.com/in/elenamentor'),
(531, 'Fred', 'Public Relations', 'Organizational', 'https://linkedin.com/in/fredmentor'),
(532, 'Gretchen', 'Venture Capital', 'Professional', 'https://linkedin.com/in/gretchenmentor'),
(533, 'Henry', 'Legal Affairs', 'Academic', 'https://linkedin.com/in/henrymentor'),
(534, 'Isabel', 'Accounting', 'Partnership', 'https://linkedin.com/in/isabelmentor'),
(535, 'Jon', 'Product Innovation', 'Organizational', 'https://linkedin.com/in/jonmentor'),
(536, 'Karen', 'Risk Management', 'Professional', 'https://linkedin.com/in/karenmentor'),
(537, 'Lance', 'Health Technology', 'Academic', 'https://linkedin.com/in/lancementor'),
(538, 'Marilyn', 'Agriculture', 'Partnership', 'https://linkedin.com/in/marilynmentor'),
(539, 'Nathan', 'Market Analysis', 'Organizational', 'https://linkedin.com/in/nathanmentor'),
(540, 'Olivia', 'Software Development', 'Professional', 'https://linkedin.com/in/oliviamentor'),
(541, 'Peter', 'Digital Marketing', 'Academic', 'https://linkedin.com/in/petermentor'),

(542, 'Queenie', 'Manufacturing', 'Partnership', 'https://linkedin.com/in/queeniementor'),
(543, 'Roy', 'Gaming Industry', 'Organizational', 'https://linkedin.com/in/roymentor'),
(544, 'Sarah', 'Social Media', 'Professional', 'https://linkedin.com/in/sarahmentor'),
(545, 'Travis', 'Human Capital', 'Academic', 'https://linkedin.com/in/travismentor'),
(546, 'Una', 'Transportation', 'Partnership', 'https://linkedin.com/in/unamentor'),
(547, 'Victor', 'Media', 'Organizational', 'https://linkedin.com/in/victormentor'),
(548, 'Willow', 'Tourism', 'Professional', 'https://linkedin.com/in/willowmentor'),
(549, 'Xavier', 'Robotics', 'Academic', 'https://linkedin.com/in/xaviermentor'),
(550, 'Yasmine', 'Education', 'Partnership', 'https://linkedin.com/in/yasminementor'),
(551, 'Zara', 'Medical Devices', 'Organizational', 'https://linkedin.com/in/zaramentor'),
(552, 'Arthur', 'Hospitality', 'Professional', 'https://linkedin.com/in/arthurmentor'),
(553, 'Bella', 'Customer Service', 'Academic', 'https://linkedin.com/in/bellamentor'),
(554, 'Caleb', 'Sports Management', 'Partnership', 'https://linkedin.com/in/calebmentor'),
(555, 'Diana', 'Creative Direction', 'Organizational', 'https://linkedin.com/in/dianamentor'),
(556, 'Eli', 'Cybersecurity', 'Professional', 'https://linkedin.com/in/elimentor'),
(557, 'Frida', 'Food & Beverage', 'Academic', 'https://linkedin.com/in/fridamentor'),
(558, 'Gabriel', 'Logistics', 'Partnership', 'https://linkedin.com/in/gabrielmentor'),
(559, 'Hugo', 'Mobile Technology', 'Organizational', 'https://linkedin.com/in/hugomentor'),
(560, 'Irene', 'Pharmaceuticals', 'Professional', 'https://linkedin.com/in/irenmentor'),
(561, 'Jack', 'Insurance', 'Academic', 'https://linkedin.com/in/jackmentor'),
(562, 'Kylie', 'Consumer Goods', 'Partnership', 'https://linkedin.com/in/kyliementor'),
(563, 'Leo', 'Telemedicine', 'Organizational', 'https://linkedin.com/in/leomentor'),
(564, 'Mona', 'Blockchain Strategy', 'Professional', 'https://linkedin.com/in/monamentor'),
(565, 'Nate', 'Mobile Applications', 'Academic', 'https://linkedin.com/in/natementor'),
(566, 'Olga', 'Event Management', 'Partnership', 'https://linkedin.com/in/olgamentor'),
(567, 'Paul', 'Climate Solutions', 'Organizational', 'https://linkedin.com/in/paulmentor'),
(568, 'Renee', 'AI Ethics', 'Professional', 'https://linkedin.com/in/renée_mentor'),

```
(569, 'Simon', 'Aerospace', 'Academic', 'https://linkedin.com/in/simonmentor'),
(570, 'Tara', 'FinTech', 'Partnership', 'https://linkedin.com/in/taramentor'),
(571, 'Ulrich', 'Cloud Solutions', 'Organizational', 'https://linkedin.com/in.ulrichmentor'),
(572, 'Vera', 'Quantum Computing', 'Professional', 'https://linkedin.com/in/veramentor'),
(573, 'Wayne', 'Policy Development', 'Academic', 'https://linkedin.com/in/waynementor'),
(574, 'Ximena', 'User Research', 'Partnership', 'https://linkedin.com/in/ximenamentor'),
(575, 'Yolanda', 'Smart City Planning', 'Organizational', 'https://linkedin.com/in/yolandamentor'),
(576, 'Zane', 'Ethical Hacking', 'Professional', 'https://linkedin.com/in/zanementor');
```

Accelerator Table



The screenshot shows the pgAdmin 4 interface with the following details:

- File Bar:** File, Object, Tools, Help.
- Object Explorer:** Shows a tree view of database objects under the schema "SE". The "Tables" node is expanded, showing "accelerator" and other tables like "Aggregates", "Collations", etc.
- Query Editor:** Displays the SQL query used to insert data into the "accelerator" table.
- Status Bar:** Shows "Total rows: 80 of 80" and "Query complete 00:00:00.183".
- System Tray:** Shows the date and time as "11-11-2024 22:47".

```
1 INSERT INTO "SE".accelerator (accelerator_id, name, location, industry_focus, batch_size, program_duration)
2 (101, 'TechStarters', 'San Francisco, CA', 'Technology', 10, 12),
3 (102, 'Health Innovators', 'New York, NY', 'Healthcare', 8, 6),
4 (103, 'Eco Boost', 'Austin, TX', 'Sustainability', 15, 9),
5 (104, 'AgriTech Hub', 'Chicago, IL', 'Agriculture', 12, 8),
6 (105, 'FinTech Fastlane', 'Boston, MA', 'Finance', 10, 12),
7 (106, 'EduAccelerate', 'Seattle, WA', 'Education', 20, 10),
8 (107, 'Smart Cities Accelerator', 'Los Angeles, CA', 'Urban Development', 5, 6),
9 (108, 'Media Mavericks', 'Los Angeles, CA', 'Media', 7, 12),
10 (109, 'Global Health Ventures', 'Toronto, Canada', 'Healthcare', 6, 8),
11 (110, 'CyberSecure', 'Washington, D.C.', 'Cybersecurity', 9, 6),
12 (111, 'AI Innovations', 'Silicon Valley, CA', 'Artificial Intelligence', 11, 10),
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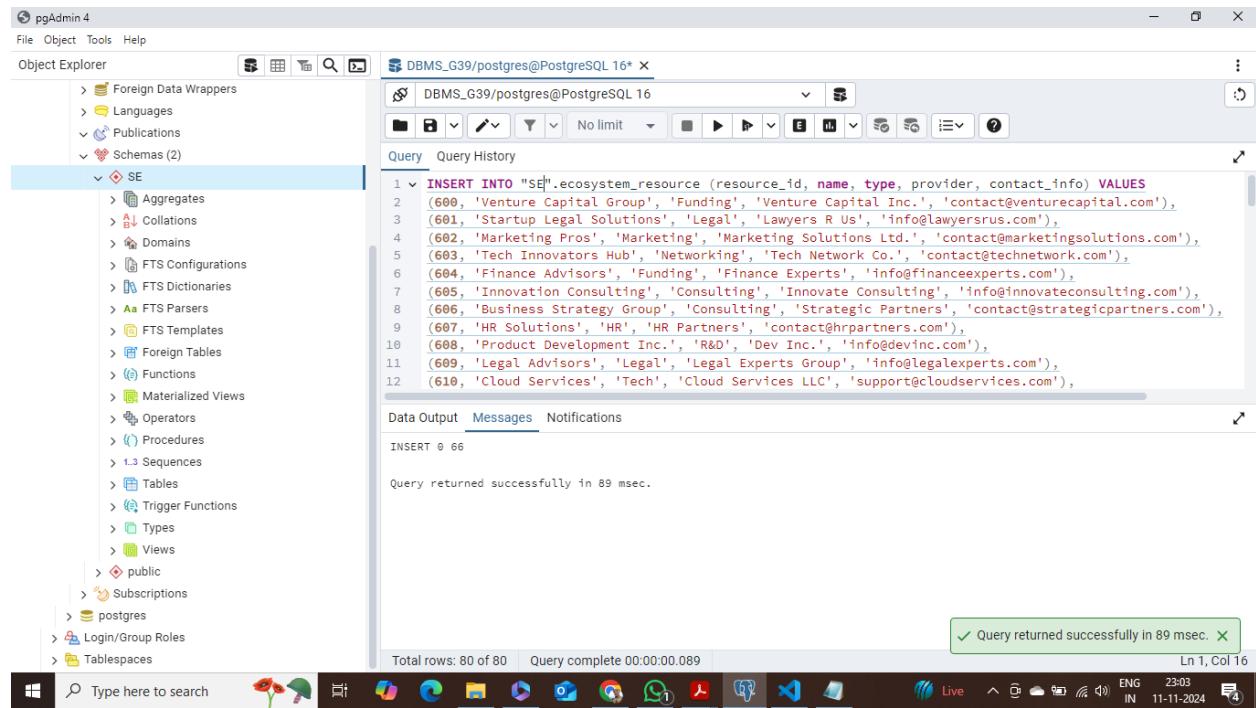
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INSERT INTO accelerator (accelerator_id, name, location, industry_focus, batch_size, program_duration) VALUES
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(101, 'TechStarters', 'San Francisco, CA', 'Technology', 10, 12),
(102, 'Health Innovators', 'New York, NY', 'Healthcare', 8, 6),
(103, 'Eco Boost', 'Austin, TX', 'Sustainability', 15, 9),
(104, 'AgriTech Hub', 'Chicago, IL', 'Agriculture', 12, 8),
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- (105, 'FinTech Fastlane', 'Boston, MA', 'Finance', 10, 12),
(106, 'EduAccelerate', 'Seattle, WA', 'Education', 20, 10),
(107, 'Smart Cities Accelerator', 'Los Angeles, CA', 'Urban Development', 5, 6),
(108, 'Media Mavericks', 'Los Angeles, CA', 'Media', 7, 12),
(109, 'Global Health Ventures', 'Toronto, Canada', 'Healthcare', 6, 8),
(110, 'CyberSecure', 'Washington, D.C.', 'Cybersecurity', 9, 6),
(111, 'AI Innovations', 'Silicon Valley, CA', 'Artificial Intelligence', 11, 10),
(112, 'FoodTech Labs', 'San Diego, CA', 'Food Technology', 8, 8),
(113, 'IoT Incubator', 'New York, NY', 'Internet of Things', 10, 10),
(114, 'Space Startups', 'Houston, TX', 'Aerospace', 4, 12),
(115, 'E-commerce Launchpad', 'Miami, FL', 'E-commerce', 12, 8),
(116, 'Creative Labs', 'Los Angeles, CA', 'Media & Entertainment', 15, 9),
(117, 'Blockchain Foundry', 'Singapore', 'Blockchain', 5, 6),
(118, 'VR Incubator', 'San Francisco, CA', 'Virtual Reality', 7, 10),
(119, 'Digital Health Accelerator', 'Berlin, Germany', 'Healthcare', 6, 6),
(120, 'Impact Innovators', 'London, UK', 'Social Impact', 10, 12),
(121, 'TravelTech Hub', 'Barcelona, Spain', 'Travel & Tourism', 8, 10),
(122, 'Fintech Factory', 'Dublin, Ireland', 'Finance', 9, 8),
(123, 'CleanTech Accelerator', 'Vancouver, Canada', 'Clean Technology', 12, 9),
(124, 'Startup Garage', 'Austin, TX', 'Various', 15, 10),
(125, 'Fashion Forward', 'Paris, France', 'Fashion', 10, 6),
(126, 'Tech Quest', 'Tokyo, Japan', 'Technology', 11, 12),
(127, 'EduLab', 'Melbourne, Australia', 'Education', 20, 10),
(128, 'Wearable Tech Incubator', 'Los Angeles, CA', 'Wearables', 6, 8),
(129, 'Sports Tech Accelerator', 'New York, NY', 'Sports', 8, 10),
(130, 'Smart Mobility Hub', 'San Francisco, CA', 'Transportation', 7, 9),
(131, 'Robotics Lab', 'Bangalore, India', 'Robotics', 10, 6),

- (132, 'Telecom Innovators', 'Chicago, IL', 'Telecommunications', 12, 12),
(133, 'Gaming Accelerator', 'Seattle, WA', 'Gaming', 10, 8),
(134, 'Sustainable Living Accelerator', 'Toronto, Canada', 'Sustainability', 9, 10),
(135, 'Digital Media Hub', 'San Diego, CA', 'Media', 11, 8),
(136, 'BioTech Innovators', 'Boston, MA', 'Biotechnology', 5, 12),
(137, 'Smart Home Incubator', 'San Francisco, CA', 'Home Automation', 8, 6),
(138, 'AgriFood Accelerator', 'Atlanta, GA', 'Food Technology', 10, 10),
(139, 'Global Impact Accelerator', 'Amsterdam, Netherlands', 'Social Entrepreneurship', 15, 8),
(140, 'VR/AR Hub', 'Los Angeles, CA', 'Virtual/Augmented Reality', 7, 6),
(141, 'Investment Accelerator', 'New York, NY', 'Finance', 10, 10),
(142, 'Healthcare Innovations', 'Dublin, Ireland', 'Healthcare', 6, 12),
(143, 'Tech Frontier', 'Singapore', 'Technology', 12, 10),
(144, 'Elder Tech Hub', 'Sydney, Australia', 'Healthcare', 9, 8),
(145, 'Smart Fashion Accelerator', 'Paris, France', 'Fashion', 5, 6),
(146, 'Energy Innovators', 'Berlin, Germany', 'Energy', 10, 9),
(147, 'Pet Tech Incubator', 'Austin, TX', 'Pets', 8, 10),
(148, 'Youth Empowerment Hub', 'Mumbai, India', 'Social Impact', 20, 12),
(149, 'Artificial Intelligence Accelerator', 'Los Angeles, CA', 'AI', 15, 10),
(150, 'FinTech 101', 'New York, NY', 'Finance', 12, 8);

Ecosystem_Resource Table



```

INSERT INTO ecosystem_resource (resource_id, name, type, provider, contact_info) VALUES
(600, 'Venture Capital Group', 'Funding', 'Venture Capital Inc.', 'contact@venturecapital.com'),
(601, 'Startup Legal Solutions', 'Legal', 'Lawyers R Us', 'info@lawyersrus.com'),
(602, 'Marketing Pros', 'Marketing', 'Marketing Solutions Ltd.', 'contact@marketingsolutions.com'),
(603, 'Tech Innovators Hub', 'Networking', 'Tech Network Co.', 'contact@technetwork.com'),
(604, 'Finance Advisors', 'Funding', 'Finance Experts', 'info@financeexperts.com'),
(605, 'Innovation Consulting', 'Consulting', 'Innovate Consulting', 'info@innovateconsulting.com'),
(606, 'Business Strategy Group', 'Consulting', 'Strategic Partners', 'contact@strategicpartners.com'),
(607, 'HR Solutions', 'HR', 'HR Partners', 'contact@hrpartners.com'),
(608, 'Product Development Inc.', 'R&D', 'Dev Inc.', 'info@devinc.com'),
(609, 'Legal Advisors', 'Legal', 'Legal Experts Group', 'info@legalexperts.com'),
(610, 'Cloud Services', 'Tech', 'Cloud Services LLC', 'support@cloudservices.com'),
(611, 'Sales Accelerator', 'Sales', 'Sales Experts', 'contact@salsexperts.com'),
(612, 'Market Research Institute', 'Research', 'Research Group', 'info@researchgroup.com'),
(613, 'Funding Solutions', 'Funding', 'Funding Network', 'info@fundingnetwork.com'),

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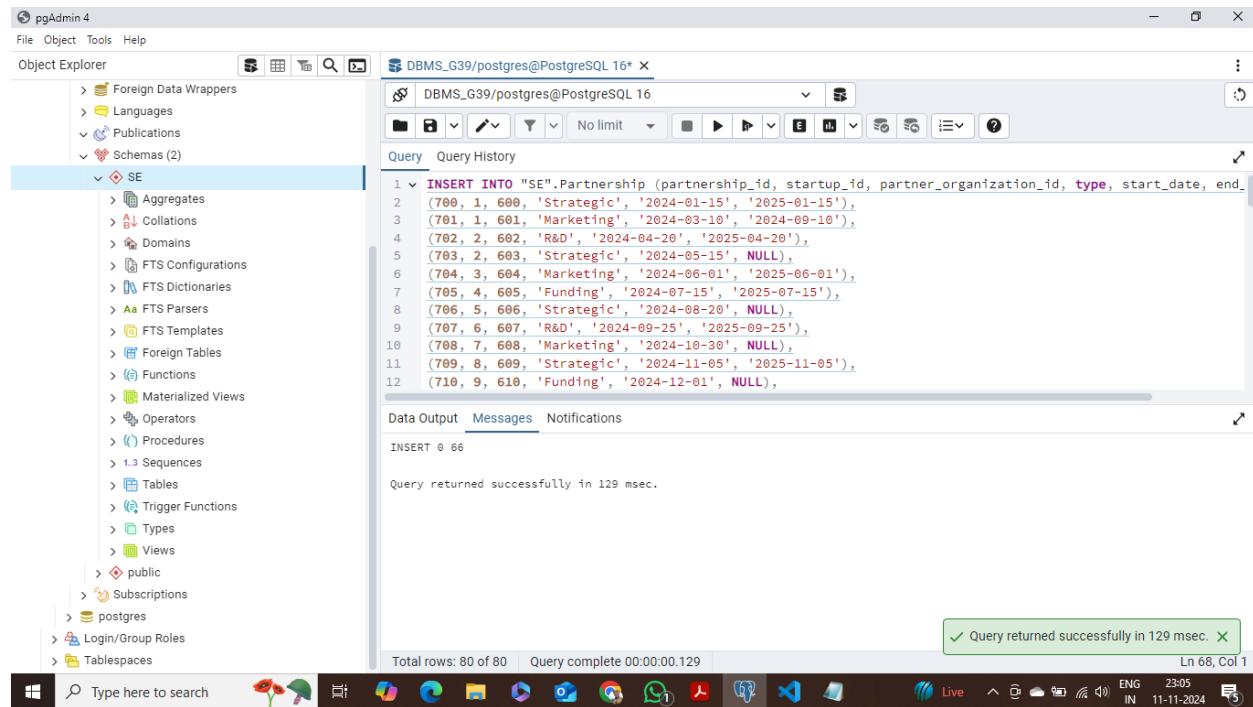
(614, 'Startup Advisors', 'Consulting', 'Startup Consultancy', 'contact@startupconsultancy.com'),
(615, 'Marketing Analytics Co.', 'Marketing', 'Analytics Group', 'info@analyticsgroup.com'),
(616, 'Design Studio', 'Design', 'Creative Design Co.', 'contact@creativedesign.com'),
(617, 'Investor Relations Group', 'Funding', 'Investor Connect', 'contact@investorconnect.com'),
(618, 'Tech Support Group', 'Tech', 'Support Services', 'support@supportservices.com'),
(619, 'Cybersecurity Solutions', 'Tech', 'Cyber Defense Co.', 'info@cyberdefense.com'),
(620, 'Intellectual Property Advisors', 'Legal', 'IP Experts', 'info@ipexperts.com'),
(621, 'Event Management Group', 'Marketing', 'Events Co.', 'info@eventsco.com'),
(622, 'Logistics Partners', 'Logistics', 'Logistics Group', 'info@logisticsgroup.com'),
(623, 'Corporate Training Group', 'Training', 'Training Solutions', 'contact@trainingsolutions.com'),
(624, 'Funding Network', 'Funding', 'Network Ventures', 'contact@networkventures.com'),
(625, 'Digital Marketing Agency', 'Marketing', 'Digital Agency', 'info@digitalagency.com'),
(626, 'Startup Growth Partners', 'Consulting', 'Growth Partners', 'info@growthpartners.com'),
(627, 'E-commerce Solutions', 'Tech', 'E-commerce Inc.', 'contact@ecommerce.com'),
(628, 'Social Media Agency', 'Marketing', 'Social Media Experts', 'info@socialmediaexperts.com'),
(629, 'Blockchain Innovations', 'Tech', 'Blockchain Co.', 'info@blockchainco.com'),
(630, 'Sustainability Consultants', 'Consulting', 'Sustainability Group',
'contact@sustainabilitygroup.com'),
(631, 'Data Analytics Firm', 'Research', 'Data Solutions', 'info@datasolutions.com'),
(632, 'Software Development Hub', 'Tech', 'Software Solutions', 'support@softwaresolutions.com'),
(633, 'Entrepreneurship Program', 'Education', 'Entrepreneur Group',
'info@entrepreneurgroup.com'),
(634, 'HealthTech Solutions', 'Health', 'Health Innovations', 'contact@healthinnovations.com'),
(635, 'Finance & Accounting Group', 'Finance', 'Finance Group', 'info@financegroup.com'),
(636, 'Crowdfunding Platform', 'Funding', 'Crowd Funders', 'contact@crowdfunders.com'),
(637, 'HR Consulting Firm', 'HR', 'HR Consulting Co.', 'info@hrconsultingco.com'),
(638, 'Product Management Group', 'Management', 'Product Experts',
'contact@productexperts.com'),

(639, 'Strategic Planning Firm', 'Consulting', 'Strategic Planners', 'info@strategicplanners.com'),
(640, 'Tech Support Solutions', 'Tech', 'Tech Support Co.', 'support@techsupportco.com'),
(641, 'Startup Community', 'Networking', 'Community Co.', 'contact@communityco.com'),
(642, 'Virtual Assistant Services', 'Support', 'Virtual Assistants', 'info@virtualassistants.com'),
(643, 'Startup Health Program', 'Health', 'Health Group', 'contact@healthgroup.com'),
(644, 'Investor Networking Group', 'Networking', 'Investor Network', 'info@investornetwork.com'),
(645, 'Online Learning Platform', 'Education', 'Learning Co.', 'support@learningco.com'),
(646, 'Advertising Agency', 'Marketing', 'Ad Solutions', 'info@adsolutions.com'),
(647, 'Social Impact Partners', 'Consulting', 'Impact Partners', 'contact@impactpartners.com'),
(648, 'App Development Studio', 'Tech', 'App Developers', 'info@appdevelopers.com'),
(649, 'Tech Innovations Inc.', 'Tech', 'Tech Innovators', 'contact@techinnovators.com'),
(650, 'E-commerce Growth Agency', 'Marketing', 'E-commerce Experts',
'info@ecommerceexperts.com'),
(651, 'Productivity Tools Company', 'Tech', 'Productivity Inc.', 'contact@productivityinc.com'),
(652, 'Investment Banking Group', 'Finance', 'Investment Bankers',
'info@investmentbankers.com'),
(653, 'Remote Work Solutions', 'Tech', 'Remote Work Co.', 'info@remoteworkco.com'),
(654, 'AI Consulting Firm', 'Consulting', 'AI Solutions', 'contact@aisolutions.com'),
(655, 'Non-profit Consulting Group', 'Consulting', 'Non-profit Experts',
'info@nonprofitexperts.com'),
(656, 'SaaS Development Company', 'Tech', 'SaaS Solutions', 'info@saassolutions.com'),
(657, 'Digital Transformation Agency', 'Consulting', 'Digital Transformations',
'contact@digitaltransformations.com'),
(658, 'Crisis Management Group', 'Consulting', 'Crisis Advisors', 'info@crisisadvisors.com'),
(659, 'Cybersecurity Consulting Firm', 'Tech', 'Cyber Solutions', 'info@cybersolutions.com'),
(660, 'FinTech Innovations', 'Tech', 'FinTech Co.', 'info@fintechco.com'),
(661, 'Content Marketing Group', 'Marketing', 'Content Experts', 'contact@contentexperts.com'),
(662, 'Global Trade Solutions', 'Logistics', 'Global Trade Group', 'info@globaltradegroup.com'),
(663, 'HR Management Solutions', 'HR', 'HR Management Co.', 'contact@hrmanagementco.com'),

```
(664, 'International Business Advisors', 'Consulting', 'International Advisors',
'info@internationaladvisors.com'),  

(665, 'Cloud Storage Solutions', 'Tech', 'Cloud Storage Co.', 'info@cloudstorageco.com');
```

Partnership Table



The screenshot shows the pgAdmin 4 interface. On the left, the Object Explorer tree view is expanded to show the 'SE' schema, which contains various database objects like Aggregates, Collations, Domains, FTS Configurations, FTS Dictionaries, FTS Parsers, FTS Templates, Foreign Tables, Functions, Materialized Views, Operators, Procedures, Sequences, Tables, Trigger Functions, Types, Views, and public and postgres roles. The main query editor window displays the following SQL code:

```
1 ✓ INSERT INTO "SE".Partnership (partnership_id, startup_id, partner_organization_id, type, start_date, end_
2 (700, 1, 600, 'Strategic', '2024-01-15', '2025-01-15'),
3 (701, 1, 601, 'Marketing', '2024-03-10', '2024-09-10'),
4 (702, 2, 602, 'R&D', '2024-04-20', '2025-04-20'),
5 (703, 2, 603, 'Strategic', '2024-05-15', NULL),
6 (704, 3, 604, 'Marketing', '2024-06-01', '2025-06-01'),
7 (705, 4, 605, 'Funding', '2024-07-15', '2025-07-15'),
8 (706, 5, 606, 'Strategic', '2024-08-20', NULL),
9 (707, 6, 607, 'R&D', '2024-09-25', '2025-09-25'),
10 (708, 7, 608, 'Marketing', '2024-10-30', NULL),
11 (709, 8, 609, 'Strategic', '2024-11-05', '2025-11-05'),
12 (710, 9, 610, 'Funding', '2024-12-01', NULL),
```

The status bar at the bottom of the pgAdmin window indicates 'Total rows: 80 of 80' and 'Query complete 00:00:00.129'. A green message box in the bottom right corner says 'Query returned successfully in 129 msec.' with a checkmark icon.

```
INSERT INTO "SE".Partnership (partnership_id, startup_id, partner_organization_id, type,
start_date, end_date) VALUES
```

```
(700, 1, 600, 'Strategic', '2024-01-15', '2025-01-15'),  

(701, 1, 601, 'Marketing', '2024-03-10', '2024-09-10'),  

(702, 2, 602, 'R&D', '2024-04-20', '2025-04-20'),  

(703, 2, 603, 'Strategic', '2024-05-15', NULL),  

(704, 3, 604, 'Marketing', '2024-06-01', '2025-06-01'),  

(705, 4, 605, 'Funding', '2024-07-15', '2025-07-15'),  

(706, 5, 606, 'Strategic', '2024-08-20', NULL),  

(707, 6, 607, 'R&D', '2024-09-25', '2025-09-25'),  

(708, 7, 608, 'Marketing', '2024-10-30', NULL),  

(709, 8, 609, 'Strategic', '2024-11-05', '2025-11-05'),  

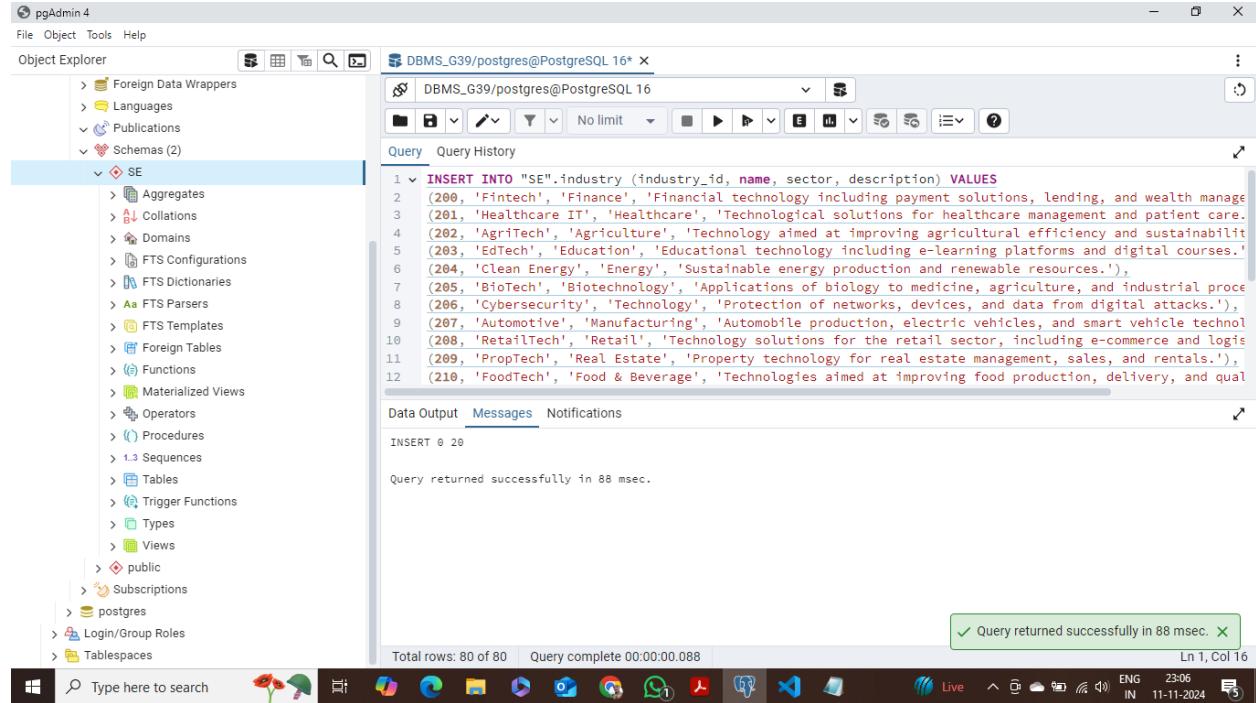
(710, 9, 610, 'Funding', '2024-12-01', NULL),
```

(709, 8, 609, 'Strategic', '2024-11-05', '2025-11-05'),
(710, 9, 610, 'Funding', '2024-12-01', NULL),
(711, 10, 611, 'R&D', '2024-01-10', '2025-01-10'),
(712, 11, 612, 'Marketing', '2024-02-15', NULL),
(713, 12, 613, 'Strategic', '2024-03-20', '2025-03-20'),
(714, 13, 614, 'Funding', '2024-04-25', NULL),
(715, 14, 615, 'R&D', '2024-05-30', '2025-05-30'),
(716, 15, 616, 'Marketing', '2024-06-05', NULL),
(717, 16, 617, 'Strategic', '2024-07-10', '2025-07-10'),
(718, 17, 618, 'Funding', '2024-08-15', NULL),
(719, 18, 619, 'R&D', '2024-09-20', '2025-09-20'),
(720, 19, 620, 'Marketing', '2024-10-25', NULL),
(721, 20, 621, 'Strategic', '2024-11-30', '2025-11-30'),
(722, 21, 622, 'Funding', '2024-12-05', NULL),
(723, 22, 623, 'R&D', '2024-01-15', '2025-01-15'),
(724, 23, 624, 'Marketing', '2024-02-20', NULL),
(725, 24, 625, 'Strategic', '2024-03-25', '2025-03-25'),
(726, 25, 626, 'Funding', '2024-04-30', NULL),
(727, 26, 627, 'R&D', '2024-05-05', '2025-05-05'),
(728, 27, 628, 'Marketing', '2024-06-10', NULL),
(729, 28, 629, 'Strategic', '2024-07-15', '2025-07-15'),
(730, 29, 630, 'Funding', '2024-08-20', NULL),
(731, 30, 631, 'R&D', '2024-09-25', '2025-09-25'),
(732, 31, 632, 'Marketing', '2024-10-30', NULL),
(733, 32, 633, 'Strategic', '2024-11-05', '2025-11-05'),
(734, 33, 634, 'Funding', '2024-12-01', NULL),
(735, 34, 635, 'R&D', '2024-01-10', '2025-01-10'),

(736, 35, 636, 'Marketing', '2024-02-15', NULL),
(737, 36, 637, 'Strategic', '2024-03-20', '2025-03-20'),
(738, 37, 638, 'Funding', '2024-04-25', NULL),
(739, 38, 639, 'R&D', '2024-05-30', '2025-05-30'),
(740, 39, 640, 'Marketing', '2024-06-05', NULL),
(741, 40, 641, 'Strategic', '2024-07-10', '2025-07-10'),
(742, 41, 642, 'Funding', '2024-08-15', NULL),
(743, 42, 643, 'R&D', '2024-09-20', '2025-09-20'),
(744, 43, 644, 'Marketing', '2024-10-25', NULL),
(745, 44, 645, 'Strategic', '2024-11-30', '2025-11-30'),
(746, 45, 646, 'Funding', '2024-12-05', NULL),
(747, 46, 647, 'R&D', '2024-01-15', '2025-01-15'),
(748, 47, 648, 'Marketing', '2024-02-20', NULL),
(749, 48, 649, 'Strategic', '2024-03-25', '2025-03-25'),
(750, 49, 650, 'Funding', '2024-04-30', NULL),
(751, 50, 651, 'R&D', '2024-05-05', '2025-05-05'),
(752, 51, 652, 'Marketing', '2024-06-10', NULL),
(753, 52, 653, 'Strategic', '2024-07-15', '2025-07-15'),
(754, 53, 654, 'Funding', '2024-08-20', NULL),
(755, 54, 655, 'R&D', '2024-09-25', '2025-09-25'),
(756, 55, 656, 'Marketing', '2024-10-30', NULL),
(757, 56, 657, 'Strategic', '2024-11-05', '2025-11-05'),
(758, 57, 658, 'Funding', '2024-12-01', NULL),
(759, 58, 659, 'R&D', '2024-01-10', '2025-01-10'),
(760, 59, 660, 'Marketing', '2024-02-15', NULL),
(761, 60, 661, 'Strategic', '2024-03-20', '2025-03-20'),
(762, 61, 662, 'Funding', '2024-04-25', NULL),

```
(763, 62, 663, 'R&D', '2024-05-30', '2025-05-30'),
(764, 63, 664, 'Marketing', '2024-06-05', NULL),
(765, 64, 665, 'Strategic', '2024-07-10', '2025-07-10');
```

Industry Table



The screenshot shows the pgAdmin 4 interface with the following details:

- Object Explorer:** Shows the database schema with various objects like Foreign Data Wrappers, Languages, Publications, Schemas (2), SE, Aggregates, Collations, Domains, FTS Configurations, FTS Dictionaries, FTS Parsers, FTS Templates, Foreign Tables, Functions, Materialized Views, Operators, Procedures, Sequences, Tables, Trigger Functions, Types, Views, public, Subscriptions, postgres, Login/Group Roles, and Tablespaces.
- Query Editor:** Displays the SQL query used to insert data into the industry table. The query is as follows:

```
1 v INSERT INTO "SE".industry (industry_id, name, sector, description) VALUES
2 (200, 'Fintech', 'Finance', 'Financial technology including payment solutions, lending, and wealth management.'),
3 (201, 'Healthcare IT', 'Healthcare', 'Technological solutions for healthcare management and patient care.'),
4 (202, 'AgriTech', 'Agriculture', 'Technology aimed at improving agricultural efficiency and sustainability.'),
5 (203, 'EdTech', 'Education', 'Educational technology including e-learning platforms and digital courses.'),
6 (204, 'Clean Energy', 'Energy', 'Sustainable energy production and renewable resources.'),
7 (205, 'BioTech', 'Biotechnology', 'Applications of biology to medicine, agriculture, and industrial processes.'),
8 (206, 'Cybersecurity', 'Technology', 'Protection of networks, devices, and data from digital attacks.'),
9 (207, 'Automotive', 'Manufacturing', 'Automobile production, electric vehicles, and smart vehicle technology.'),
10 (208, 'RetailTech', 'Retail', 'Technology solutions for the retail sector, including e-commerce and logistics.'),
11 (209, 'PropTech', 'Real Estate', 'Property technology for real estate management, sales, and rentals.'),
12 (210, 'FoodTech', 'Food & Beverage', 'Technologies aimed at improving food production, delivery, and quality control.')

Data Output Messages Notifications
INSERT 0 20

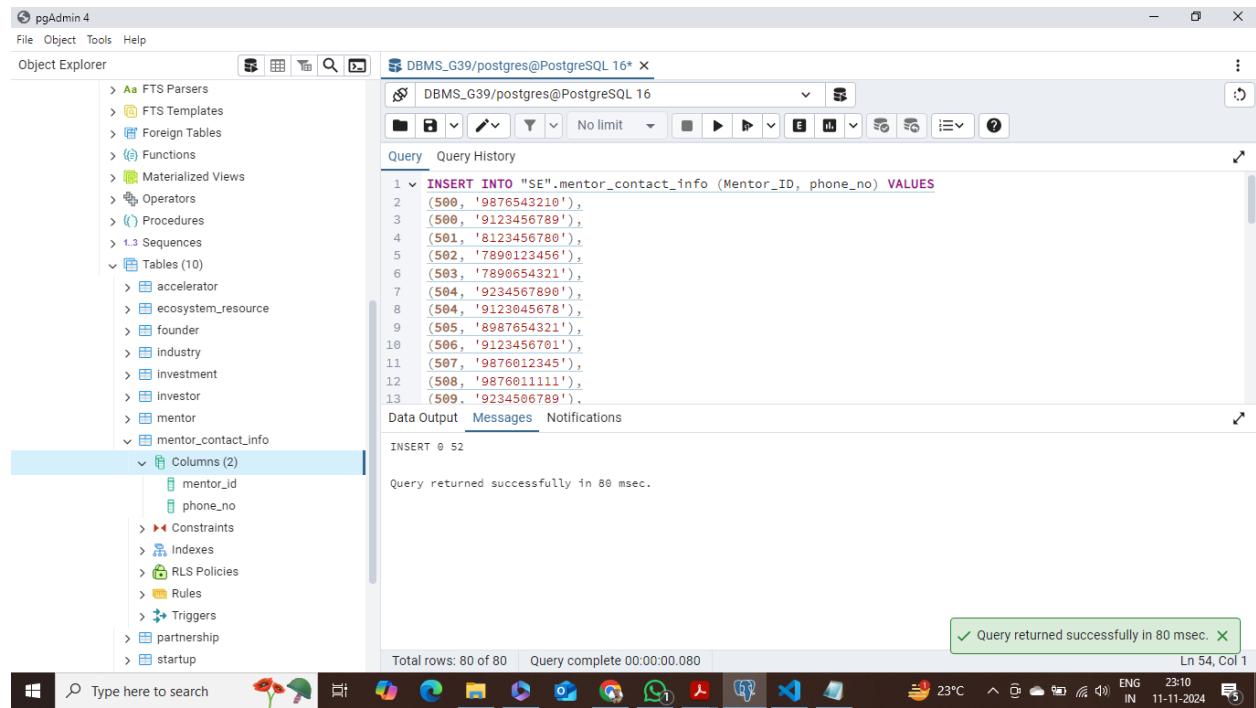
Query returned successfully in 88 msec.
```

The status bar at the bottom indicates "Total rows: 80 of 80" and "Query complete 00:00:00.088".

```
INSERT INTO industry (industry_id, name, sector, description) VALUES
(200, 'Fintech', 'Finance', 'Financial technology including payment solutions, lending, and wealth management.'),
(201, 'Healthcare IT', 'Healthcare', 'Technological solutions for healthcare management and patient care.'),
(202, 'AgriTech', 'Agriculture', 'Technology aimed at improving agricultural efficiency and sustainability.'),
(203, 'EdTech', 'Education', 'Educational technology including e-learning platforms and digital courses.'),
(204, 'Clean Energy', 'Energy', 'Sustainable energy production and renewable resources.'),
```

- (205, 'BioTech', 'Biotechnology', 'Applications of biology to medicine, agriculture, and industrial processes.'),
- (206, 'Cybersecurity', 'Technology', 'Protection of networks, devices, and data from digital attacks.'),
- (207, 'Automotive', 'Manufacturing', 'Automobile production, electric vehicles, and smart vehicle technology.'),
- (208, 'RetailTech', 'Retail', 'Technology solutions for the retail sector, including e-commerce and logistics.'),
- (209, 'PropTech', 'Real Estate', 'Property technology for real estate management, sales, and rentals.'),
- (210, 'FoodTech', 'Food & Beverage', 'Technologies aimed at improving food production, delivery, and quality.'),
- (211, 'Gaming', 'Entertainment', 'Development and distribution of video games and interactive entertainment.'),
- (212, 'Logistics', 'Supply Chain', 'Technology and services for transportation and supply chain optimization.'),
- (213, 'Telecommunications', 'Communication', 'Communication technologies including mobile networks and internet services.'),
- (214, 'FashionTech', 'Fashion', 'Technological innovations in fashion design, production, and retail.'),
- (215, 'InsurTech', 'Insurance', 'Digital transformation in the insurance industry for products and services.'),
- (216, 'SpaceTech', 'Aerospace', 'Technologies and advancements in space exploration and satellite technology.'),
- (217, 'ConstructionTech', 'Construction', 'Innovations in construction processes, materials, and project management.'),
- (218, 'LegalTech', 'Legal', 'Technology solutions for legal processes, compliance, and case management.'),
- (219, 'MedTech', 'Medical Devices', 'Development of medical devices and diagnostic equipment.');

Mentor_Contact_Info Table



INSERT INTO "SE".mentor_contact_info (Mentor_ID, Contact_Details) VALUES

(500, '9876543210'),

(500, '9123456789'),

(501, '8123456780'),

(502, '7890123456'),

(503, '7890654321'),

(504, '9234567890'),

(504, '9123045678'),

(505, '8987654321'),

(506, '9123456701'),

(507, '9876012345'),

(508, '9876011111'),

(509, '9234506789'),

(510, '8123456799'),

(511, '7890987654'),

(512, '7012345678'),

(513, '8123067895'),
(514, '7998654321'),
(514, '9123456023'),
(515, '9876543012'),
(516, '7890123098'),
(517, '9234567101'),
(518, '8012345765'),
(519, '9123345678'),
(520, '7890456789'),
(521, '8123456781'),
(522, '7012987654'),
(523, '9876543201'),
(524, '9234567801'),
(524, '8123098765'),
(525, '7890123097'),
(526, '9234567893'),
(527, '7012345676'),
(528, '8123409876'),
(529, '7890123987'),
(530, '9876543109'),
(531, '9234567809'),
(532, '8123456709'),
(533, '7890234567'),
(534, '7012345673'),
(535, '9876501234'),
(535, '9234567891'),
(536, '8123456782'),

```
(537, '7890987123'),
(538, '7012789563'),
(539, '9876554321'),
(540, '9234012345'),
(541, '8123901234'),
(542, '7890543210'),
(543, '7012876543'),
(544, '9876001234'),
(545, '9234098765'),
(545, '8123678901');
```

Accelerator_Contact_Info Table

The screenshot shows the pgAdmin 4 interface. The left pane, 'Object Explorer', displays a tree structure of database objects. Under 'Tables (10)', the 'mentor_contact_info' table is selected, showing its columns: mentor_id and phone_no. The right pane contains a query editor window titled 'DBMS_G39/postgres@PostgreSQL 16*'. The query window shows the following SQL code and its execution results:

```
1 ✓ INSERT INTO "SE".Accelerator_contact_info (Accelerator_ID, phone_no) VALUES
2   (101, 9876543210),
3   (101, 9123456789),
4   (102, 8123456780),
5   (103, 7890123456),
6   (103, 7890654321),
7   (104, 9234567890),
8   (105, 9123456789),
9   (106, 8987654321),
10  (107, 9123456701),
11  (108, 9876012345),
12  (108, 9876011111),
13  (109, 9234506789)
```

Below the query window, the status bar indicates 'Total rows: 80 of 80' and 'Query complete 00:00:00.074'. A green message box at the bottom right says '✓ Query returned successfully in 74 msec.'

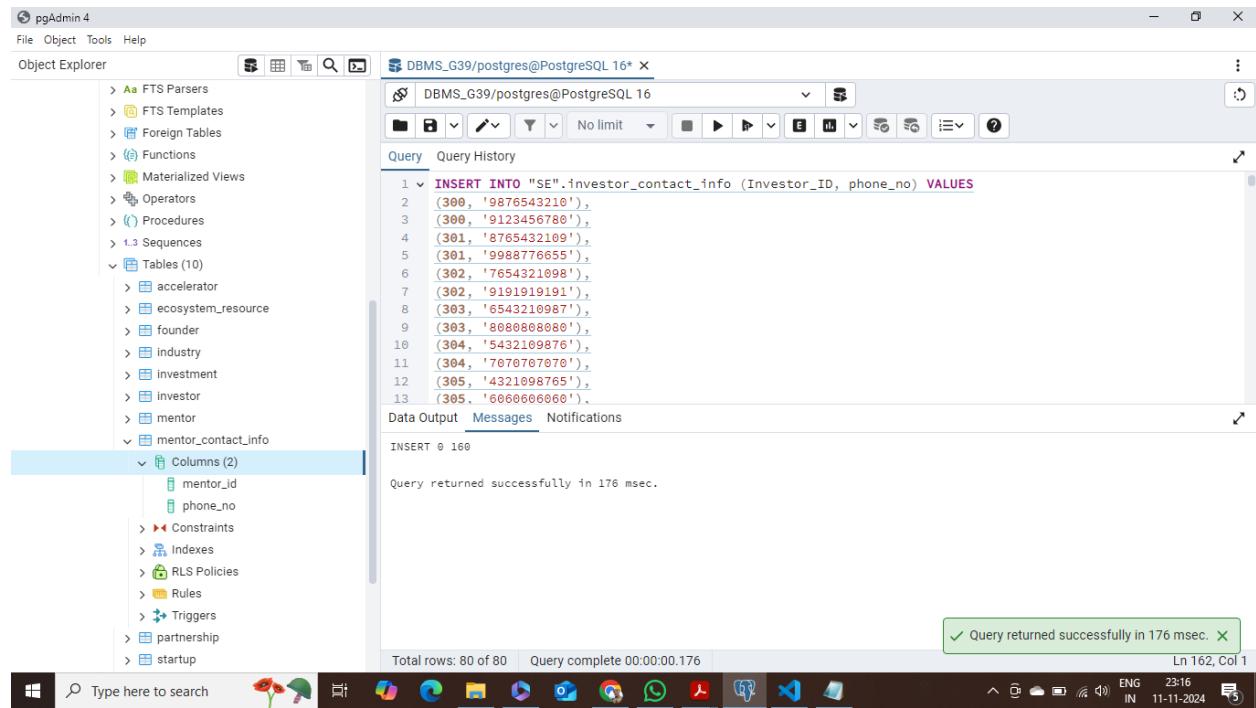
```
INSERT INTO "SE".Accelerator_contact_info (Accelerator_ID, phone_no) VALUES
(101, 9876543210),
```

(101, 9123456789),
(102, 8123456780),
(103, 7890123456),
(103, 7890654321),
(104, 9234567890),
(105, 9123045678),
(106, 8987654321),
(107, 9123456701),
(108, 9876012345),
(108, 9876011111),
(109, 9234506789),
(110, 8123456799),
(111, 7890987654),
(112, 7012345678),
(113, 8123067895),
(114, 7998654321),
(115, 9123456023),
(116, 9876543012),
(117, 7890123098),
(118, 9234567101),
(119, 8012345765),
(120, 9123345678),
(121, 7890456789),
(122, 8123456781),
(123, 7012987654),
(124, 9876543201),
(125, 9234567801),

(126, 8123098765),
(127, 7890123097),
(127, 9234567893),
(128, 7012345676),
(129, 8123409876),
(130, 7890123987),
(131, 9876543109),
(132, 9234567809),
(133, 8123456709),
(134, 7890234567),
(135, 7012345673),
(136, 9876501234),
(137, 9234567891),
(138, 8123456782),
(139, 7890987123),
(140, 7012789563),
(141, 9876554321),
(142, 9234012345),
(143, 8123901234),
(144, 7890543210),
(145, 7012876543),
(146, 9876001234),
(147, 9234098765),
(148, 8123678901),
(149, 7890345678),
(150, 7012009876),
(150, 9876112345),

| |
|--------------------|
| (151, 9234123456), |
| (152, 8123789012), |
| (153, 7890564321), |
| (154, 7012456789), |
| (155, 9876023456), |
| (156, 9234234567), |
| (157, 8123456012), |
| (158, 7890891234), |
| (159, 7012987345), |
| (160, 9876123456), |
| (161, 9234345678), |
| (162, 8123567890), |
| (163, 7890789432), |
| (164, 7012345908), |
| (165, 9876345678), |
| (166, 9234560123), |
| (167, 8123678091), |
| (168, 7890132456), |
| (169, 7012901234), |
| (170, 9876432109), |
| (170, 9234056789), |
| (170, 8123456791), |
| (170, 7890123678); |

Investor_Contact_Info Table



```
INSERT INTO "SE".investor_contact_info (Investor_ID, phone_no) VALUES
```

```
(300, '9876543210'),
```

```
(300, '9123456780'),
```

```
(301, '8765432109'),
```

```
(301, '9988776655'),
```

```
(302, '7654321098'),
```

```
(302, '9191919191'),
```

```
(303, '6543210987'),
```

```
(303, '8080808080'),
```

```
(304, '5432109876'),
```

```
(304, '7070707070'),
```

```
(305, '4321098765'),
```

```
(305, '6060606060'),
```

```
(306, '3210987654'),
```

```
(306, '5050505050'),
```

```
(307, '2109876543'),
```

(307, '4040404040'),
(308, '1098765432'),
(308, '3030303030'),
(309, '0987654321'),
(309, '2020202020'),
(310, '9876501234'),
(310, '9191919292'),
(311, '8765401234'),
(311, '9292929292'),
(312, '7654301234'),
(312, '8383838383'),
(313, '6543201234'),
(313, '7474747474'),
(314, '5432101234'),
(314, '6565656565'),
(315, '4321001234'),
(315, '5656565656'),
(316, '3210901234'),
(316, '4747474747'),
(317, '2109801234'),
(317, '3838383838'),
(318, '1098701234'),
(318, '2929292929'),
(319, '0987601234'),
(319, '1010101010'),
(320, '9876509876'),
(320, '1111111111'),

(321, '8765409876'),
(321, '1212121212'),
(322, '7654309876'),
(322, '1313131313'),
(323, '6543209876'),
(323, '1414141414'),
(324, '5432109876'),
(324, '1515151515'),
(325, '4321009876'),
(325, '1616161616'),
(326, '3210909876'),
(326, '1717171717'),
(327, '2109809876'),
(327, '1818181818'),
(328, '1098709876'),
(328, '1919191919'),
(329, '0987609876'),
(329, '2020202020'),
(330, '9876512345'),
(330, '2121212121'),
(331, '8765412345'),
(331, '2222222222'),
(332, '7654312345'),
(332, '2323232323'),
(333, '6543212345'),
(333, '2424242424'),
(334, '5432112345'),

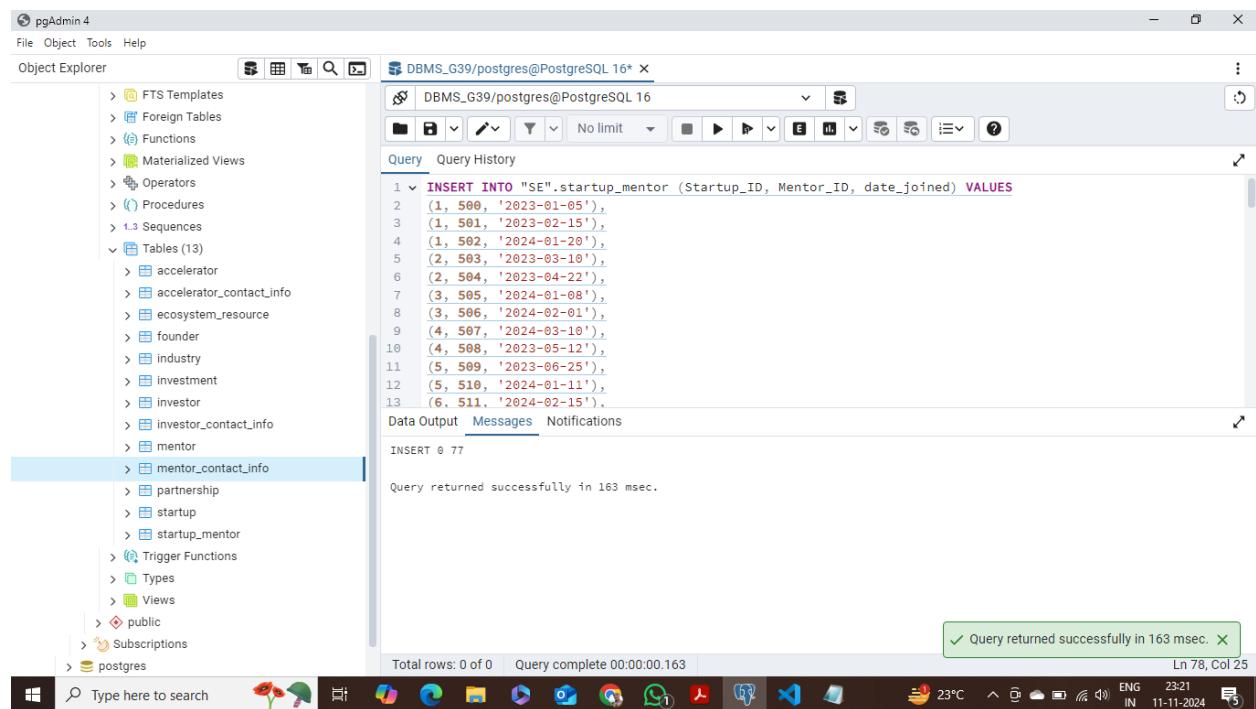
(334, '2525252525'),
(335, '4321112345'),
(335, '2626262626'),
(336, '3211012345'),
(336, '2727272727'),
(337, '2109912345'),
(337, '2828282828'),
(338, '1098712345'),
(338, '2929292929'),
(339, '0987612345'),
(339, '3030303030'),
(340, '9876523456'),
(340, '3131313131'),
(341, '8765423456'),
(341, '3232323232'),
(342, '7654323456'),
(342, '3333333333'),
(343, '6543223456'),
(343, '3434343434'),
(344, '5432123456'),
(344, '3535353535'),
(345, '4321123456'),
(345, '3636363636'),
(346, '3211023456'),
(346, '3737373737'),
(347, '2109923456'),
(347, '3838383838'),

(348, '1098723456'),
(348, '3939393939'),
(349, '0987623456'),
(349, '4040404040'),
(350, '9876534567'),
(350, '4141414141'),
(351, '8765434567'),
(351, '4242424242'),
(352, '7654334567'),
(352, '4343434343'),
(353, '6543234567'),
(353, '4444444444'),
(354, '5432134567'),
(354, '4545454545'),
(355, '4321134567'),
(355, '4646464646'),
(356, '3211034567'),
(356, '4747474747'),
(357, '2109934567'),
(357, '4848484848'),
(358, '1098734567'),
(358, '4949494949'),
(359, '0987634567'),
(359, '5050505050'),
(360, '9876545678'),
(360, '5151515151'),
(361, '8765445678'),

(361, '5252525252'),
(362, '7654345678'),
(362, '5353535353'),
(363, '6543245678'),
(363, '5454545454'),
(364, '5432145678'),
(364, '5555555555'),
(365, '4321145678'),
(365, '5656565656'),
(366, '3211045678'),
(366, '5757575757'),
(367, '2109945678'),
(367, '5858585858'),
(368, '1098745678'),
(368, '5959595959'),
(369, '0987645678'),
(369, '6060606060'),
(370, '9876556789'),
(370, '6161616161'),
(371, '8765456789'),
(371, '6262626262'),
(372, '7654356789'),
(372, '6363636363'),
(373, '6543256789'),
(373, '6464646464'),
(374, '5432156789'),
(374, '6565656565'),

```
(375, '4321156789'),
(375, '6666666666'),
(376, '3211056789'),
(376, '6767676767'),
(377, '2109956789'),
(377, '6868686868'),
(378, '1098756789'),
(378, '6969696969'),
(379, '0987656789'),
(379, '7070707070');
```

Startup_Mentor Table



The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying a tree structure of database objects. The 'Tables' node under 'SE' is expanded, showing tables like 'accelerator', 'accelerator_contact_info', 'ecosystem_resource', 'founder', 'industry', 'investment', 'investor', 'investor_contact_info', 'mentor', 'mentor_contact_info', 'partnerhip', 'startup', 'startup_mentor', and 'trigger_functions'. The 'mentor_contact_info' table is currently selected. The right pane is a query editor window titled 'DBMS_G39/postgres@PostgreSQL 16*'. It contains a SQL query:

```
1 v INSERT INTO "SE".startup_mentor (Startup_ID, Mentor_ID, date_joined) VALUES
2 (1, 500, '2023-01-05'),
3 (1, 501, '2023-02-15'),
4 (1, 502, '2023-01-20'),
5 (2, 503, '2023-03-10'),
6 (2, 504, '2023-04-22'),
7 (3, 505, '2024-01-08'),
8 (3, 506, '2024-02-01'),
9 (4, 507, '2024-03-10'),
10 (4, 508, '2023-05-12'),
11 (5, 509, '2023-06-25'),
12 (5, 510, '2024-01-11'),
13 (6, 511, '2024-02-15').
```

The status bar at the bottom indicates 'Query returned successfully in 163 msec.' and 'Ln 78, Col 25'. The taskbar at the very bottom shows various application icons.

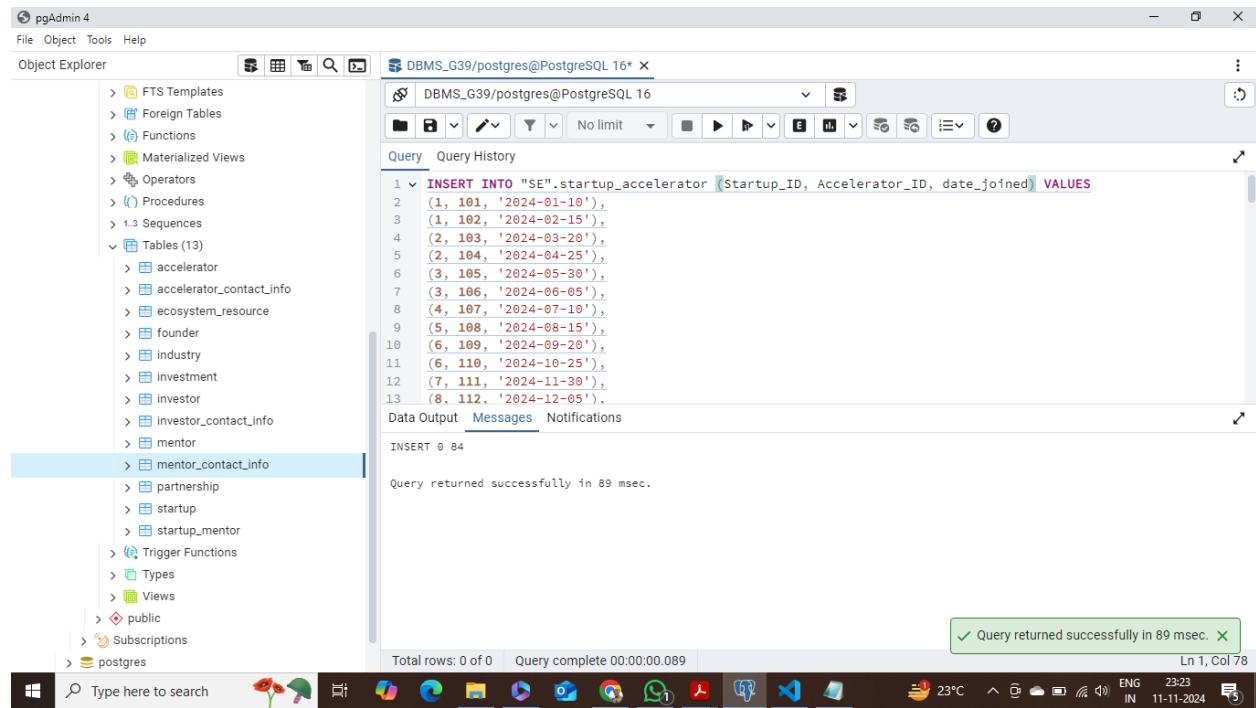
```
INSERT INTO "SE".startup_mentor (Startup_ID, Mentor_ID, Start_Date) VALUES
(1, 500, '2023-01-05'),
```

(1, 501, '2023-02-15'),
(1, 502, '2024-01-20'),
(2, 503, '2023-03-10'),
(2, 504, '2023-04-22'),
(3, 505, '2024-01-08'),
(3, 506, '2024-02-01'),
(4, 507, '2024-03-10'),
(4, 508, '2023-05-12'),
(5, 509, '2023-06-25'),
(5, 510, '2024-01-11'),
(6, 511, '2024-02-15'),
(6, 512, '2023-07-29'),
(7, 513, '2024-01-18'),
(7, 514, '2024-02-14'),
(8, 515, '2023-08-30'),
(8, 516, '2024-03-20'),
(9, 517, '2024-03-15'),
(9, 518, '2023-09-11'),
(10, 519, '2024-01-22'),
(10, 520, '2024-02-03'),
(11, 521, '2023-10-10'),
(11, 522, '2023-11-25'),
(12, 523, '2024-02-01'),
(12, 524, '2023-12-05'),
(13, 525, '2024-03-24'),
(13, 526, '2023-02-17'),
(14, 527, '2024-01-30'),

(14, 528, '2024-02-28'),
(15, 529, '2023-03-05'),
(15, 530, '2023-04-17'),
(16, 531, '2024-01-09'),
(16, 532, '2024-03-19'),
(17, 533, '2023-05-22'),
(17, 534, '2023-06-26'),
(18, 535, '2024-02-12'),
(18, 536, '2024-01-14'),
(19, 537, '2023-07-11'),
(19, 538, '2024-02-21'),
(20, 539, '2023-08-01'),
(20, 540, '2024-01-19'),
(21, 541, '2024-03-02'),
(21, 542, '2023-09-15'),
(22, 543, '2023-10-20'),
(22, 544, '2024-01-07'),
(23, 545, '2023-11-30'),
(23, 546, '2024-02-06'),
(24, 547, '2023-12-03'),
(24, 548, '2024-01-26'),
(25, 549, '2023-05-04'),
(25, 550, '2024-02-09'),
(26, 551, '2023-06-13'),
(26, 552, '2024-03-14'),
(27, 553, '2024-01-05'),
(27, 554, '2023-07-27'),

| |
|--------------------------|
| (28, 555, '2024-02-17'), |
| (28, 556, '2023-08-23'), |
| (29, 557, '2023-09-08'), |
| (29, 558, '2024-03-11'), |
| (30, 559, '2024-02-24'), |
| (30, 560, '2023-10-01'), |
| (31, 561, '2023-11-14'), |
| (31, 562, '2024-01-03'), |
| (32, 563, '2024-03-01'), |
| (32, 564, '2023-12-10'), |
| (33, 565, '2023-01-29'), |
| (33, 566, '2024-02-05'), |
| (34, 567, '2024-03-25'), |
| (34, 568, '2023-02-24'), |
| (35, 569, '2023-03-12'), |
| (35, 570, '2024-01-11'), |
| (36, 571, '2023-04-15'), |
| (36, 572, '2024-03-20'), |
| (37, 573, '2023-05-19'), |
| (37, 574, '2023-06-29'), |
| (38, 575, '2024-02-20'), |
| (38, 576, '2023-07-14'); |

Startup_Accelerator Table



```
INSERT INTO "SE".startup_accelerator (Startup_ID, Accelerator_ID, Start_Date) VALUES
```

```
(1, 101, '2024-01-10'),
(1, 102, '2024-02-15'),
(2, 103, '2024-03-20'),
(2, 104, '2024-04-25'),
(3, 105, '2024-05-30'),
(3, 106, '2024-06-05'),
(4, 107, '2024-07-10'),
(5, 108, '2024-08-15'),
(6, 109, '2024-09-20'),
(6, 110, '2024-10-25'),
(7, 111, '2024-11-30'),
(8, 112, '2024-12-05'),
(9, 113, '2025-01-10'),
(10, 114, '2025-02-15'),
(11, 115, '2025-03-20'),
```

(12, 116, '2025-04-25'),
(13, 117, '2025-05-30'),
(14, 118, '2025-06-05'),
(15, 119, '2025-07-10'),
(16, 120, '2025-08-15'),
(17, 121, '2025-09-20'),
(18, 122, '2025-10-25'),
(19, 123, '2025-11-30'),
(20, 124, '2025-12-05'),
(21, 125, '2026-01-10'),
(22, 126, '2026-02-15'),
(23, 127, '2026-03-20'),
(24, 128, '2026-04-25'),
(25, 129, '2026-05-30'),
(26, 130, '2026-06-05'),
(27, 131, '2026-07-10'),
(28, 132, '2026-08-15'),
(29, 133, '2026-09-20'),
(30, 134, '2026-10-25'),
(31, 135, '2026-11-30'),
(32, 136, '2026-12-05'),
(33, 137, '2027-01-10'),
(34, 138, '2027-02-15'),
(35, 139, '2027-03-20'),
(36, 140, '2027-04-25'),
(37, 141, '2027-05-30'),
(38, 142, '2027-06-05'),

(39, 143, '2027-07-10'),
(40, 144, '2027-08-15'),
(41, 145, '2027-09-20'),
(42, 146, '2027-10-25'),
(43, 147, '2027-11-30'),
(44, 148, '2027-12-05'),
(45, 149, '2028-01-10'),
(46, 150, '2028-02-15'),
(47, 101, '2028-03-10'),
(48, 102, '2028-04-15'),
(49, 103, '2028-05-20'),
(50, 104, '2028-06-25'),
(51, 105, '2028-07-30'),
(52, 106, '2028-08-05'),
(53, 107, '2028-09-10'),
(54, 108, '2028-10-15'),
(55, 109, '2028-11-20'),
(56, 110, '2028-12-25'),
(57, 111, '2029-01-10'),
(58, 112, '2029-02-15'),
(59, 113, '2029-03-20'),
(60, 114, '2029-04-25'),
(61, 115, '2029-05-30'),
(62, 116, '2029-06-05'),
(63, 117, '2029-07-10'),
(64, 118, '2029-08-15'),
(65, 119, '2029-09-20'),

```
(66, 120, '2029-10-25'),  
(67, 121, '2029-11-30'),  
(68, 122, '2029-12-05'),  
(69, 123, '2030-01-10'),  
(70, 124, '2030-02-15'),  
(71, 125, '2030-03-20'),  
(72, 126, '2030-04-25'),  
(73, 127, '2030-05-30'),  
(74, 128, '2030-06-05'),  
(75, 129, '2030-07-10'),  
(76, 130, '2030-08-15'),  
(77, 131, '2030-09-20'),  
(78, 132, '2030-10-25'),  
(79, 133, '2030-11-30'),  
(80, 134, '2030-12-05');
```

Data Snapshots

Startup Table

pgAdmin 4

File Object Tools Help

Object Explorer

- > FTS Configurations
- > FTS Dictionaries
- > FTS Parsers
- > FTS Templates
- > Foreign Tables
- > Functions
- > Materialized Views
- > Operators
- > Procedures
- > 1.3 Sequences
- > Tables (14)
 - > accelerator
 - > accelerator_contact_info
 - > ecosystem_resource
 - > founder
 - > industry
 - > investment
 - > investor
 - > investor_contact_info
 - > mentor
 - > mentor_contact_info
 - > partnership
 - > startup
 - > startup_accelerator
 - > startup_mentor
 - > Trigger Functions
 - > Types

DBMS_G39/postgres@PostgreSQL 16*

Query Query History

```
1 select * from "SE".Startup;
```

Data Output Messages Notifications

| startup_id | [PK] integer | name | character varying (255) | industry | character varying (100) | stage | character varying (50) | founded_date | date | location | character varying (100) | funding_ar | numeric (1) |
|------------|--------------|------------------|-------------------------|-------------------------|-------------------------|----------|------------------------|--------------|------|--------------------|-------------------------|------------|-------------|
| 1 | 1 | TechFlow | | Technology | | Seed | | 2023-01-15 | | San Francisco, CA | | 500 | |
| 2 | 2 | HealthWave | | Healthcare | | Series A | | 2021-03-10 | | New York, NY | | 200 | |
| 3 | 3 | EcoSmart | | Sustainability | | Seed | | 2022-06-25 | | Austin, TX | | 300 | |
| 4 | 4 | AgriFuture | | Agriculture | | Series B | | 2020-09-05 | | Chicago, IL | | 1500 | |
| 5 | 5 | FinTrend | | Finance | | Series A | | 2021-04-17 | | Boston, MA | | 1000 | |
| 6 | 6 | EduLeap | | Education | | Seed | | 2023-02-20 | | Seattle, WA | | 250 | |
| 7 | 7 | SmartUrban | | Urban Development | | Series A | | 2022-05-30 | | Los Angeles, CA | | 800 | |
| 8 | 8 | MediaNest | | Media | | Seed | | 2023-01-08 | | Los Angeles, CA | | 400 | |
| 9 | 9 | GlobalHealthTech | | Healthcare | | Series C | | 2019-07-15 | | Toronto, Canada | | 5000 | |
| 10 | 10 | CyberGuard | | Cybersecurity | | Series A | | 2021-08-12 | | Washington, D.C. | | 1200 | |
| 11 | 11 | AI Innovations | | Artificial Intelligence | | Seed | | 2023-03-10 | | Silicon Valley, CA | | 600 | |
| 12 | 12 | FoodeTech | | Food Technology | | | | | | San Diego, CA | | 900 | |
| | | | | | | | | | | | | | |

Total rows: 80 of 80 Query complete 00:00:00.126

Successfully run. Total query runtime: 126 msec. 80 rows affected. X

Ln 1, Col 28

Founder Table

pgAdmin 4

File Object Tools Help

Object Explorer

- > FTS Configurations
- > FTS Dictionaries
- > FTS Parsers
- > FTS Templates
- > Foreign Tables
- > Functions
- > Materialized Views
- > Operators
- > Procedures
- > 1.3 Sequences
- > Tables (14)
 - > accelerator
 - > accelerator_contact_info
 - > ecosystem_resource
 - > founder
 - > industry
 - > investment
 - > investor
 - > investor_contact_info
 - > mentor
 - > mentor_contact_info
 - > partnership
 - > startup
 - > startup_accelerator
 - > startup_mentor
 - > Trigger Functions
 - > Types

DBMS_G39/postgres@PostgreSQL 16*

Query Query History

```
1 select * from "SE".founder;
```

Data Output Messages Notifications

| founder_id | [PK] integer | fname | character varying (255) | lname | character varying (255) | role | character varying (100) | linkedin_profile | character varying (255) | startup_id | integer |
|------------|--------------|-----------|-------------------------|-----------|-------------------------|------------|-------------------------|---|-------------------------|------------|---------|
| 1 | 201 | Alice | | Smith | | CEO | | https://linkedin.com/in/alicesmith | | 1 | |
| 2 | 202 | Bob | | Johnson | | Co-founder | | https://linkedin.com/in/bobjohnson | | 1 | |
| 3 | 203 | Charlie | | Brown | | CTO | | https://linkedin.com/in/charliebrown | | 2 | |
| 4 | 204 | David | | Davis | | CEO | | https://linkedin.com/in/daviddavis | | 3 | |
| 5 | 205 | Eva | | Garcia | | Co-founder | | https://linkedin.com/in/evagarcia | | 3 | |
| 6 | 206 | Frank | | Miller | | CEO | | https://linkedin.com/in/frankmiller | | 4 | |
| 7 | 207 | Grace | | Hernandez | | CTO | | https://linkedin.com/in/gracehernand... | | 5 | |
| 8 | 208 | Henry | | Martinez | | CEO | | https://linkedin.com/in/henrymartinez | | 6 | |
| 9 | 209 | Isabella | | Wilson | | Co-founder | | https://linkedin.com/in/isabellawilson | | 7 | |
| 10 | 210 | Jack | | Moore | | CTO | | https://linkedin.com/in/jackmoore | | 8 | |
| 11 | 211 | Katherine | | Taylor | | CEO | | https://linkedin.com/in/katherinetaylor | | 9 | |
| 12 | 212 | Liam | | Anderson | | Co-founder | | https://linkedin.com/in/liamanderson | | 10 | |
| 13 | 213 | Mia | | Thomas | | | | | | | |

Total rows: 80 of 80 Query complete 00:00:00.109

Successfully run. Total query runtime: 109 msec. 80 rows affected. X

Ln 1, Col 27

Investor Table

```
select * from "SE".investor;
```

| investor_id | name | type | investment_stage_preference | location |
|-------------|------|-----------------|-----------------------------|--------------------|
| 1 | 300 | Rajesh Sharma | Angel Investor | Seed Mumbai |
| 2 | 301 | Priya Agarwal | Venture Capitalist | Series A Bengaluru |
| 3 | 302 | Anil Mehta | Private Equity | Series B Delhi |
| 4 | 303 | Sunita Rao | Venture Capitalist | Series A Hyderabad |
| 5 | 304 | Amitabh Gupta | Angel Investor | Seed Pune |
| 6 | 305 | Kavita Patel | Corporate Investor | Series B Ahmedabad |
| 7 | 306 | Ravi Iyer | Venture Capitalist | Series A Chennai |
| 8 | 307 | Swati Joshi | Angel Investor | Pre-Seed Jaipur |
| 9 | 308 | Deepak Malhotra | Venture Capitalist | Seed Kolkata |
| 10 | 309 | Neha Kapoor | Private Equity | Series B Mumbai |
| 11 | 310 | Suresh Reddy | Corporate Investor | Series A Bengaluru |
| 12 | 311 | Vikas Singh | Angel Investor | Seed Delhi |
| 13 | 312 | Manisha Desai | Venture Capitalist | |

Successfully run. Total query runtime: 116 msec. 81 rows affected.

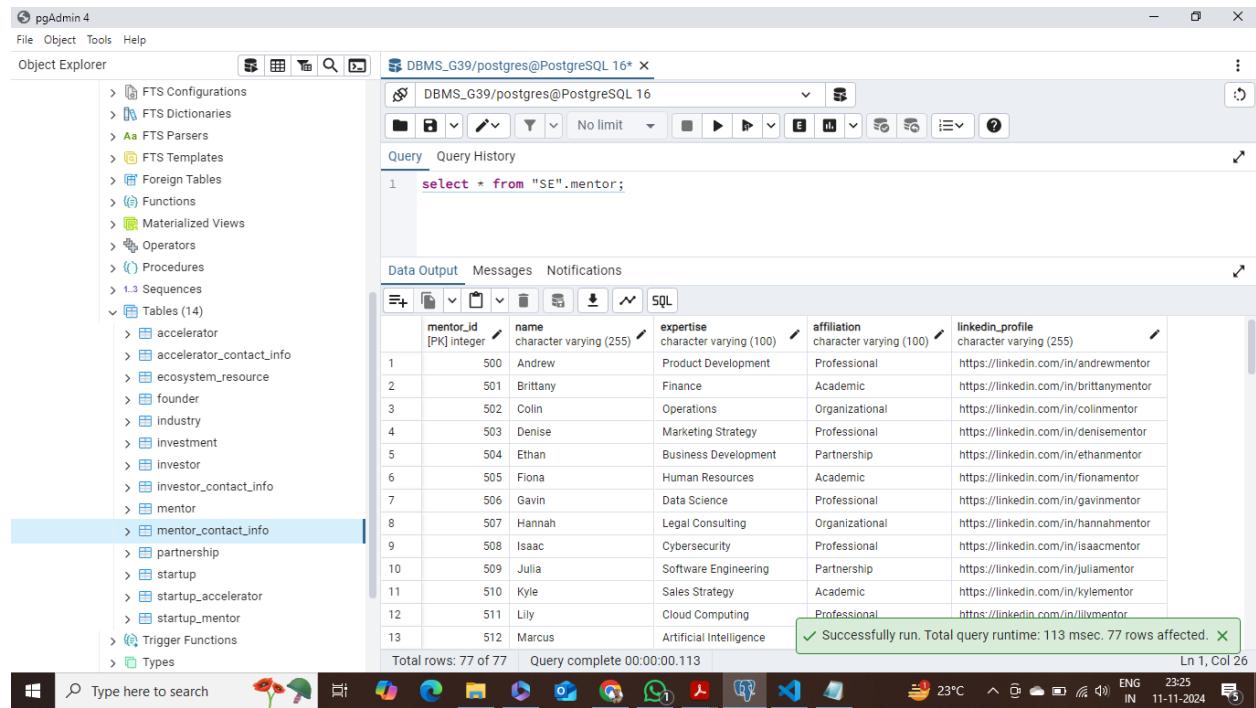
Investment Table

```
select * from "SE".investment;
```

| investment_id | investor_id | startup_id | amount | date | stage |
|---------------|-------------|------------|--------|-----------|---------------------|
| 1 | 1000 | 300 | 1 | 500000.00 | 2023-01-15 Seed |
| 2 | 1001 | 301 | 1 | 250000.00 | 2023-02-20 Seed |
| 3 | 1002 | 302 | 2 | 300000.00 | 2023-03-18 Series A |
| 4 | 1003 | 303 | 2 | 450000.00 | 2023-04-12 Series A |
| 5 | 1004 | 304 | 3 | 600000.00 | 2023-05-08 Seed |
| 6 | 1005 | 305 | 3 | 200000.00 | 2023-05-28 Seed |
| 7 | 1006 | 306 | 4 | 750000.00 | 2023-06-15 Series B |
| 8 | 1007 | 307 | 4 | 500000.00 | 2023-07-10 Series B |
| 9 | 1008 | 308 | 5 | 300000.00 | 2023-08-05 Seed |
| 10 | 1009 | 309 | 5 | 350000.00 | 2023-08-25 Seed |
| 11 | 1010 | 310 | 6 | 450000.00 | 2023-09-14 Series A |
| 12 | 1011 | 311 | 6 | 550000.00 | 2023-10-10 Series A |
| 13 | 1012 | 312 | 7 | 250000.00 | |

Successfully run. Total query runtime: 109 msec. 80 rows affected.

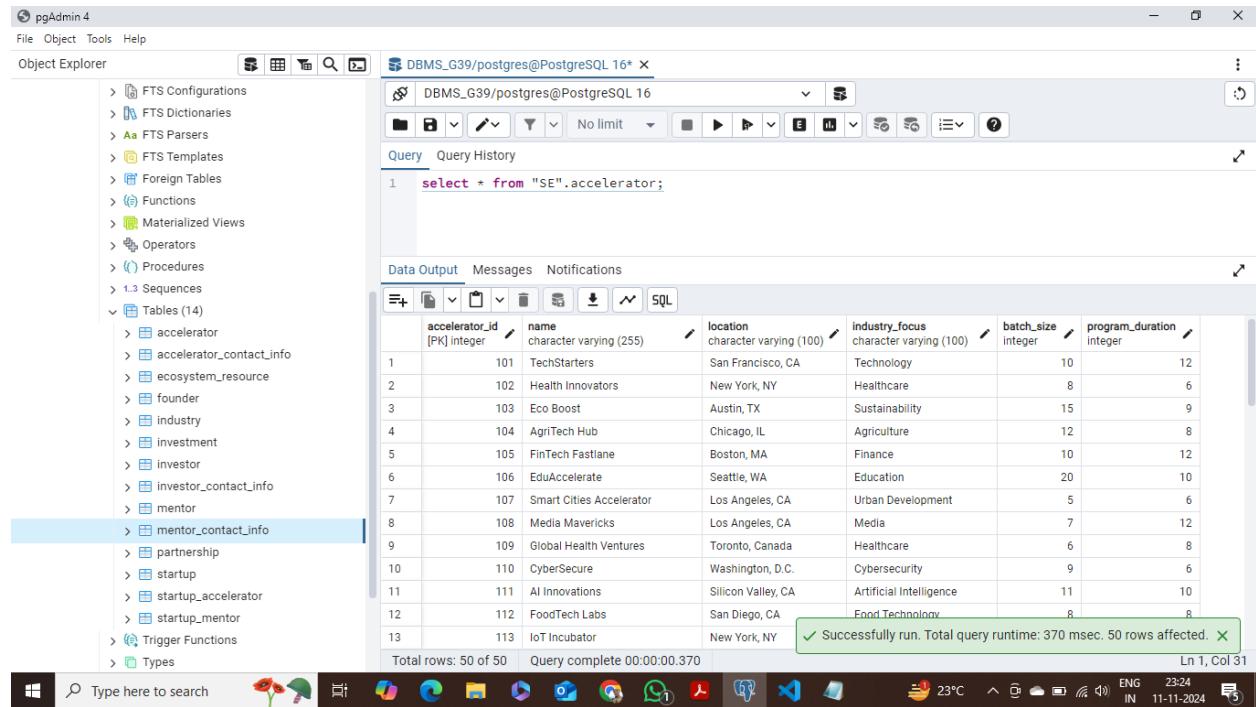
Mentor Table



The screenshot shows the pgAdmin 4 interface with the following details:

- File Menu:** File, Object, Tools, Help.
- Object Explorer:** Shows a tree view of database objects including FTS Configurations, FTS Dictionaries, FTS Parsers, FTS Templates, Foreign Tables, Functions, Materialized Views, Operators, Procedures, Sequences, and Tables (14). The "Tables (14)" node is expanded, and the "mentor" table is selected.
- Query Editor:** Displays the SQL query: `select * from "SE".mentor;`
- Data Output:** Shows the results of the query in a grid format. The columns are: mentor_id [PK] integer, name character varying (255), expertise character varying (100), affiliation character varying (100), and linkedin_profile character varying (255). The data includes 13 rows of mentor information.
- Status Bar:** Shows "Successfully run. Total query runtime: 113 msec. 77 rows affected." and "Ln 1, Col 26".
- System Tray:** Shows the Windows taskbar with various pinned icons like File Explorer, Edge, and File History.

Accelerator Table



The screenshot shows the pgAdmin 4 interface with the following details:

- File Menu:** File, Object, Tools, Help.
- Object Explorer:** Shows a tree view of database objects including FTS Configurations, FTS Dictionaries, FTS Parsers, FTS Templates, Foreign Tables, Functions, Materialized Views, Operators, Procedures, Sequences, and Tables (14). The "Tables (14)" node is expanded, and the "accelerator" table is selected.
- Query Editor:** Displays the SQL query: `select * from "SE".accelerator;`
- Data Output:** Shows the results of the query in a grid format. The columns are: accelerator_id [PK] integer, name character varying (255), location character varying (100), industry_focus character varying (100), batch_size integer, and program_duration integer. The data includes 13 rows of accelerator information.
- Status Bar:** Shows "Successfully run. Total query runtime: 370 msec. 50 rows affected." and "Ln 1, Col 31".
- System Tray:** Shows the Windows taskbar with various pinned icons like File Explorer, Edge, and File History.

Ecosystem_Resource Table

pgAdmin 4

File Object Tools Help

Object Explorer

DBMS_G39/postgres@PostgreSQL 16*

Query Query History

```
1 select * from "SE".ecosystem_resource;
```

Data Output Messages Notifications

SQL

| resource_id | [PK] integer | name | character varying (255) | type | character varying (50) | provider | character varying (100) | contact_info | character varying (255) |
|-------------|--------------|---------------------------|-------------------------|------------|------------------------|--------------------------|-------------------------|--------------------------------|-------------------------|
| 1 | 600 | Venture Capital Group | | Funding | | Venture Capital Inc. | | contact@venturecapital.com | |
| 2 | 601 | Startup Legal Solutions | | Legal | | Lawyers R Us | | info@lawyersrus.com | |
| 3 | 602 | Marketing Pros | | Marketing | | Marketing Solutions Ltd. | | contact@marketingsolutions.com | |
| 4 | 603 | Tech Innovators Hub | | Networking | | Tech Network Co. | | contact@technetwork.com | |
| 5 | 604 | Finance Advisors | | Funding | | Finance Experts | | info@financeexperts.com | |
| 6 | 605 | Innovation Consulting | | Consulting | | Innovate Consulting | | info@innovateconsulting.com | |
| 7 | 606 | Business Strategy Group | | Consulting | | Strategic Partners | | contact@strategicpartners.com | |
| 8 | 607 | HR Solutions | | HR | | HR Partners | | contact@hrpartners.com | |
| 9 | 608 | Product Development Inc. | | R&D | | Dev Inc. | | info@devinc.com | |
| 10 | 609 | Legal Advisors | | Legal | | Legal Experts Group | | info@legalexperts.com | |
| 11 | 610 | Cloud Services | | Tech | | Cloud Services LLC | | support@cloudservices.com | |
| 12 | 611 | Sales Accelerator | | Sales | | Sales Experts | | contact@salesexperts.com | |
| 13 | 612 | Market Research Institute | | Research | | | | | |

Total rows: 66 of 66 Query complete 00:00:00.117

Successfully run. Total query runtime: 117 msec. 66 rows affected. X

Ln 1, Col 38

Partnership Table

pgAdmin 4

File Object Tools Help

Object Explorer

DBMS_G39/postgres@PostgreSQL 16*

Query Query History

```
1 select * from "SE".partnership;
```

Data Output Messages Notifications

SQL

| partnership_id | [PK] integer | startup_id | integer | partner_organization_id | integer | type | character varying (50) | start_date | date | end_date | date |
|----------------|--------------|------------|---------|-------------------------|---------|-----------|------------------------|------------|--------|------------|------|
| 1 | 700 | 1 | | 600 | | Strategic | | 2024-01-15 | | 2025-01-15 | |
| 2 | 701 | 1 | | 601 | | Marketing | | 2024-03-10 | | 2024-09-10 | |
| 3 | 702 | 2 | | 602 | | R&D | | 2024-04-20 | | 2025-04-20 | |
| 4 | 703 | 2 | | 603 | | Strategic | | 2024-05-15 | [null] | | |
| 5 | 704 | 3 | | 604 | | Marketing | | 2024-06-01 | | 2025-06-01 | |
| 6 | 705 | 4 | | 605 | | Funding | | 2024-07-15 | | 2025-07-15 | |
| 7 | 706 | 5 | | 606 | | Strategic | | 2024-08-20 | [null] | | |
| 8 | 707 | 6 | | 607 | | R&D | | 2024-09-25 | | 2025-09-25 | |
| 9 | 708 | 7 | | 608 | | Marketing | | 2024-10-30 | [null] | | |
| 10 | 709 | 8 | | 609 | | Strategic | | 2024-11-05 | | 2025-11-05 | |
| 11 | 710 | 9 | | 610 | | Funding | | 2024-12-01 | [null] | | |
| 12 | 711 | 10 | | 611 | | R&D | | 2024-01-10 | | 2025-01-10 | |
| 13 | 712 | 11 | | 612 | | Market | | | | | |

Total rows: 66 of 66 Query complete 00:00:00.133

Successfully run. Total query runtime: 133 msec. 66 rows affected. X

Ln 1, Col 31

Industry Table

The screenshot shows the pgAdmin 4 interface with the 'industry' table selected in the Object Explorer. The SQL tab contains the query: `select * from "SE".industry;`. The Data Output tab displays the following table:

| | industry_id | name | sector | description |
|----|-------------|---------------|-----------------|---|
| 1 | 200 | Fintech | Finance | Financial technology including payment solutions, lending, and wealth management. |
| 2 | 201 | Healthcare IT | Healthcare | Technological solutions for healthcare management and patient care. |
| 3 | 202 | AgriTech | Agriculture | Technology aimed at improving agricultural efficiency and sustainability. |
| 4 | 203 | EdTech | Education | Educational technology including e-learning platforms and digital courses. |
| 5 | 204 | Clean Energy | Energy | Sustainable energy production and renewable resources. |
| 6 | 205 | BioTech | Biotechnology | Applications of biology to medicine, agriculture, and industrial processes. |
| 7 | 206 | Cybersecurity | Technology | Protection of networks, devices, and data from digital attacks. |
| 8 | 207 | Automotive | Manufacturing | Automobile production, electric vehicles, and smart vehicle technology. |
| 9 | 208 | RetailTech | Retail | Technology solutions for the retail sector, including e-commerce and logistics. |
| 10 | 209 | PropTech | Real Estate | Property technology for real estate management, sales, and rentals. |
| 11 | 210 | FoodTech | Food & Beverage | Technologies aimed at improving food production, delivery, and quality. |
| 12 | 211 | Gaming | Entertainment | Development and distribution of video games and interactive entertainment. |
| 13 | 212 | Logistics | Supply Chain | |

Total rows: 20 of 20 Query complete 00:00:00.256 Ln 1, Col 28

Mentor_Contact_Info Table

The screenshot shows the pgAdmin 4 interface with the 'mentor_contact_info' table selected in the Object Explorer. The SQL tab contains the query: `select * from "SE".mentor_contact_info;`. The Data Output tab displays the following table:

| | mentor_id | phone_no |
|----|-----------|------------|
| 1 | 500 | 9876543210 |
| 2 | 500 | 9123456789 |
| 3 | 501 | 8123456780 |
| 4 | 502 | 7890123456 |
| 5 | 503 | 7890654321 |
| 6 | 504 | 9234567890 |
| 7 | 504 | 9123045678 |
| 8 | 505 | 8987654321 |
| 9 | 506 | 9123456701 |
| 10 | 507 | 9876012345 |
| 11 | 508 | 9876011111 |
| 12 | 509 | 9234506789 |
| 13 | 510 | 8123456799 |

Total rows: 52 of 52 Query complete 00:00:00.182 Ln 1, Col 39

Accelerator_Contact_Info Table

The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying various database objects like FTS Configurations, Functions, and Tables. The right pane is the Query Editor, showing the results of a query. The query is:

```
1 select * from "SE".accelerator_contact_info;
```

The results table has two columns: 'accelerator_id' and 'phone_no'. The data is as follows:

| | accelerator_id | phone_no |
|----|----------------|------------|
| 1 | 101 | 9876543210 |
| 2 | 101 | 9123456789 |
| 3 | 102 | 8123456780 |
| 4 | 103 | 7890123456 |
| 5 | 103 | 7890654321 |
| 6 | 104 | 9234567890 |
| 7 | 105 | 9123045678 |
| 8 | 106 | 8987654321 |
| 9 | 107 | 9123456701 |
| 10 | 108 | 9876012345 |
| 11 | 108 | 9876011111 |
| 12 | 109 | 923456789 |
| 13 | 110 | 8123456799 |

Below the table, a message box says: "Successfully run. Total query runtime: 193 msec. 78 rows affected." The status bar at the bottom right shows: Ln 1, Col 44, 23°C, ENG IN, 11-11-2024.

Investor_Contact_Info Table

The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying various database objects like FTS Configurations, Functions, and Tables. The right pane is the Query Editor, showing the results of a query. The query is:

```
1 select * from "SE".investor_contact_info;
```

The results table has two columns: 'investor_id' and 'phone_no'. The data is as follows:

| | investor_id | phone_no |
|----|-------------|------------|
| 1 | 300 | 9876543210 |
| 2 | 300 | 9123456780 |
| 3 | 301 | 8765432109 |
| 4 | 301 | 9988776655 |
| 5 | 302 | 7654321098 |
| 6 | 302 | 9191919191 |
| 7 | 303 | 6543210987 |
| 8 | 303 | 8080808080 |
| 9 | 304 | 5432109876 |
| 10 | 304 | 7070707070 |
| 11 | 305 | 4321098765 |
| 12 | 305 | 6060606060 |
| 13 | 306 | 3210987654 |

Below the table, a message box says: "Successfully run. Total query runtime: 155 msec. 160 rows affected." The status bar at the bottom right shows: Ln 1, Col 41, 23°C, ENG IN, 11-11-2024.

Startup_Mentor Table

```
select * from "SE".startup_mentor;
```

| startup_id | mentor_id | date_joined |
|------------|-----------|-------------|
| 1 | 1 | 2023-01-05 |
| 2 | 1 | 2023-02-15 |
| 3 | 1 | 2024-01-20 |
| 4 | 2 | 2023-03-10 |
| 5 | 2 | 2023-04-22 |
| 6 | 3 | 2024-01-08 |
| 7 | 3 | 2024-02-01 |
| 8 | 4 | 2024-03-10 |
| 9 | 4 | 2023-05-12 |
| 10 | 5 | 2023-06-25 |
| 11 | 5 | 2024-01-11 |
| 12 | 6 | 2024-02-15 |
| 13 | 6 | 2023-07-29 |

Total rows: 77 of 77 Query complete 00:00:00.171

Successfully run. Total query runtime: 171 msec. 77 rows affected. Ln 1, Col 34

Startup_Accelerator Table

```
select * from "SE".startup_accelerator;
```

| startup_id | accelerator_id | date_joined |
|------------|----------------|-------------|
| 1 | 101 | 2024-01-10 |
| 2 | 102 | 2024-02-15 |
| 3 | 103 | 2024-03-20 |
| 4 | 104 | 2024-04-25 |
| 5 | 105 | 2024-05-30 |
| 6 | 106 | 2024-06-05 |
| 7 | 107 | 2024-07-10 |
| 8 | 108 | 2024-08-15 |
| 9 | 109 | 2024-09-20 |
| 10 | 110 | 2024-10-25 |
| 11 | 111 | 2024-11-30 |
| 12 | 112 | 2024-12-05 |
| 13 | 113 | 2025-01-10 |

Total rows: 84 of 84 Query complete 00:00:00.106

Successfully run. Total query runtime: 106 msec. 84 rows affected. Ln 1, Col 39

3. SQL Queries

1. Select all startups.

```
SELECT * FROM "SE".startup;
```

The screenshot shows the pgAdmin 4 interface. On the left is the Object Explorer pane, which lists various database objects like FTS Configurations, Functions, and Tables. The main area contains a SQL editor window with the query `SELECT * FROM "SE".startup;`. Below the editor is a Data Output pane displaying the results of the query. The results are as follows:

| startup_id | name | industry | stage | founded_date | location | funding_amount |
|------------|------------------|-------------------------|----------|--------------|--------------------|----------------|
| 1 | TechFlow | Technology | Seed | 2023-01-15 | San Francisco, CA | 50C |
| 2 | HealthWave | Healthcare | Series A | 2021-03-10 | New York, NY | 200C |
| 3 | EcoSmart | Sustainability | Seed | 2022-06-25 | Austin, TX | 30C |
| 4 | AgriFuture | Agriculture | Series B | 2020-09-05 | Chicago, IL | 150C |
| 5 | FinTrend | Finance | Series A | 2021-04-17 | Boston, MA | 100C |
| 6 | EduLeap | Education | Seed | 2023-02-20 | Seattle, WA | 25C |
| 7 | SmartUrban | Urban Development | Series A | 2022-05-30 | Los Angeles, CA | 80C |
| 8 | MediaNest | Media | Seed | 2023-01-08 | Los Angeles, CA | 40C |
| 9 | GlobalHealthTech | Healthcare | Series C | 2019-07-15 | Toronto, Canada | 500C |
| 10 | CyberGuard | Cybersecurity | Series A | 2021-08-12 | Washington, D.C. | 120C |
| 11 | AI Innovations | Artificial Intelligence | Seed | 2023-03-10 | Silicon Valley, CA | 60C |

Total rows: 80 of 80 Query complete 00:00:00.122 Ln 1, Col 28

2. Get details of a specific startup by ID.

```
SELECT * FROM "SE".startup WHERE Startup_ID = 25;
```

```
1 SELECT * FROM "SE".startup WHERE Startup_ID = 25;
2
```

| startup_id | name | industry | stage | founded_date | location | funding_amou |
|------------|-------------|----------|----------|--------------|---------------|--------------|
| 25 | FashionTech | Fashion | Series A | 2021-04-12 | Paris, France | 600000 |

Successfully run. Total query runtime: 110 msec. 1 rows affected.

3. Get all investors.

```
SELECT * FROM "SE".investor;
```

```
1 SELECT * FROM "SE".investor;
```

| investor_id | name | type | investment_stage_preference | location |
|-------------|-----------------|--------------------|-----------------------------|-----------|
| 300 | Rajesh Sharma | Angel Investor | Seed | Mumbai |
| 301 | Priya Agarwal | Venture Capitalist | Series A | Bengaluru |
| 302 | Anil Mehta | Private Equity | Series B | Delhi |
| 303 | Sunita Rao | Venture Capitalist | Series A | Hyderabad |
| 304 | Amitabh Gupta | Angel Investor | Seed | Pune |
| 305 | Kavita Patel | Corporate Investor | Series B | Ahmedabad |
| 306 | Ravi Iyer | Venture Capitalist | Series A | Chennai |
| 307 | Swati Joshi | Angel Investor | Pre-Seed | Jaipur |
| 308 | Deepak Malhotra | Venture Capitalist | Seed | Kolkata |
| 309 | Neha Kapoor | Private Equity | Series B | Mumbai |
| 310 | Suresh Reddy | Corporate Investor | Series A | Bangalore |
| 311 | Vikas Singh | Angel Investor | Pre-Seed | Chennai |

Successfully run. Total query runtime: 112 msec. 81 rows affected.

4. List all founder in a particular role.

```
SELECT * FROM "SE".founder WHERE role = 'CEO';
```

The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying various database objects like FTS Configurations, FTS Dictionaries, FTS Parsers, FTS Templates, Foreign Tables, Functions, Materialized Views, Operators, Procedures, Sequences, and 14 Tables. The 'founder' table under the 'Tables (14)' section is selected. The right pane contains a query editor window titled 'DBMS_G39/postgres@PostgreSQL 16*' with the following content:

```
1  SELECT * FROM "SE".founder WHERE role = 'CEO';
2
3
```

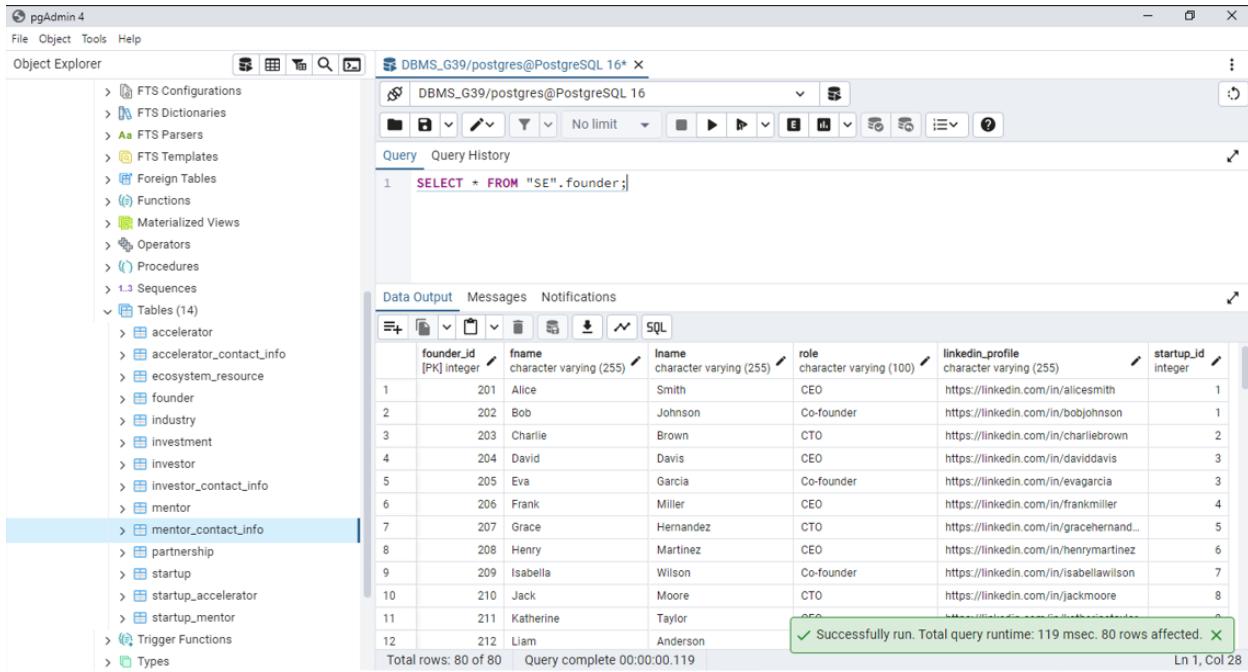
Below the query editor is a Data Output tab showing the results of the query. The results are as follows:

| founder_id | fname | lname | role | linkedin_profile | startup_id |
|------------|-----------|----------|------|---|------------|
| 201 | Alice | Smith | CEO | https://linkedin.com/in/alicesmith | 1 |
| 204 | David | Davis | CEO | https://linkedin.com/in/daviddavis | 3 |
| 206 | Frank | Miller | CEO | https://linkedin.com/in/frankmiller | 4 |
| 208 | Henry | Martinez | CEO | https://linkedin.com/in/henymartinez | 6 |
| 211 | Katherine | Taylor | CEO | https://linkedin.com/in/katherinetaylor | 9 |
| 214 | Noah | Jackson | CEO | https://linkedin.com/in/noahjackson | 12 |
| 217 | Quinn | Clark | CEO | https://linkedin.com/in/quinnclark | 15 |
| 220 | Tina | Walker | CEO | https://linkedin.com/in/tinawalker | 18 |
| 223 | Will | King | CEO | https://linkedin.com/in/willking | 21 |
| 226 | Zane | Adams | CEO | https://linkedin.com/in/zaneadams | 24 |
| 229 | Cindy | Mitchell | CEO | https://linkedin.com/in/cindymitchell | 27 |
| 232 | Felix | Turner | CEO | https://linkedin.com/in/felixturner | 30 |

Total rows: 28 of 28 Query complete 00:00:00.116

5. Get all founders of startups.

```
SELECT * FROM "SE".founder;
```

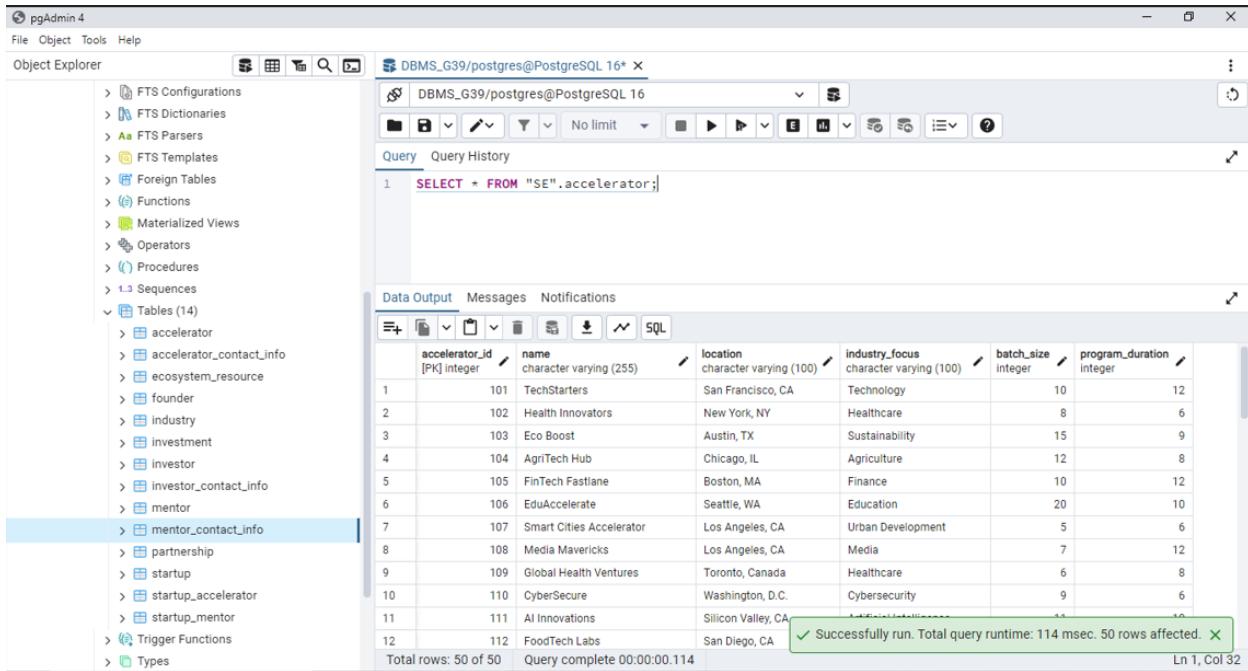


The screenshot shows the pgAdmin 4 interface with the database 'DBMS_G39' selected. In the Object Explorer, the 'Tables' node is expanded, showing 14 tables. The 'founder' table is selected and highlighted in blue. The Data Output tab displays the results of the query `SELECT * FROM "SE".founder;`. The table has columns: founder_id (PK integer), fname (character varying(255)), lname (character varying(255)), role (character varying(100)), linkedin_profile (character varying(255)), and startup_id (integer). The data shows 12 rows of founders with their names, roles, LinkedIn profiles, and startup IDs.

| founder_id | fname | lname | role | linkedin_profile | startup_id |
|------------|-------|-----------|-----------|------------------|---|
| 1 | 201 | Alice | Smith | CEO | https://linkedin.com/in/alicesmith |
| 2 | 202 | Bob | Johnson | Co-founder | https://linkedin.com/in/bobjohnson |
| 3 | 203 | Charlie | Brown | CTO | https://linkedin.com/in/charliebrown |
| 4 | 204 | David | Davis | CEO | https://linkedin.com/in/daviddavis |
| 5 | 205 | Eva | Garcia | Co-founder | https://linkedin.com/in/evagarcia |
| 6 | 206 | Frank | Miller | CEO | https://linkedin.com/in/frankmiller |
| 7 | 207 | Grace | Hernandez | CTO | https://linkedin.com/in/gracehernand... |
| 8 | 208 | Henry | Martinez | CEO | https://linkedin.com/in/henrymartinez |
| 9 | 209 | Isabella | Wilson | Co-founder | https://linkedin.com/in/isabellawilson |
| 10 | 210 | Jack | Moore | CTO | https://linkedin.com/in/jackmoore |
| 11 | 211 | Katherine | Taylor | CEO | https://linkedin.com/in/katherinetaylor |
| 12 | 212 | Liam | Anderson | CEO | https://linkedin.com/in/liamanderson |

6. Get all accelerators.

```
SELECT * FROM "SE".accelerator;
```



The screenshot shows the pgAdmin 4 interface with the database 'DBMS_G39' selected. In the Object Explorer, the 'Tables' node is expanded, showing 14 tables. The 'accelerator' table is selected and highlighted in blue. The Data Output tab displays the results of the query `SELECT * FROM "SE".accelerator;`. The table has columns: accelerator_id (PK integer), name (character varying(255)), location (character varying(100)), industry_focus (character varying(100)), batch_size (integer), and program_duration (integer). The data shows 12 rows of accelerators with their names, locations, industry focuses, batch sizes, and program durations.

| accelerator_id | name | location | industry_focus | batch_size | program_duration |
|----------------|------|--------------------------|--------------------|-------------------------|------------------|
| 1 | 101 | TechStarters | San Francisco, CA | Technology | 10 |
| 2 | 102 | Health Innovators | New York, NY | Healthcare | 8 |
| 3 | 103 | Eco Boost | Austin, TX | Sustainability | 15 |
| 4 | 104 | AgriTech Hub | Chicago, IL | Agriculture | 12 |
| 5 | 105 | FinTech Fastlane | Boston, MA | Finance | 10 |
| 6 | 106 | EduAccelerate | Seattle, WA | Education | 20 |
| 7 | 107 | Smart Cities Accelerator | Los Angeles, CA | Urban Development | 5 |
| 8 | 108 | Media Mavericks | Los Angeles, CA | Media | 7 |
| 9 | 109 | Global Health Ventures | Toronto, Canada | Healthcare | 6 |
| 10 | 110 | CyberSecure | Washington, D.C. | Cybersecurity | 9 |
| 11 | 111 | AI Innovations | Silicon Valley, CA | Artificial Intelligence | 10 |
| 12 | 112 | FoodTech Labs | San Diego, CA | Food Technology | 12 |

7. Select startup names and their founders.

```
SELECT S.Name, F.Name
```

```
FROM "SE".startup S
JOIN "SE".founder F ON S.Startup_ID = F.Startup_ID;
```

The screenshot shows the pgAdmin 4 interface with a query editor window. The query is:

```
1 v SELECT S.Name, F.fname
2 FROM "SE".startup S
3 JOIN "SE".founder F ON S.Startup_ID = F.Startup_ID;
```

The results table displays 12 rows:

| | name | fname |
|----|------------------|-----------|
| 1 | TechFlow | Alice |
| 2 | TechFlow | Bob |
| 3 | HealthWave | Charlie |
| 4 | EcoSmart | David |
| 5 | EcoSmart | Eva |
| 6 | AgriFuture | Frank |
| 7 | FinTrend | Grace |
| 8 | EduLeap | Henry |
| 9 | SmartUrban | Isabella |
| 10 | MediaNest | Jack |
| 11 | GlobalHealthTech | Katherine |
| 12 | CyberGuard | Liam |

Status message: ✓ Successfully run. Total query runtime: 97 msec. 80 rows affected.

8. Count startup in each stage.

```
SELECT Industry, COUNT(*) AS Num_Startups
FROM "SE".Startup
GROUP BY Industry
ORDER BY Num_Startups DESC;
```

The screenshot shows the pgAdmin 4 interface. On the left is the Object Explorer pane, which lists various database objects like FTS Configurations, Functions, and Tables. The Tables section is expanded, showing 14 tables including 'accelerator', 'accelerator_contact_info', 'ecosystem_resource', etc. The main area is a query editor window titled 'DBMS_G39/postgres@PostgreSQL 16*'. It contains a SQL query:

```

1 v  SELECT Industry, COUNT(*) AS Num_Startups
2   FROM "SE".Startup
3   GROUP BY Industry
4   ORDER BY Num_Startups DESC;
5

```

The results are displayed in a Data Output tab, showing the count of startups per industry:

| Industry | num_startups |
|-------------------------|--------------|
| Healthcare | 8 |
| Finance | 7 |
| Technology | 5 |
| Education | 5 |
| Clean Technology | 4 |
| Agriculture | 3 |
| Sustainability | 3 |
| Artificial Intelligence | 3 |
| Energy | 3 |
| Travel & Tourism | 3 |
| Media | 3 |
| Social Impact | 2 |

Total rows: 36 of 36 Query complete 00:00:00.222 Ln 5, Col 1

9. Find Startups with Funding Above 10000.

```

SELECT Name, Funding_Amount
FROM "SE".Startup
WHERE Funding_Amount > 10000;j

```

The screenshot shows the pgAdmin 4 interface. The left sidebar is the Object Explorer, displaying various database objects like FTS Configurations, FTS Dictionaries, FTS Parsers, FTS Templates, Foreign Tables, Functions, Materialized Views, Operators, Procedures, Sequences, and 14 Tables. The 'Tables (14)' section is expanded, showing accelerator, accelerator_contact_info, ecosystem_resource, founder, industry, investment, investor, investor_contact_info, mentor, mentor_contact_info, partnership, startup, startup_accelerator, startup_mentor, Trigger Functions, and Types. The main window shows a query editor with the following SQL code:

```

1 v SELECT Name, Funding_Amount
2   FROM "SE".Startup
3  WHERE Funding_Amount > 10000;
4

```

The Data Output tab displays the results of the query:

| | name | funding_amount |
|----|-------------------------|----------------|
| | character varying (255) | numeric (15,2) |
| 1 | TechFlow | 500000.00 |
| 2 | HealthWave | 2000000.00 |
| 3 | EcoSmart | 300000.00 |
| 4 | AgriFuture | 1500000.00 |
| 5 | FinTrend | 1000000.00 |
| 6 | EduLeap | 250000.00 |
| 7 | SmartUrban | 800000.00 |
| 8 | MediaNest | 400000.00 |
| 9 | GlobalHealthTech | 5000000.00 |
| 10 | CyberGuard | 1200000.00 |
| 11 | AI Innovations | 600000.00 |
| 12 | FoodieTech | 900000.00 |

Total rows: 80 of 80 Query complete 00:00:00.120

A green success message at the bottom right says: Successfully run. Total query runtime: 120 msec. 80 rows affected.

10. Get Startups Founded in a Specific Year.

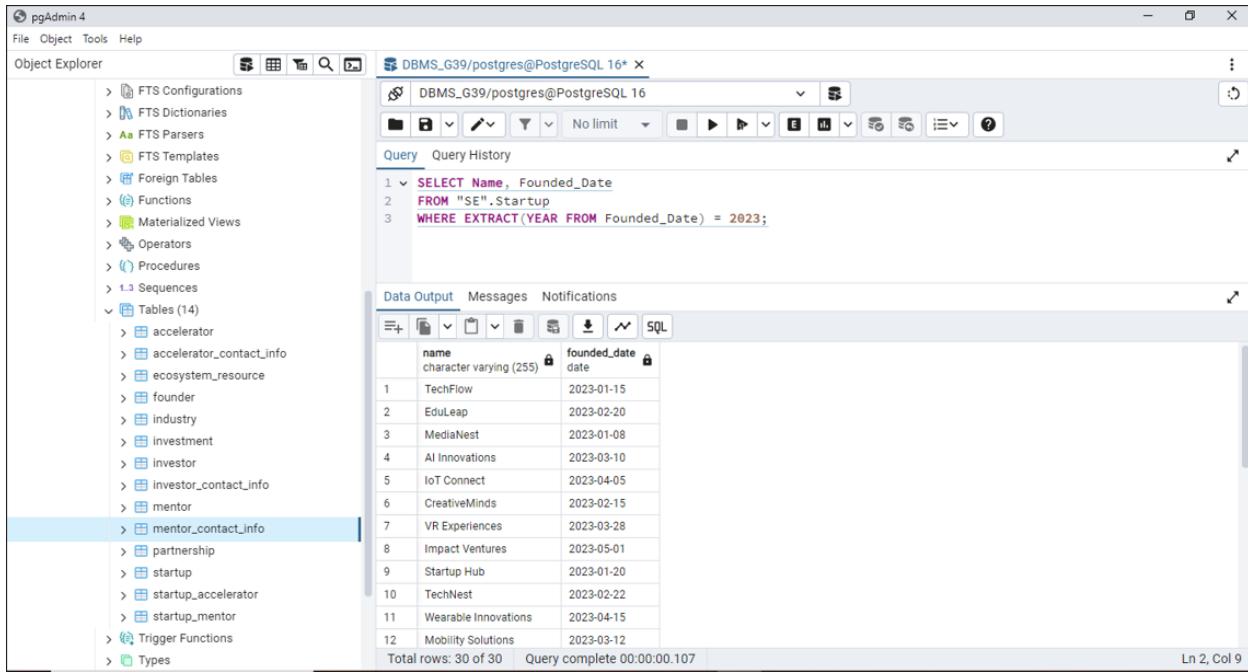
```

SELECT Name, Founded_Date

FROM "SE".Startup

WHERE EXTRACT(YEAR FROM Founded_Date) = 2023;

```



```

SELECT Name, Founded_Date
FROM "SE".Startup
WHERE EXTRACT(YEAR FROM Founded_Date) = 2023;

```

| | name | Founded Date |
|----|----------------------|--------------|
| 1 | TechFlow | 2023-01-15 |
| 2 | EduLeap | 2023-02-20 |
| 3 | MediaNest | 2023-01-08 |
| 4 | AI Innovations | 2023-03-10 |
| 5 | IoT Connect | 2023-04-05 |
| 6 | CreativeMinds | 2023-02-15 |
| 7 | VR Experiences | 2023-03-28 |
| 8 | Impact Ventures | 2023-05-01 |
| 9 | Startup Hub | 2023-01-20 |
| 10 | TechNest | 2023-02-22 |
| 11 | Wearable Innovations | 2023-04-15 |
| 12 | Mobility Solutions | 2023-03-12 |

11. Join Startup and Investment to Get Funding Details.

```

SELECT S.Name AS Startup_Name, I.Amount AS Investment_Amount, I.Date AS
Investment_Date
FROM "SE".Startup S
JOIN "SE".Investment I ON S.Startup_ID = I.Startup_ID;

```

The screenshot shows the pgAdmin 4 interface. The Object Explorer on the left lists various database objects like FTS Configurations, Functions, and Tables. The central area shows a query window with the following SQL code:

```

1 v  SELECT S.Name AS Startup_Name, I.Amount AS Investment_Amount, I.Date AS Investment_Date
2   FROM "SE".Startup S
3  JOIN "SE".Investment I ON S.Startup_ID = I.Startup_ID;

```

The Data Output tab displays the results of the query, which is a table with three columns: startup.name, investment_amount, and investment_date. The data consists of 12 rows:

| | startup.name | investment_amount | investment_date |
|----|--------------|-------------------|-----------------|
| 1 | TechFlow | 500000.00 | 2023-01-15 |
| 2 | TechFlow | 250000.00 | 2023-02-20 |
| 3 | HealthWave | 300000.00 | 2023-03-18 |
| 4 | HealthWave | 450000.00 | 2023-04-12 |
| 5 | EcoSmart | 600000.00 | 2023-05-08 |
| 6 | EcoSmart | 200000.00 | 2023-05-28 |
| 7 | AgriFuture | 750000.00 | 2023-06-15 |
| 8 | AgriFuture | 500000.00 | 2023-07-10 |
| 9 | FinTrend | 300000.00 | 2023-08-05 |
| 10 | FinTrend | 350000.00 | 2023-08-25 |
| 11 | EduLeap | 450000.00 | 2023-09-14 |
| 12 | EduLeap | 550000.00 | 2023-10-10 |

Total rows: 80 of 80 Query complete 00:00:00.113 Ln 3, Col 55

12. Get Investors Who Invested in a Specific Startup.

```

SELECT I.Name AS Investor_Name, I.Type AS Investor_Type, I.Investment_Stage_Preference
FROM "SE".Investor I
JOIN "SE".Investment Inv ON I.Investor_ID = Inv.Investor_ID
WHERE Inv.Startup_ID = 11;

```

```

SELECT I.Name AS Investor_Name, I.Type AS Investor_Type, I.Investment_Stage_Preference
FROM "SE".Investor I
JOIN "SE".Investment Inv ON I.Investor_ID = Inv.Investor_ID
WHERE Inv.Startup_ID = 11;

```

| | investor_name | investor_type | investment_stage_preference |
|---|----------------|----------------|-----------------------------|
| 1 | Lakshmi Pillai | Angel Investor | Seed |

Total rows: 1 of 1 Query complete 00:00:00.203 Ln 4, Col 26

13. Count Startups in Each Industry.

```

SELECT Industry, COUNT(*) AS Num_Startups
FROM "SE".Startup
GROUP BY Industry;

```

```

SELECT Industry, COUNT(*) AS Num_Startups
FROM "SE".Startup
GROUP BY Industry;

```

| Industry | num_startups |
|-----------------------|--------------|
| Wellness | 1 |
| Sustainability | 3 |
| Various | 1 |
| Education | 5 |
| Home Automation | 1 |
| Wearables | 1 |
| Agriculture | 3 |
| Sports | 1 |
| Healthcare | 8 |
| Media & Entertainment | 1 |
| Media | 3 |
| Virtual Reality | 1 |

Total rows: 36 of 36 Query complete 00:00:00.182

Successfully run. Total query runtime: 182 msec. 36 rows affected.

14. Total Investment Amount by Investor.

```

SELECT I.Name, SUM(Inv.Amount) AS Total_Investment
FROM "SE".Investor I
JOIN "SE".Investment Inv ON I.Investor_ID = Inv.Investor_ID
GROUP BY I.Investor_ID;

```

The screenshot shows the pgAdmin 4 interface. The left sidebar displays the Object Explorer with various database objects like FTS Configurations, Functions, and Tables. The main area shows a query window with the following SQL code:

```

1 SELECT I.Name, SUM(Inv.Amount) AS Total_Investment
2 FROM "SE".Investor I
3 JOIN "SE".Investment Inv ON I.Investor_ID = Inv.Investor_ID
4 GROUP BY I.Investor_ID;
    
```

The Data Output tab shows the results of the query:

| | name | total_investment |
|----|----------------|------------------|
| 1 | Rajat Bhardwaj | 300000.00 |
| 2 | Ramesh Kale | 400000.00 |
| 3 | Anuja Pathak | 200000.00 |
| 4 | Kavita Patel | 200000.00 |
| 5 | Simran N | 750000.00 |
| 6 | Mona Nanda | 500000.00 |
| 7 | Nitin Kapoor | 300000.00 |
| 8 | Amitabh Gupta | 600000.00 |
| 9 | Nidhi Bhatia | 500000.00 |
| 10 | Sunita Rai | 450000.00 |
| 11 | Vikram Pandey | 450000.00 |
| 12 | Mohit Goel | 600000.00 |

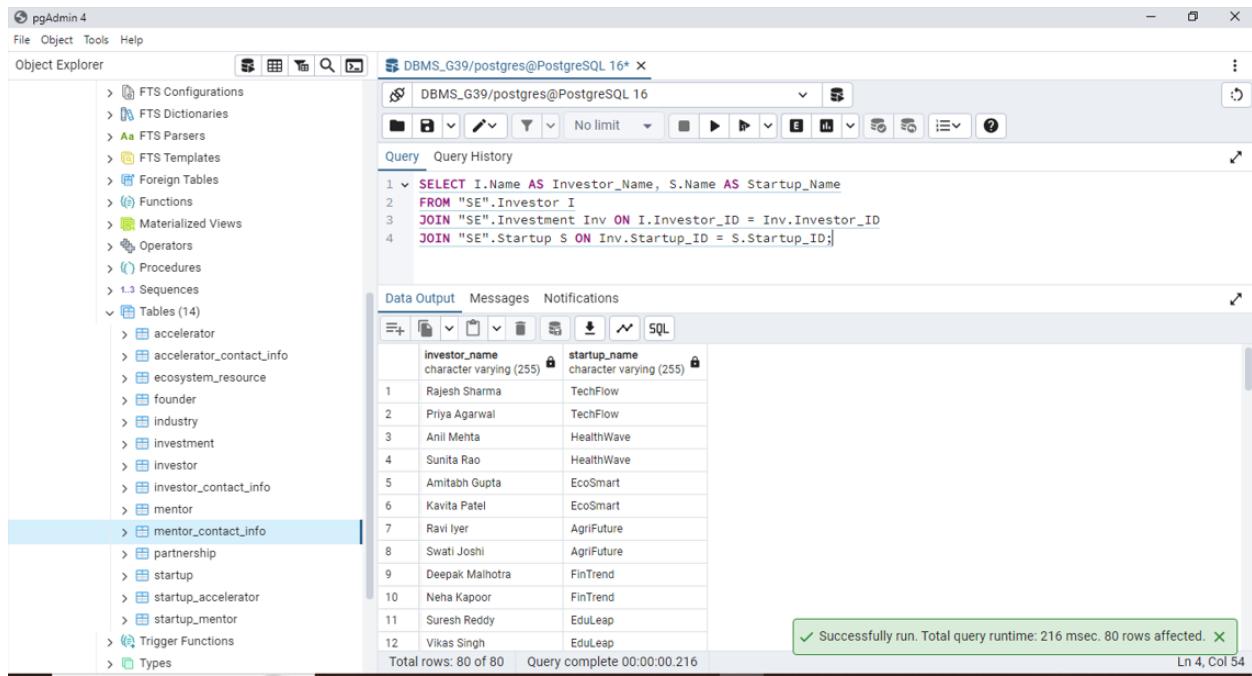
Total rows: 80 of 80 Query complete 00:00:00.105

Below the table, a green message box indicates: Successfully run. Total query runtime: 105 msec. 80 rows affected.

15. List Investors and the Startups They Have Invested In.

```

SELECT I.Name AS Investor_Name, S.Name AS Startup_Name
FROM "SE".Investor I
JOIN "SE".Investment Inv ON I.Investor_ID = Inv.Investor_ID
JOIN "SE".Startup S ON Inv.Startup_ID = S.Startup_ID;
    
```



```

SELECT I.Name AS Investor_Name, S.Name AS Startup_Name
FROM "SE".Investor I
JOIN "SE".Investment Inv ON I.Investor_ID = Inv.Investor_ID
JOIN "SE".Startup S ON Inv.Startup_ID = S.Startup_ID;

```

| | investor_name | startup_name |
|----|-----------------|--------------|
| 1 | Rajesh Sharma | TechFlow |
| 2 | Priya Agarwal | TechFlow |
| 3 | Anil Mehta | HealthWave |
| 4 | Sunita Rao | HealthWave |
| 5 | Amitabh Gupta | EcoSmart |
| 6 | Kavita Patel | EcoSmart |
| 7 | Ravi Iyer | AgriFuture |
| 8 | Swati Joshi | AgriFuture |
| 9 | Deepak Malhotra | FinTrend |
| 10 | Neha Kapoor | FinTrend |
| 11 | Suresh Reddy | EduLeap |
| 12 | Vikas Singh | EduLeap |

Successfully run. Total query runtime: 216 msec. 80 rows affected.

16. Find Startups and Their Industry Focus with Funding Above 500000.

```

SELECT S.Name, S.Industry, S.Funding_Amount
FROM "SE".Startup S
WHERE S.Funding_Amount > 500000;

```

The screenshot shows the PgAdmin 4 interface. On the left is the Object Explorer pane, which lists various database objects like FTS Configurations, FTS Dictionaries, FTS Parsers, FTS Templates, Foreign Tables, Functions, Materialized Views, Operators, Procedures, Sequences, and 14 Tables. The Tables node is expanded, showing accelerator, accelerator_contact_info, ecosystem_resource, founder, industry, investment, investor, investor_contact_info, mentor, mentor_contact_info, partnership, startup, startup_accelerator, startup_mentor, Trigger Functions, and Types. The main area is a query editor window titled 'DBMS_G39/postgres@PostgreSQL 16*' containing the following SQL code:

```

1 v  SELECT S.Name, S.Industry, S.Funding_Amount
2   FROM "SE".Startup_S
3  WHERE S.Funding_Amount > 500000;
4

```

Below the query editor is a Data Output tab showing a table with three columns: name, industry, and funding_amount. The data consists of 12 rows:

| | name | industry | funding_amount |
|----|--------------------------|-------------------------|----------------|
| 1 | HealthWave | Healthcare | 2000000.00 |
| 2 | AgriFuture | Agriculture | 1500000.00 |
| 3 | FinTrend | Finance | 1000000.00 |
| 4 | SmartUrban | Urban Development | 800000.00 |
| 5 | GlobalHealthTech | Healthcare | 5000000.00 |
| 6 | CyberGuard | Cybersecurity | 1200000.00 |
| 7 | AI Innovations | Artificial Intelligence | 600000.00 |
| 8 | FoodieTech | Food Technology | 900000.00 |
| 9 | Space Ventures | Aerospace | 2500000.00 |
| 10 | EcomMagic | E-commerce | 850000.00 |
| 11 | Blockchain Experts | Blockchain | 3000000.00 |
| 12 | Digital Health Solutions | Healthcare | 1800000.00 |

At the bottom of the Data Output tab, a message box indicates: "Successfully run. Total query runtime: 91 msec. 55 rows affected. Ln 3, Col 28".

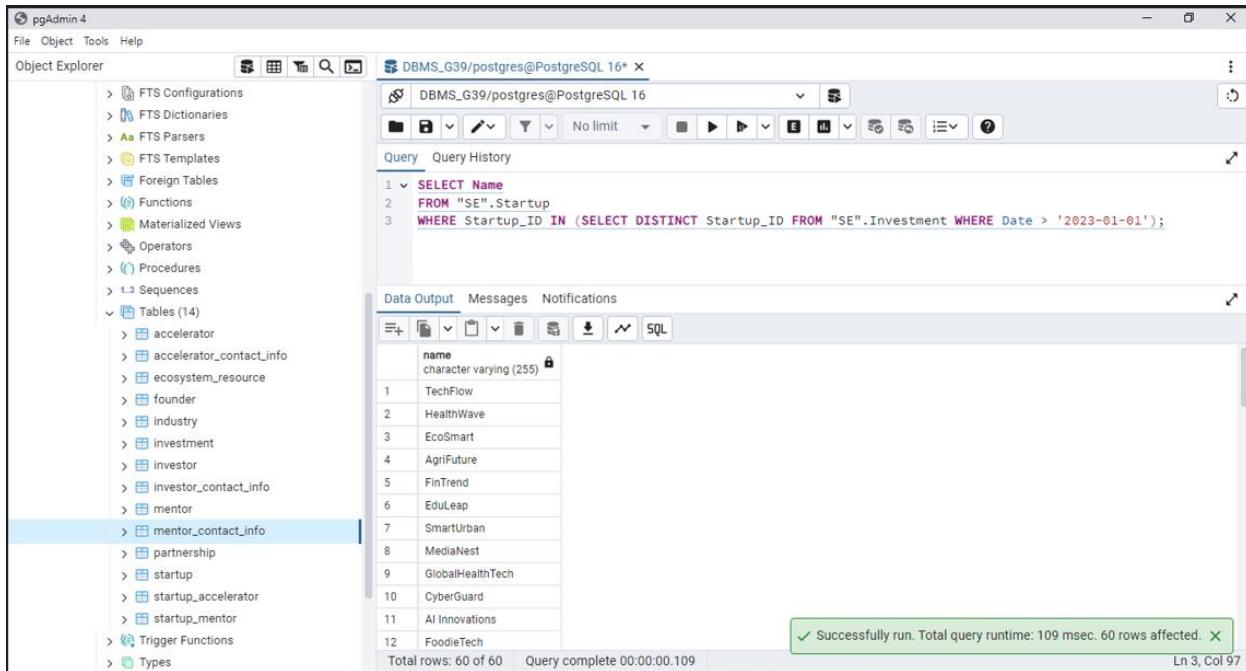
17. Get Startups That Received Funding After a Specific Date.

```

SELECT Name
FROM "SE".Startup

WHERE Startup_ID IN (SELECT DISTINCT Startup_ID FROM "SE".Investment WHERE Date >
'2023-01-01');

```



```

SELECT Name
FROM "SE".Startup
WHERE Startup_ID IN (SELECT DISTINCT Startup_ID FROM "SE".Investment WHERE Date > '2023-01-01');

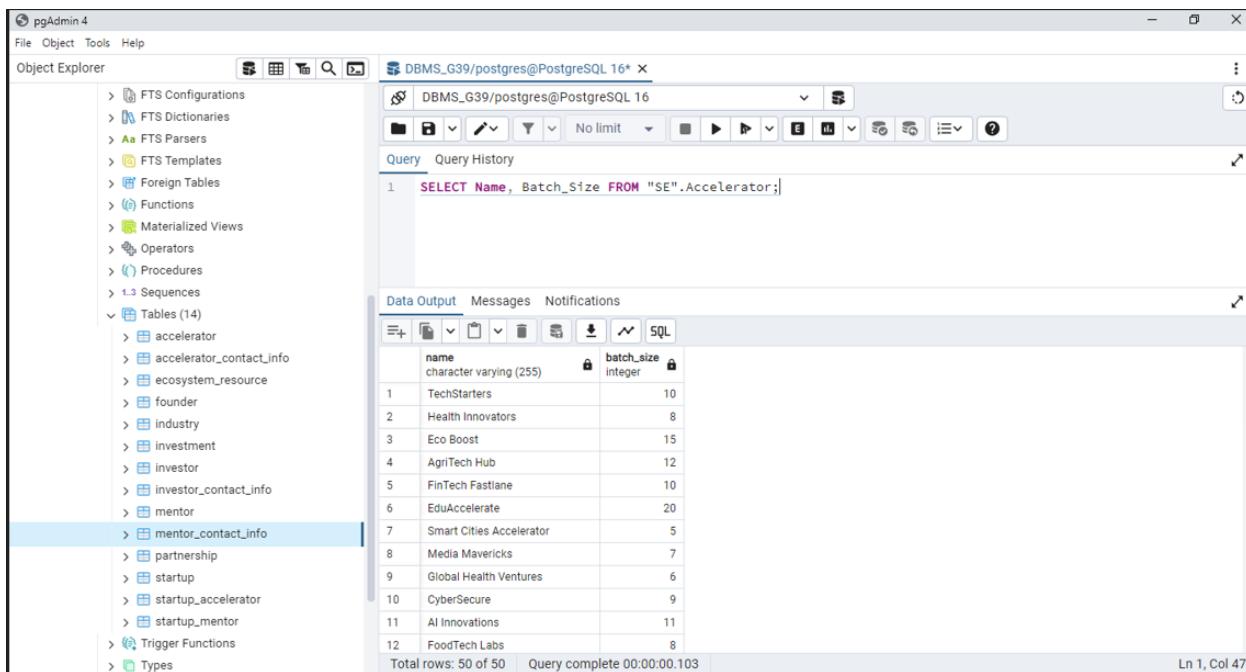
```

| name |
|------------------|
| TechFlow |
| HealthWave |
| EcoSmart |
| AgriFuture |
| FinTrend |
| EduLeap |
| SmartUrban |
| MediaNest |
| GlobalHealthTech |
| CyberGuard |
| AI Innovations |
| FoodieTech |

Successfully run. Total query runtime: 109 msec. 60 rows affected.

18. List Accelerators and Their Batch Sizes.

```
SELECT Name, Batch_Size FROM "SE".Accelerator;
```



```

SELECT Name, Batch_Size FROM "SE".Accelerator;

```

| name | batch_size |
|--------------------------|------------|
| TechStarters | 10 |
| Health Innovators | 8 |
| Eco Boost | 15 |
| AgriTech Hub | 12 |
| FinTech Fastlane | 10 |
| EduAccelerate | 20 |
| Smart Cities Accelerator | 5 |
| Media Mavericks | 7 |
| Global Health Ventures | 6 |
| CyberSecure | 9 |
| AI Innovations | 11 |
| FoodTech Labs | 8 |

19. Find Investors Who Invested More Than the Average Investment Amount.

```
SELECT I.Name, SUM(Inv.Amount) AS Total_Investment
FROM "SE".Investor I
JOIN "SE".Investment Inv ON I.Investor_ID = Inv.Investor_ID
GROUP BY I.Investor_ID
HAVING SUM(Inv.Amount) > (SELECT AVG(Amount) FROM "SE".Investment);
```

```
1 ✓ SELECT I.Name, SUM(Inv.Amount) AS Total_Investment
2   FROM "SE".Investor I
3   JOIN "SE".Investment Inv ON I.Investor_ID = Inv.Investor_ID
4   GROUP BY I.Investor_ID
5   HAVING SUM(Inv.Amount) > (SELECT AVG(Amount) FROM "SE".Investment);
6
```

| | name | total_investment |
|----|---------------|------------------|
| 1 | Simran N | 750000.00 |
| 2 | Mona Nanda | 500000.00 |
| 3 | Amitabh Gupta | 600000.00 |
| 4 | Nidhi Bhatia | 500000.00 |
| 5 | Mohit Goel | 600000.00 |
| 6 | Aakash Nanda | 550000.00 |
| 7 | Anita Ghosh | 650000.00 |
| 8 | Rashmi Tiwari | 550000.00 |
| 9 | Shivani Rathi | 700000.00 |
| 10 | Gaurav Meena | 500000.00 |
| 11 | Taranjeet C | 500000.00 |
| 12 | Kriti Mohan | 550000.00 |

Successfully run. Total query runtime: 99 msec. 40 rows affected.

20. Find the Latest Investment in Each Startup.

```
SELECT S.Name AS Startup_Name, I.Amount AS Latest_Investment_Amount, I.Date AS
Investment_Date
FROM "SE".Startup S
JOIN "SE".Investment I ON S.Startup_ID = I.Startup_ID
WHERE I.Date IN (SELECT MAX(Date) FROM "SE".Investment WHERE Startup_ID =
S.Startup_ID)
ORDER BY S.Name;
```

```

SELECT S.Name AS Startup_Name, I.Amount AS Latest_Investment_Amount, I.Date AS Investment_Date
FROM "SE".Startup S
JOIN "SE".Investment I ON S.Startup_ID = I.Startup_ID
WHERE I.Date IN (SELECT MAX(Date) FROM "SE".Investment WHERE Startup_ID = S.Startup_ID)
ORDER BY S.Name;

```

| startup_name | latest_investment_amount | investment_date |
|--------------------------|--------------------------|-----------------|
| AgriFuture | 500000.00 | 2023-07-10 |
| AgriTech Hub | 450000.00 | 2025-06-30 |
| AI Accelerator | 500000.00 | 2025-11-10 |
| AI Innovations | 550000.00 | 2024-03-20 |
| BioInnovations | 750000.00 | 2025-05-25 |
| Blockchain Experts | 450000.00 | 2024-07-25 |
| CleanAir Tech | 400000.00 | 2026-03-10 |
| CleanEnergy Solutions | 300000.00 | 2024-11-01 |
| CreativeMinds | 350000.00 | 2024-07-10 |
| CyberGuard | 600000.00 | 2024-03-10 |
| Digital Health Solutions | 700000.00 | 2024-08-20 |
| EcomMagic | 300000.00 | 2024-06-28 |

Successfully run. Total query runtime: 85 msec. 60 rows affected.

21. List Mentors and the Startups They Are Mentoring.

```

SELECT M.Name AS Mentor_Name, S.Name AS Startup_Name
FROM "SE".Mentor M
JOIN "SE".Startup_Mentor SM ON M.Mentor_ID = SM.Mentor_ID
JOIN "SE".Startup S ON SM.Startup_ID = S.Startup_ID;

```

```

SELECT M.Name AS Mentor_Name, S.Name AS Startup_Name
FROM "SE".Mentor M
JOIN "SE".Startup_Mentor SM ON M.Mentor_ID = SM.Mentor_ID
JOIN "SE".Startup S ON SM.Startup_ID = S.Startup_ID;

```

The screenshot shows the pgAdmin 4 interface with the following details:

- Object Explorer:** Shows a tree view of database objects including FTS Configurations, FTS Dictionaries, FTS Parsers, FTS Templates, Foreign Tables, Functions, Materialized Views, Operators, Procedures, Sequences, Tables (14), Types, and a selected item: mentor_contact_info.
- Query Editor:** Contains the SQL query shown above.
- Data Output:** Displays a table with two columns: mentor_name and startup_name. The data is as follows:

| | mentor_name | startup_name |
|----|-------------|--------------|
| 1 | Andrew | TechFlow |
| 2 | Brittany | TechFlow |
| 3 | Collin | TechFlow |
| 4 | Denise | HealthWave |
| 5 | Ethan | HealthWave |
| 6 | Fiona | EcoSmart |
| 7 | Gavin | EcoSmart |
| 8 | Hannah | AgriFuture |
| 9 | Isaac | AgriFuture |
| 10 | Julia | FinTrend |
| 11 | Kyle | FinTrend |
| 12 | Lily | EduLeap |

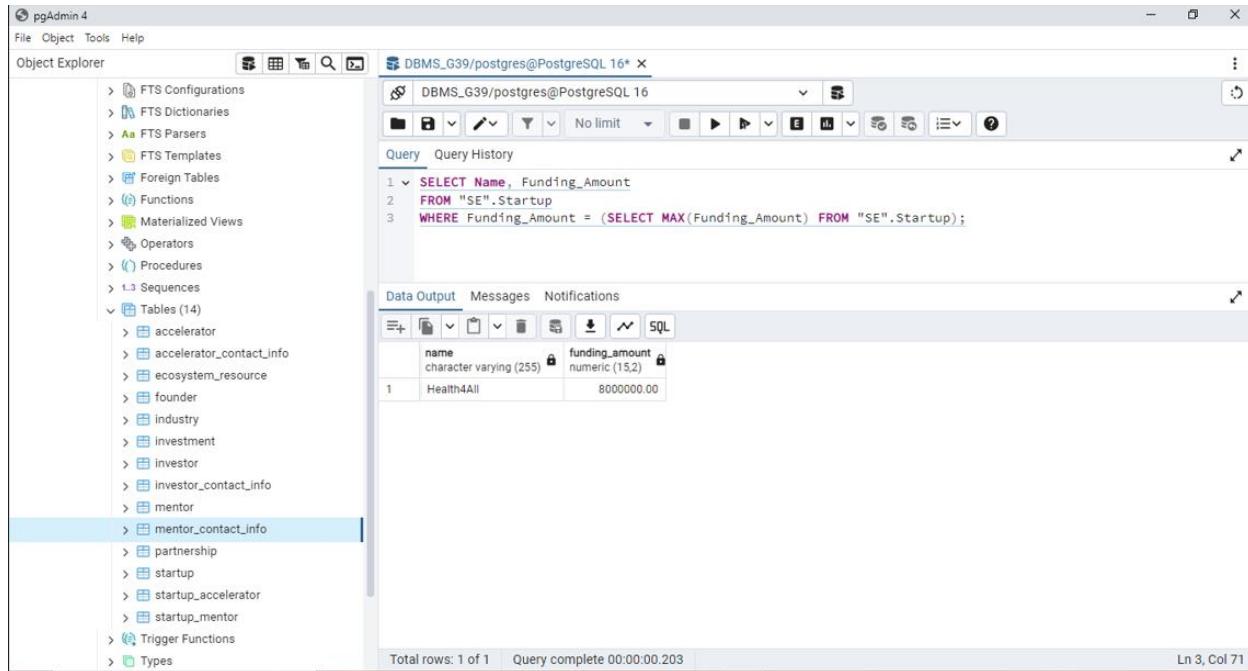
- Messages:** Shows a green success message: "Successfully run. Total query runtime: 88 msec. 77 rows affected."
- Status Bar:** Shows "Total rows: 77 of 77" and "Query complete 00:00:00.088".

22. Find Startups with the Highest Funding Amount.

```

SELECT Name, Funding_Amount
FROM "SE".Startup
WHERE Funding_Amount = (SELECT MAX(Funding_Amount) FROM "SE".Startup);

```



The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying various database objects like FTS Configurations, Functions, and Tables. The right pane is the Query Editor, showing a query to select the startup with the highest funding from the 'Startup' table in the 'SE' schema.

```

SELECT Name, Funding_Amount
FROM "SE".Startup
WHERE Funding_Amount = (SELECT MAX(Funding_Amount) FROM "SE".Startup);

```

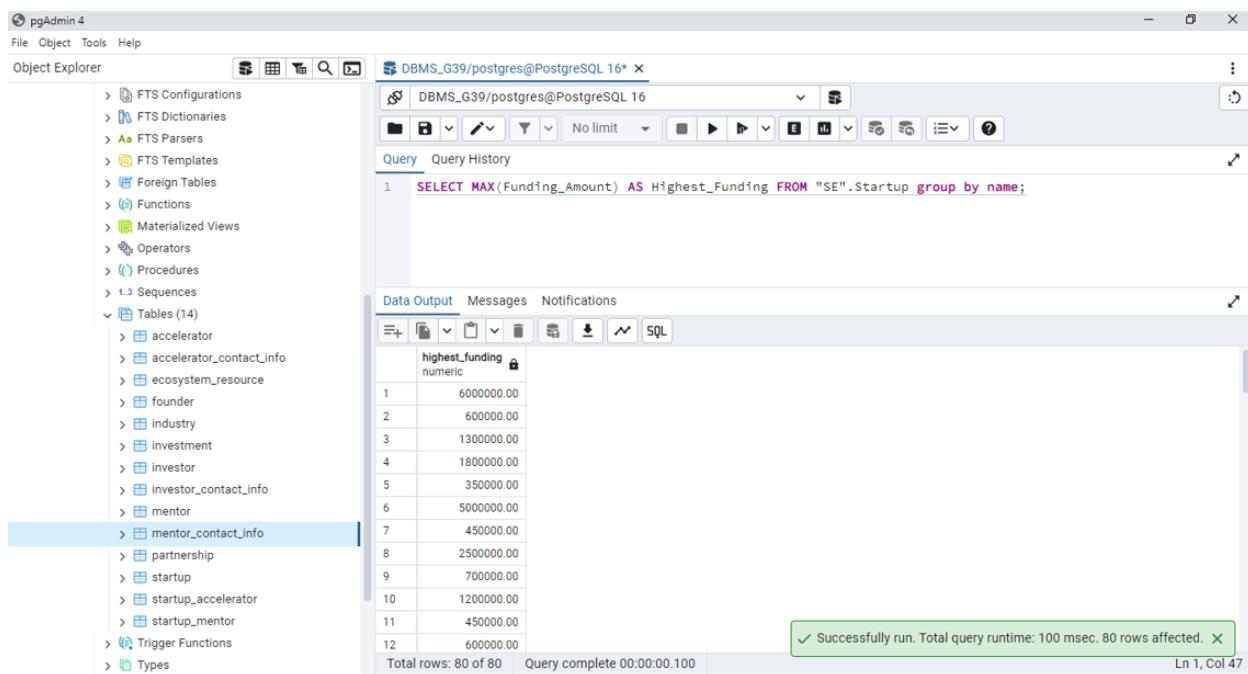
The Data Output tab shows the result of the query:

| name | funding_amount |
|------------|----------------|
| Health4All | 8000000.00 |

Total rows: 1 of 1 | Query complete 00:00:00.203 | Ln 3, Col 71

23. Find the Startup with the Highest Funding.

```
SELECT MAX(Funding_Amount) AS Highest_Funding FROM "SE".Startup Group by name;
```



The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying various database objects. The right pane is the Query Editor, showing a query to find the maximum funding amount grouped by startup name.

```

SELECT MAX(Funding_Amount) AS Highest_Funding FROM "SE".Startup group by name;

```

The Data Output tab shows the result of the query:

| highest_funding |
|-----------------|
| 6000000.00 |
| 600000.00 |
| 1300000.00 |
| 1800000.00 |
| 350000.00 |
| 5000000.00 |
| 450000.00 |
| 2500000.00 |
| 700000.00 |
| 1200000.00 |
| 450000.00 |
| 600000.00 |

Successful run. Total query runtime: 100 msec. 80 rows affected. | Total rows: 80 of 80 | Query complete 00:00:00.100 | Ln 1, Col 47

24. List Founders and Their LinkedIn Profiles.

```
SELECT fName, lName, LinkedIn_Profile FROM "SE".Founder;
```

The screenshot shows the pgAdmin 4 interface. The left pane is the Object Explorer, displaying various database objects like FTS Configurations, Functions, Operators, Procedures, Sequences, and Tables (14). The 'Tables (14)' section is expanded, showing tables such as accelerator, ecosystem_resource, founder, industry, investment, investor, investor_contact_info, mentor, mentor_contact_info, partnership, startup, startup_accelerator, startup_mentor, Trigger Functions, and Types. The 'mentor_contact_info' table is currently selected.

The right pane contains a query editor window titled 'DBMS_G39/postgres@PostgreSQL 16*' with the following content:

```
1 | SELECT fName, lName, LinkedIn_Profile FROM "SE".Founder;
```

Below the query editor is a 'Data Output' tab showing the results of the query:

| | fName | lName | LinkedIn_Profile |
|----|-----------|-----------|---|
| 1 | Alice | Smith | https://linkedin.com/in/alicesmith |
| 2 | Bob | Johnson | https://linkedin.com/in/bobjohnson |
| 3 | Charlie | Brown | https://linkedin.com/in/charliebrown |
| 4 | David | Davis | https://linkedin.com/in/daviddavis |
| 5 | Eva | Garcia | https://linkedin.com/in/evagarcia |
| 6 | Frank | Miller | https://linkedin.com/in/frankmiller |
| 7 | Grace | Hernandez | https://linkedin.com/in/gracehernand... |
| 8 | Henry | Martinez | https://linkedin.com/in/henrymartinez |
| 9 | Isabella | Wilson | https://linkedin.com/in/isabellawilson |
| 10 | Jack | Moore | https://linkedin.com/in/jackmoore |
| 11 | Katherine | Taylor | https://linkedin.com/in/katherinetaylor |
| 12 | Liam | Anderson | https://linkedin.com/in/liamanderson |

At the bottom of the pgAdmin window, a message box indicates: 'Successfully run. Total query runtime: 106 msec. 80 rows affected.'

25. Count Startups by Location.

```
SELECT Location, COUNT(*) AS Num_Startups  

FROM "SE".Startup  

GROUP BY Location;
```

```

SELECT Location, COUNT(*) AS Num_Startups
FROM "SE".Startup
GROUP BY Location;

```

| | location | num_startups |
|----|------------------------|--------------|
| 1 | San Diego, CA | 3 |
| 2 | San Francisco, CA | 8 |
| 3 | London, UK | 2 |
| 4 | Tokyo, Japan | 1 |
| 5 | Silicon Valley, CA | 2 |
| 6 | Vancouver, Canada | 1 |
| 7 | New York, NY | 10 |
| 8 | Amsterdam, Netherlands | 1 |
| 9 | Houston, TX | 1 |
| 10 | Atlanta, GA | 1 |
| 11 | Paris, France | 3 |
| 12 | Barcelona, Spain | 2 |

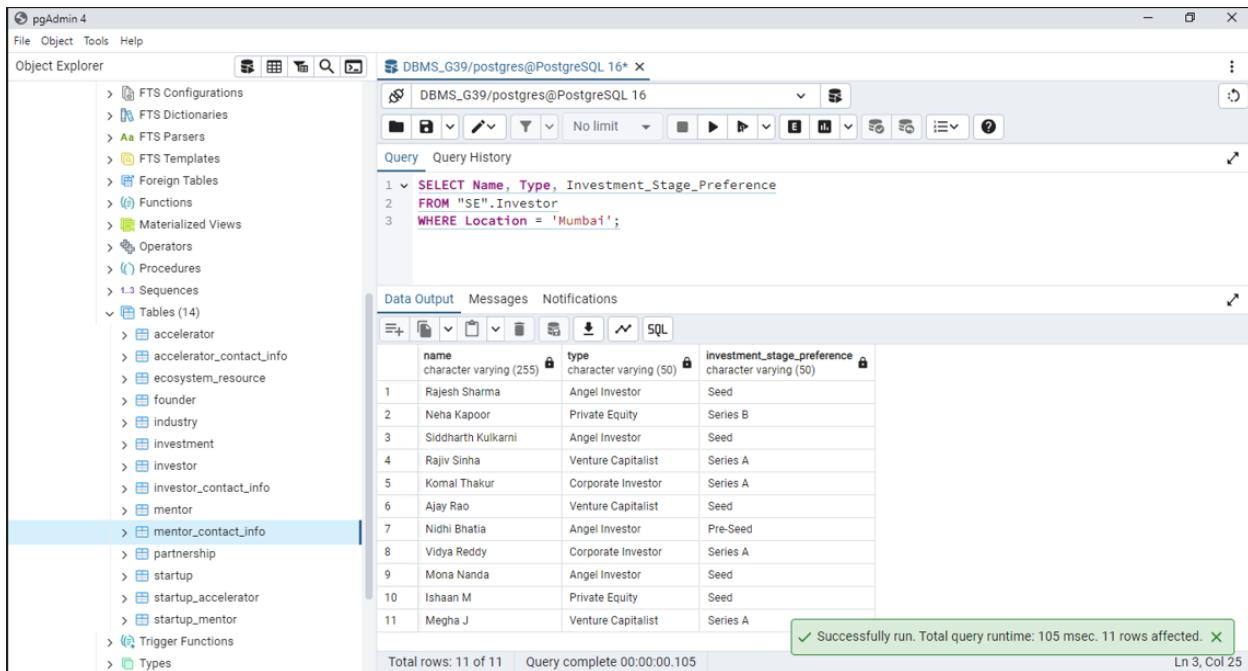
Successfully run. Total query runtime: 100 msec. 27 rows affected.

26. Find Investors in a Specific Location.

```

SELECT Name, Type, Investment_Stage_Preference
FROM "SE".Investor
WHERE Location = 'Mumbai';

```



```

SELECT Name, Type, Investment_Stage_Preference
FROM "SE".Investor
WHERE Location = 'Mumbai';

```

| | name | type | investment_stage_preference |
|----|--------------------|--------------------|-----------------------------|
| 1 | Rajesh Sharma | Angel Investor | Seed |
| 2 | Neha Kapoor | Private Equity | Series B |
| 3 | Siddharth Kulkarni | Angel Investor | Seed |
| 4 | Rajiv Sinha | Venture Capitalist | Series A |
| 5 | Komal Thakur | Corporate Investor | Series A |
| 6 | Ajay Rao | Venture Capitalist | Seed |
| 7 | Nidhi Bhatia | Angel Investor | Pre-Seed |
| 8 | Vidya Reddy | Corporate Investor | Series A |
| 9 | Mona Nanda | Angel Investor | Seed |
| 10 | Ishaan M | Private Equity | Seed |
| 11 | Megha J | Venture Capitalist | Series A |

Successfully run. Total query runtime: 105 msec. 11 rows affected.

27. Find Startups and Their Founders in a Specific Location.

```

SELECT S.Name AS Startup_Name, F.fName, F.lName
FROM "SE".Startup S
JOIN "SE".Founder F ON S.Startup_ID = F.Startup_ID
WHERE S.Location = 'Los Angeles, CA';

```

The screenshot shows the pgAdmin 4 interface with the following details:

- Object Explorer:** Shows a tree view of database objects including FTS Configurations, FTS Dictionaries, FTS Parsers, FTS Templates, Foreign Tables, Functions, Materialized Views, Operators, Procedures, Sequences, and Tables (14).
- Query Editor:** Displays the following SQL query:


```

1 v SELECT S.Name AS Startup_Name, F.fName, F.lName
2   FROM "SE".Startup S
3   JOIN "SE".Founder F ON S.Startup_ID = F.Startup_ID
4 WHERE S.Location = 'Los Angeles, CA';
5
6 -- select * from "SE".startup;
      
```
- Data Output:** Shows a table with three columns: startup_name, fName, and lName. The data is as follows:

| | startup_name | fName | lName |
|----|----------------------|----------|-----------|
| 1 | SmartUrban | Isabella | Wilson |
| 2 | MediaNest | Jack | Moore |
| 3 | CreativeMinds | Rita | Lewis |
| 4 | VR Experiences | Tina | Walker |
| 5 | Wearable Innovations | Daniel | Perez |
| 6 | VR/AR Innovations | Paula | Rogers |
| 7 | AI Accelerator | Yasmine | Fleming |
| 8 | SmartEnergy | Diana | Cook |
| 9 | SmartEnergy | Edward | Ford |
| 10 | FoodInnovate | Uma | George |
| 11 | CyberDefend | Yara | Fernandez |
| 12 | CyberDefend | Zoe | Bradley |

28. Find All Startups Receiving Investment in a Specific Year.

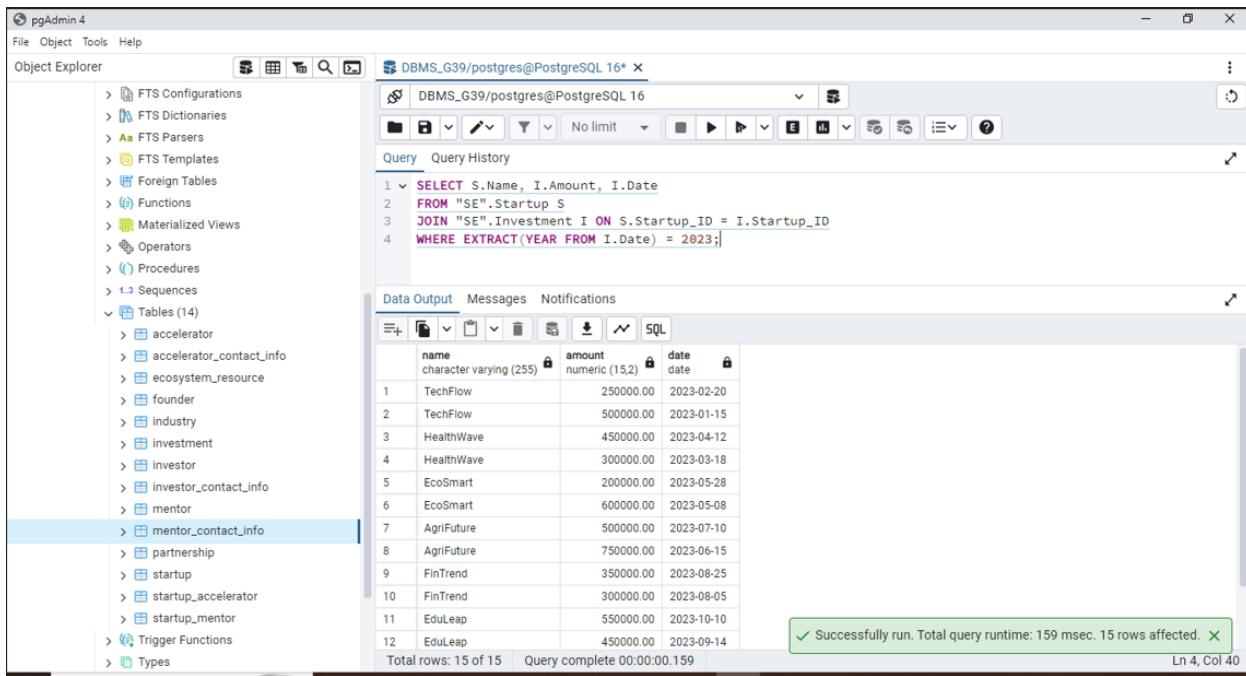
```

SELECT S.Name, I.Amount, I.Date

FROM "SE".Startup S

JOIN "SE".Investment I ON S.Startup_ID = I.Startup_ID

WHERE EXTRACT(YEAR FROM I.Date) = 2023;
    
```



```

SELECT S.Name, I.Amount, I.Date
FROM "SE".Startup S
JOIN "SE".Investment I ON S.Startup_ID = I.Startup_ID
WHERE EXTRACT(YEAR FROM I.Date) = 2023;

```

| | name | amount | date |
|----|------------|-----------|------------|
| 1 | TechFlow | 250000.00 | 2023-02-20 |
| 2 | TechFlow | 500000.00 | 2023-01-15 |
| 3 | HealthWave | 450000.00 | 2023-04-12 |
| 4 | HealthWave | 300000.00 | 2023-03-18 |
| 5 | EcoSmart | 200000.00 | 2023-05-28 |
| 6 | EcoSmart | 600000.00 | 2023-05-08 |
| 7 | AgriFuture | 500000.00 | 2023-07-10 |
| 8 | AgriFuture | 750000.00 | 2023-06-15 |
| 9 | FinTrend | 350000.00 | 2023-08-25 |
| 10 | FinTrend | 300000.00 | 2023-08-05 |
| 11 | EduLeap | 550000.00 | 2023-10-10 |
| 12 | EduLeap | 450000.00 | 2023-09-14 |

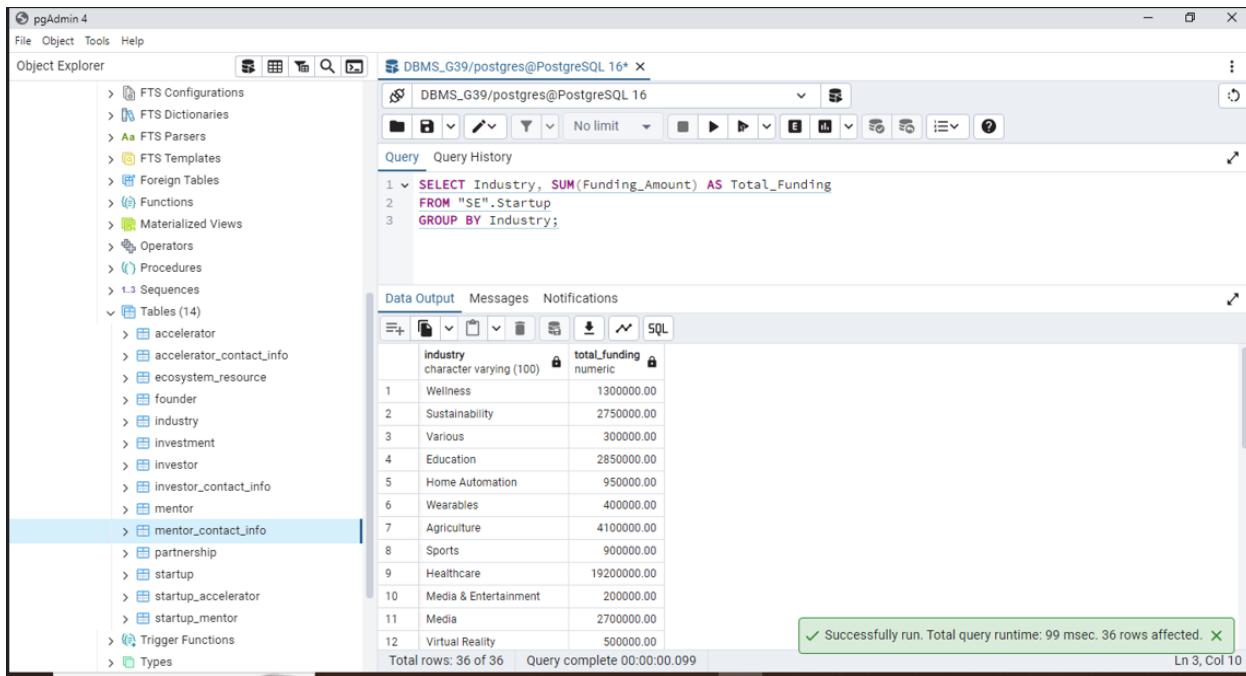
Successfully run. Total query runtime: 159 msec. 15 rows affected.

29. Get the Total Funding Amount in Each Industry.

```

SELECT Industry, SUM(Funding_Amount) AS Total_Funding
FROM "SE".Startup
GROUP BY Industry;

```



```

SELECT Industry, SUM(Funding_Amount) AS Total_Funding
FROM "SE".Startup
GROUP BY Industry;

```

| Industry | Total_Funding |
|-----------------------|---------------|
| Wellness | 1300000.00 |
| Sustainability | 2750000.00 |
| Various | 300000.00 |
| Education | 2850000.00 |
| Home Automation | 950000.00 |
| Wearables | 400000.00 |
| Agriculture | 4100000.00 |
| Sports | 900000.00 |
| Healthcare | 19200000.00 |
| Media & Entertainment | 200000.00 |
| Media | 2700000.00 |
| Virtual Reality | 500000.00 |

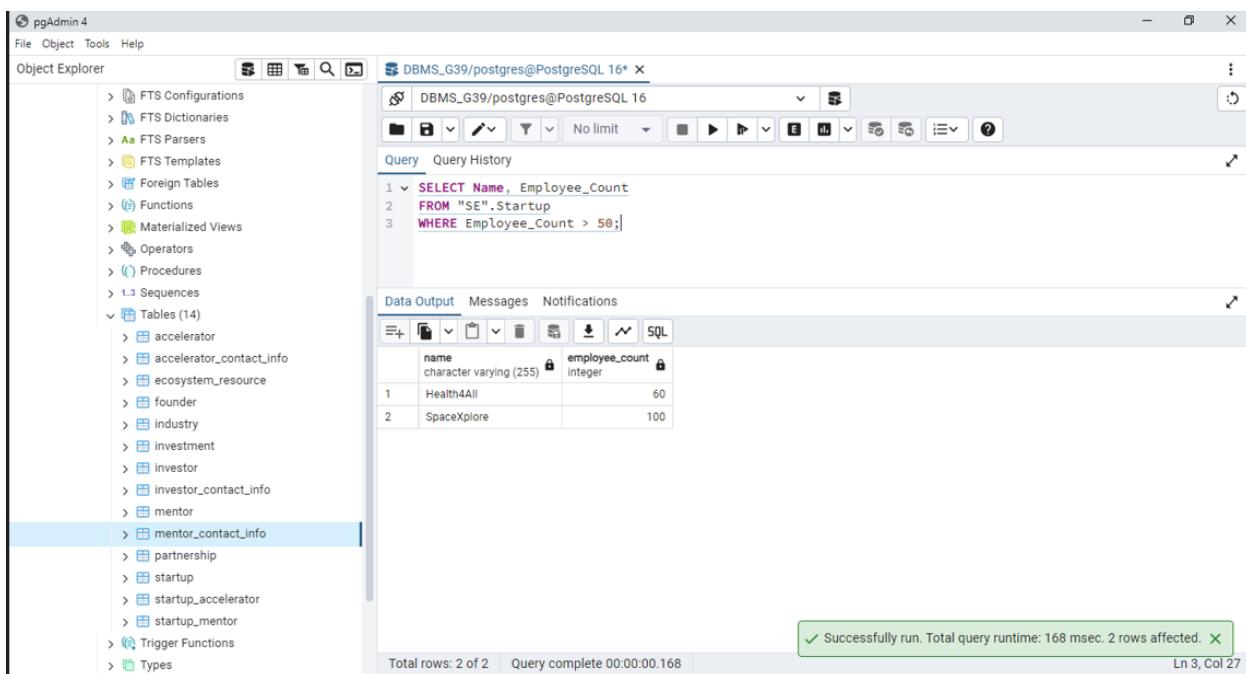
Successfully run. Total query runtime: 99 msec. 36 rows affected.

30. List Startups with More Than 50 Employees.

```

SELECT Name, Employee_Count
FROM "SE".Startup
WHERE Employee_Count > 50;

```



```

SELECT Name, Employee_Count
FROM "SE".Startup
WHERE Employee_Count > 50;

```

| Name | Employee_Count |
|-------------|----------------|
| Health4All | 60 |
| SpaceXplore | 100 |

Successfully run. Total query runtime: 168 msec. 2 rows affected.

31. Find the Most Recent Investment for a Startup.

```
SELECT S.Name, MAX(I.Date) AS Latest_Investment_Date
FROM "SE".Startup S
JOIN "SE".Investment I ON S.Startup_ID = I.Startup_ID
GROUP BY S.Startup_ID;
```

The screenshot shows the pgAdmin 4 interface with the following details:

- Object Explorer:** Shows the database schema with various objects like FTS Configurations, Functions, Procedures, Sequences, and 14 Tables.
- Query Editor:** Contains the SQL query provided in the previous code block.
- Data Output:** Displays the results of the query in a table format.
- Table Data:**

| | name | latest_investment_date |
|----|----------------------|------------------------|
| 1 | GreenFuture | 2026-01-10 |
| 2 | SportsConnect | 2025-01-30 |
| 3 | AgriFuture | 2023-07-10 |
| 4 | SustainableLiving | 2025-04-25 |
| 5 | InnovateTech | 2025-12-10 |
| 6 | HealthTech Solutions | 2025-12-20 |
| 7 | CyberGuard | 2024-03-10 |
| 8 | MediaSpark | 2025-05-10 |
| 9 | SmartFashion | 2025-09-30 |
| 10 | EduLeap | 2023-10-10 |
| 11 | Impact Accelerator | 2025-07-15 |
| 12 | BioInnovations | 2025-05-25 |
- Message Bar:** Shows a success message: "Successfully run. Total query runtime: 91 msec. 60 rows affected."
- Status Bar:** Shows "Ln 4, Col 23".

32. Find the Number of Startups for Each Investor.

```
SELECT I.Name AS Investor_Name, COUNT(*) AS Num_Investments
FROM "SE".Investor I
JOIN "SE".Investment Inv ON I.Investor_ID = Inv.Investor_ID
GROUP BY I.Investor_ID;
```

```

SELECT I.Name AS Investor_Name, COUNT(*) AS Num_Investments
FROM "SE".Investor I
JOIN "SE".Investment Inv ON I.Investor_ID = Inv.Investor_ID
GROUP BY I.Investor_ID;

```

| | investor_name | num_investments |
|----|----------------|-----------------|
| 1 | Rajat Bhardwaj | 1 |
| 2 | Ramesh Kale | 1 |
| 3 | Anuja Pathak | 1 |
| 4 | Kavita Patel | 1 |
| 5 | Simran N | 1 |
| 6 | Mona Nanda | 1 |
| 7 | Nitin Kapoor | 1 |
| 8 | Amitabh Gupta | 1 |
| 9 | Nidhi Bhatia | 1 |
| 10 | Sunita Rao | 1 |
| 11 | Vikram Pandey | 1 |
| 12 | Mohit Goel | 1 |

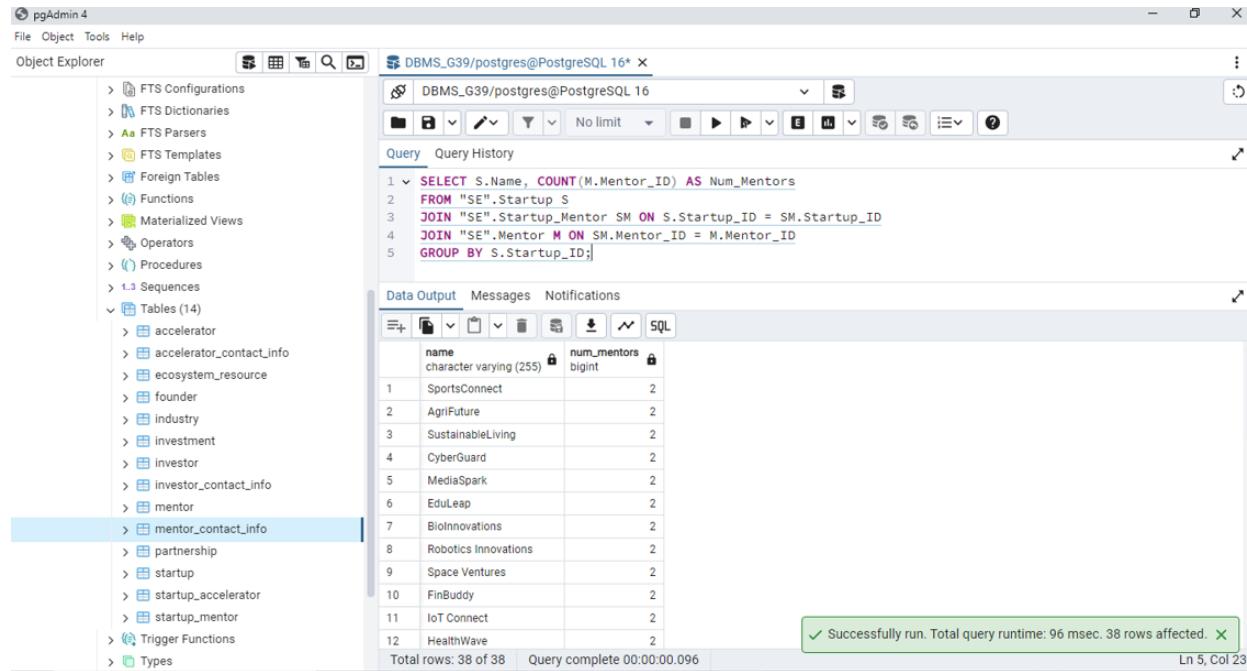
Successfully run. Total query runtime: 192 msec. 80 rows affected.

33. Get the Number of Mentors for Each Startup.

```

SELECT S.Name, COUNT(M.Mentor_ID) AS Num_Mentors
FROM "SE".Startup S
JOIN "SE".Startup_Mentor SM ON S.Startup_ID = SM.Startup_ID
JOIN "SE".Mentor M ON SM.Mentor_ID = M.Mentor_ID
GROUP BY S.Startup_ID;

```



```

SELECT S.Name, COUNT(M.Mentor_ID) AS Num_Mentors
FROM "SE".Startup_S
JOIN "SE".Startup_Mentor SM ON S.Startup_ID = SM.Startup_ID
JOIN "SE".Mentor M ON SM.Mentor_ID = M.Mentor_ID
GROUP BY S.Startup_ID;

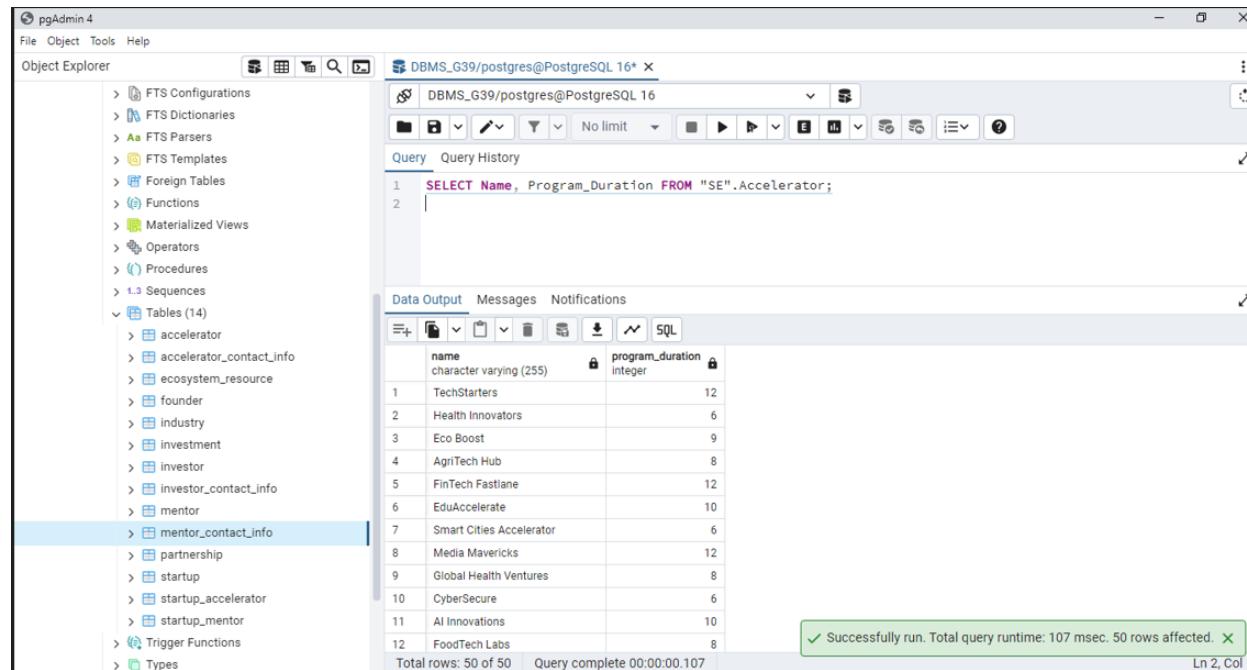
```

| name | num_mentors |
|----------------------|-------------|
| SportsConnect | 2 |
| AgriFuture | 2 |
| SustainableLiving | 2 |
| CyberGuard | 2 |
| MediaSpark | 2 |
| EduLeap | 2 |
| BioInnovations | 2 |
| Robotics Innovations | 2 |
| Space Ventures | 2 |
| FinBuddy | 2 |
| IoT Connect | 2 |
| HealthWave | 2 |

Successfully run. Total query runtime: 96 msec. 38 rows affected.

34. List Accelerators and Their Program Durations.

SELECT Name, Program_Duration FROM "SE".Accelerator;



```

SELECT Name, Program_Duration FROM "SE".Accelerator;

```

| name | program_duration |
|--------------------------|------------------|
| TechStarters | 12 |
| Health Innovators | 6 |
| Eco Boost | 9 |
| AgriTech Hub | 8 |
| FinTech Fastlane | 12 |
| EduAccelerate | 10 |
| Smart Cities Accelerator | 6 |
| Media Mavericks | 12 |
| Global Health Ventures | 8 |
| CyberSecure | 6 |
| AI Innovations | 10 |
| FoodTech Labs | 8 |

Successfully run. Total query runtime: 107 msec. 50 rows affected.

35. Find Startups with Investments in Multiple Stages.

```
SELECT S.Name, COUNT(DISTINCT I.Stage) AS Num_Stages
FROM "SE".Startup S
JOIN "SE".Investment I ON S.Startup_ID = I.Startup_ID
GROUP BY S.Startup_ID
HAVING COUNT(DISTINCT I.Stage) > 1;
```

The screenshot shows the pgAdmin 4 interface. In the Object Explorer, under the 'Tables' section, there are 14 tables listed. The 'Data Output' tab displays the results of the executed SQL query. The results are as follows:

| | name | num_stages |
|---|-----------------------|------------|
| 1 | FoodieTech | 2 |
| 2 | Impact Ventures | 2 |
| 3 | CleanEnergy Solutions | 2 |
| 4 | TechNest | 2 |
| 5 | Wearable Innovations | 2 |
| 6 | SustainableLiving | 2 |
| 7 | FinTech Pioneers | 2 |

Below the table, a message indicates the query was successfully run and completed in 110 msec with 7 rows affected.

36. Find Startups with the Maximum Number of Founders.

```
SELECT S.Name, COUNT(F.Founder_ID) AS Num_Founders
FROM "SE".Startup S
JOIN "SE".Founder F ON S.Startup_ID = F.Startup_ID
GROUP BY S.Startup_ID
ORDER BY Num_Founders DESC
LIMIT 1;
```

The screenshot shows the pgAdmin 4 interface. On the left, the Object Explorer pane displays a tree view of database objects, including FTS Configurations, FTS Dictionaries, FTS Parsers, FTS Templates, Foreign Tables, Functions, Materialized Views, Operators, Procedures, Sequences, and 14 tables under the 'Tables' category. One table, 'mentor_contact_info', is currently selected. The main window contains a query editor with the following SQL code:

```

1 v SELECT S.Name, COUNT(F.Founder_ID) AS Num_Founders
2   FROM "SE".Startup S
3   JOIN "SE".Founder F ON S.Startup_ID = F.Startup_ID
4   GROUP BY S.Startup_ID
5   ORDER BY Num_Founders DESC
6   LIMIT 1;

```

The results pane shows a single row of data from the query:

| name | num_founders |
|-------------|--------------|
| CyberDefend | 2 |

At the bottom of the pgAdmin window, a message box indicates: "Successfully run. Total query runtime: 98 msec. 1 rows affected." and "Ln 6, Col 9".

37. Get Investors Who Have Invested in a Startup and Their Contact Info.

```

SELECT I.Name, I.Type, I.Investment_Stage_Preference, IC.phone_no
FROM "SE".Investor I
JOIN "SE".Investment Inv ON I.Investor_ID = Inv.Investor_ID
JOIN "SE".Investor_contact_info IC ON I.Investor_ID = IC.Investor_ID
WHERE Inv.Startup_ID = 1;

```

```

SELECT I.Name, I.Type, I.Investment_Stage_Preference, IC.phone_no
FROM "SE".Investor I
JOIN "SE".Investment Inv ON I.Investor_ID = Inv.Investor_ID
JOIN "SE".Investor_contact_info IC ON I.Investor_ID = IC.Investor_ID
WHERE Inv.Startup_ID = 1;

```

| | name | type | investment_stage_preference | phone_no |
|---|---------------|--------------------|-----------------------------|------------|
| 1 | Rajesh Sharma | Angel Investor | Seed | 9123456780 |
| 2 | Rajesh Sharma | Angel Investor | Seed | 9876543210 |
| 3 | Priya Agarwal | Venture Capitalist | Series A | 8765432109 |
| 4 | Priya Agarwal | Venture Capitalist | Series A | 9988776655 |

38. Find Startups with the Highest Number of Mentors.

```

SELECT S.Name, COUNT(M.Mentor_ID) AS Num_Mentors
FROM "SE".Startup S
JOIN "SE".Startup_Mentor SM ON S.Startup_ID = SM.Startup_ID
JOIN "SE".Mentor M ON SM.Mentor_ID = M.Mentor_ID
GROUP BY S.Startup_ID;

```

The screenshot shows the pgAdmin 4 interface. In the Object Explorer, under Tables (14), the 'mentor_contact_info' table is selected. In the main window, a query is run:

```

1 v SELECT S.Name, COUNT(M.Mentor_ID) AS Num_Mentors
2   FROM "SE".Startup S
3   JOIN "SE".Startup_Mentor SM ON S.Startup_ID = SM.Startup_ID
4   JOIN "SE".Mentor M ON SM.Mentor_ID = M.Mentor_ID
5   GROUP BY S.Startup_ID;
    
```

The Data Output tab displays the results:

| | name | num_mentors |
|----|----------------------|-------------|
| 1 | SportsConnect | 2 |
| 2 | AgriFuture | 2 |
| 3 | SustainableLiving | 2 |
| 4 | CyberGuard | 2 |
| 5 | MediaSpark | 2 |
| 6 | EduLeap | 2 |
| 7 | BioInnovations | 2 |
| 8 | Robotics Innovations | 2 |
| 9 | Space Ventures | 2 |
| 10 | FinBuddy | 2 |
| 11 | IoT Connect | 2 |
| 12 | HealthWave | 2 |

Total rows: 38 of 38 Query complete 00:00:00.096

Success message: Successfully run. Total query runtime: 96 msec, 38 rows affected.

39. Find Startups with the Most Investment in a Specific Year.

```

SELECT S.Name, SUM(I.Amount) AS Total_Investment
FROM "SE".Startup S
JOIN "SE".Investment I ON S.Startup_ID = I.Startup_ID
WHERE EXTRACT(YEAR FROM I.Date) = 2023
GROUP BY S.Startup_ID
ORDER BY Total_Investment DESC
LIMIT 1;
    
```

The screenshot shows the pgAdmin 4 interface with the following details:

- Object Explorer:** Shows a tree view of database objects including FTS Configurations, FTS Dictionaries, FTS Parsers, FTS Templates, Foreign Tables, Functions, Materialized Views, Operators, Procedures, Sequences, Tables (14), and Types.
- Query Editor:** Contains the following SQL query:


```
2 FROM "SE".Startup S
3 JOIN "SE".Investment I ON S.Startup_ID = I.Startup_ID
4 WHERE EXTRACT(YEAR FROM I.Date) = 2023
5 GROUP BY S.Startup_ID
6 ORDER BY Total_Investment DESC
7 LIMIT 1;
```
- Data Output:** Displays the results in a table:

| | name | total_investment |
|---|------------|------------------|
| 1 | AgriFuture | 1250000.00 |
- Messages:** A green message box indicates: "Successfully run. Total query runtime: 189 msec. 1 rows affected." and "Ln 7, Col 9".

40. Find Startups with More Employees Than the Average Employee Count.

```
SELECT Name, Employee_Count
FROM "SE".Startup
WHERE Employee_Count > (SELECT AVG(Employee_Count) FROM "SE".Startup);
```

The screenshot shows the pgAdmin 4 interface with the following details:

- Object Explorer:** Shows a tree view of database objects including FTS Configurations, FTS Dictionaries, FTS Parsers, FTS Templates, Foreign Tables, Functions, Materialized Views, Operators, Procedures, Sequences, Tables (14), and Types.
- Query Editor:** Contains the following SQL query:


```
1 v SELECT Name, Employee_Count
2 FROM "SE".Startup
3 WHERE Employee_Count > (SELECT AVG(Employee_Count) FROM "SE".Startup);
4
```
- Data Output:** Displays the results in a table:

| | name | employee_count |
|----|----------------------|----------------|
| 1 | HealthWave | 15 |
| 2 | AgriFuture | 20 |
| 3 | GlobalHealthTech | 25 |
| 4 | Space Ventures | 15 |
| 5 | Blockchain Experts | 20 |
| 6 | Robotics Innovations | 15 |
| 7 | MediaSpark | 15 |
| 8 | Impact Accelerator | 20 |
| 9 | AI Accelerator | 20 |
| 10 | Health4All | 60 |
| 11 | GoGreen | 25 |
| 12 | CleanAir Tech | 40 |
- Messages:** A green message box indicates: "Total rows: 23 of 23 Query complete 00:00:00.098" and "Ln 3, Col 60".

Chapter 5: Interface Implementation

1. Setup JDBC and Basic GUI

Startup Table

DatabaseManager.java

```
import java.sql.*;  
  
public class DatabaseManager {
```

```
private static final String URL = "jdbc:postgresql://localhost:5432/DBMS_G39";
private static final String USER = "postgres";
private static final String PASSWORD = "";

public Connection connect() throws SQLException {
    return DriverManager.getConnection(URL, USER, PASSWORD);
}

public void insertStartup(String name, String industry, String stage, String founded_date, String location, int funding_amount, int employee_count) {
    String insertSQL = "INSERT INTO \"SE\".startup (name, industry, stage, founded_date, location, funding_amount, employee_count) VALUES (?, ?, ?, ?, ?, ?, ?)";
    try (Connection connection = connect()) {
        PreparedStatement pstmt = connection.prepareStatement(insertSQL) {
            pstmt.setString(1, name);
            pstmt.setString(2, industry);
            pstmt.setString(3, stage);
            pstmt.setString(4, founded_date);
            pstmt.setString(5, location);
            pstmt.setInt(6, funding_amount);
            pstmt.setInt(7, employee_count);
            pstmt.executeUpdate();
        } catch (SQLException e) {
            e.printStackTrace();
        }
    }
}

public ResultSet readStartup() {
```

```
String selectSQL = "SELECT * FROM \"SE\".startup";  
try {  
    Connection connection = connect();  
    PreparedStatement pstmt = connection.prepareStatement(selectSQL);  
    return pstmt.executeQuery();  
} catch (SQLException e) {  
    e.printStackTrace();  
}  
return null;  
  
}  
  
public void updateStartup(int startup_id, String name, String industry, String stage, String founded_date, String location, int funding_amount, int employee_count) {  
    String updateSQL = "UPDATE \"SE\".startup SET name = ?, industry = ?, stage = ?, founded_date = ?, location = ?, funding_amount = ?, employee_count = ? WHERE startup_id = ?";  
    try (Connection connection = connect()) {  
        PreparedStatement pstmt = connection.prepareStatement(updateSQL) {  
            pstmt.setString(1, name);  
            pstmt.setString(2, industry);  
            pstmt.setString(3, stage);  
            pstmt.setString(4, founded_date);  
            pstmt.setString(5, location);  
            pstmt.setInt(6, funding_amount);  
            pstmt.setInt(7, employee_count);  
            pstmt.setInt(8, startup_id);  
            pstmt.executeUpdate();  
        } catch (SQLException e) {  
            e.printStackTrace();  
        }  
    }  
}
```

```
}

}

public void deleteStartup(int startup_id) {
    String deleteSQL = "DELETE FROM \"SE\".startup WHERE startup_id = ?";
    try (Connection connection = connect()) {
        PreparedStatement pstmt = connection.prepareStatement(deleteSQL) {
            pstmt.setInt(1, startup_id);
            pstmt.executeUpdate();
        } catch (SQLException e) {
            e.printStackTrace();
        }
    }
}
```

StartupGUI.java

```
import javax.swing.*;
import javax.swing.table.DefaultTableModel;
import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.sql.ResultSet;
import java.sql.SQLException;
public class StartupGUI extends JFrame {
    private JTextField nameField, industryField, stageField, dateField, locationField,
    funding_amountField, employee_countField, idField;
```

```
private JButton addButton, updateButton, deleteButton, loadButton;  
private JTable startupTable;  
private DefaultTableModel tableModel;  
private DatabaseManager dbManager;  
  
public StartupGUI() {  
    dbManager = new DatabaseManager();  
    setTitle("Startup Management");  
    setLayout(new BorderLayout());  
  
    JPanel inputPanel = new JPanel(new GridLayout(4, 1));  
    inputPanel.add(new JLabel("ID:"));  
    idField = new JTextField();  
    inputPanel.add(idField);  
  
    inputPanel.add(new JLabel("Name:"));  
    nameField = new JTextField();  
    inputPanel.add(nameField);  
  
    inputPanel.add(new JLabel("Industry:"));  
    industryField = new JTextField();  
    inputPanel.add(industryField);  
  
    inputPanel.add(new JLabel("Stage:"));  
    stageField = new JTextField();  
    inputPanel.add(stageField);
```

```
inputPanel.add(new JLabel("Date:"));
dateField = new JTextField();
inputPanel.add(dateField);

inputPanel.add(new JLabel("Location:"));
locationField = new JTextField();
inputPanel.add(locationField);

inputPanel.add(new JLabel("Funding Amount:"));
funding_amountField = new JTextField();
inputPanel.add(funding_amountField);

inputPanel.add(new JLabel("Employee Count:"));
employee_countField = new JTextField();
inputPanel.add(employee_countField);

JPanel buttonPanel = new JPanel();
addButton = new JButton("Add");
updateButton = new JButton("Update");
deleteButton = new JButton("Delete");
loadButton = new JButton("Load");
buttonPanel.add(addButton);
buttonPanel.add(updateButton);
buttonPanel.add(deleteButton);
buttonPanel.add(loadButton);

tableModel = new DefaultTableModel(new String[]{"ID", "Name", "Industry", "Stage", "Date",
"Location", "FundAmount", "EmployeeCount"}, 0);
```

```
startupTable = new JTable(tableModel);

JScrollPane scrollPane = new JScrollPane(startupTable);

add(inputPanel, BorderLayout.NORTH);

add(scrollPane, BorderLayout.CENTER);

add(buttonPanel, BorderLayout.SOUTH);

addButton.addActionListener(new ActionListener() {

    @Override

    public void actionPerformed(ActionEvent e) {

        String name = nameField.getText();

        String industry= industryField.getText();

        String stage= stageField.getText();

        String date= dateField.getText();

        String location= locationField.getText();

        int funding_amount = Integer.parseInt(funding_amountField.getText());

        int employee_count = Integer.parseInt(employee_countField.getText());

        dbManager.insertStartup(name, industry, stage, date, location ,funding_amount ,employee_count);

        loadStartup();

    }

});

updateButton.addActionListener(new ActionListener() {

    @Override

    public void actionPerformed(ActionEvent e) {

        int startup_id = Integer.parseInt(idField.getText());
```

```
String name = nameField.getText();
String industry= industryField.getText();
String stage= stageField.getText();
String founded_date = dateField.getText();
String location= locationField.getText();
int funding_amount = Integer.parseInt(funding_amountField.getText());
int employee_count = Integer.parseInt(employee_countField.getText());
dbManager.updateStartup(startup_id,name,industry,stage,founded_date,
location ,funding_amount, employee_count);
loadStartup();
}
});

deleteButton.addActionListener(new ActionListener() {
@Override
public void actionPerformed(ActionEvent e) {
int startup_id = Integer.parseInt(idField.getText());
dbManager.deleteStartup(startup_id);
loadStartup();
}
});

loadButton.addActionListener(new ActionListener() {
@Override
public void actionPerformed(ActionEvent e) {
loadStartup();
}
});
});
```

```
setSize(600, 400);

setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);

setVisible(true);

}

private void loadStartup() {

try {

ResultSet resultSet = dbManager.readStartup();

tableModel.setRowCount(0); // Clear existing data

while (resultSet != null && resultSet.next()) {

int id = resultSet.getInt("startup_id");

String name = resultSet.getString("name");

String industry= resultSet.getString("industry");

String stage = resultSet.getString("stage");

String date= resultSet.getString("founded_date");

String location= resultSet.getString("location");

int fundAmt =resultSet.getInt("funding_amount");

int employee_count= resultSet.getInt("employee_count");



tableModel.addRow(new Object[]{id, name, industry,stage,date, location ,fundAmt ,employee_count});

}

} catch (SQLException e) {

e.printStackTrace();

}

}

public static void main(String[] args) {
```

```
    new StartupGUI();  
}  
}  
}
```

Accelerator Table

DatabaseManager1.java

```
import java.sql.*;  
  
public class DatabaseManager1 {  
  
    private static final String URL = "jdbc:postgresql://localhost:5432/DBMS_G39";  
  
    private static final String USER = "postgres";  
  
    private static final String PASSWORD = "";  
  
    public Connection connect() throws SQLException {  
  
        return DriverManager.getConnection(URL, USER, PASSWORD);  
    }  
  
  
    public void insertAccelerator(String name, String location, String industry_focus, int batch_size, int program_duration){  
  
        String insertSQL = "INSERT INTO \"SE\".accelerator (name, location, industry_focus, batch_size, program_duration) VALUES (?, ?, ?, ?, ?)";  
  
        try (Connection connection = connect());  
  
        PreparedStatement pstmt = connection.prepareStatement(insertSQL) {  
  
            pstmt.setString(1, name);  
            pstmt.setString(2, location);  
            pstmt.setString(3, industry_focus);  
            pstmt.setInt(4, batch_size);  
        }  
    }  
}
```

```
        pstmt.setInt(5, program_duration);

        pstmt.executeUpdate();

    } catch (SQLException e) {
        e.printStackTrace();
    }
}

public ResultSet readAccelerator() {
    String selectSQL = "SELECT * FROM \"SE\".accelerator";
    try {
        Connection connection = connect();
        PreparedStatement pstmt = connection.prepareStatement(selectSQL);
        return pstmt.executeQuery();
    } catch (SQLException e) {
        e.printStackTrace();
    }
    return null;
}

public void updateAccelerator(int accelerator_id, String name, String location, String industry_focus, int batch_size, int program_duration ) {
    String updateSQL = "UPDATE \"SE\".accelerator SET name = ?, location = ?, industry_focus = ?, batch_size = ?, program_duration = ? WHERE accelerator_id = ?";
    try (Connection connection = connect()) {
        PreparedStatement pstmt = connection.prepareStatement(updateSQL) {
            pstmt.setString(1, name);
            pstmt.setString(2, location);
```

```
        pstmt.setString(3, industry_focus);
        pstmt.setInt(4, batch_size);
        pstmt.setInt(5, program_duration);
        pstmt.setInt(6, accelerator_id);
        pstmt.executeUpdate();
    } catch (SQLException e) {
        e.printStackTrace();
    }
}

public void deleteAccelerator(int accelerator_id) {
    String deleteSQL = "DELETE FROM \"SE\".accelerator WHERE accelerator_id = ?";
    try (Connection connection = connect()) {
        PreparedStatement pstmt = connection.prepareStatement(deleteSQL) {
            pstmt.setInt(1, accelerator_id);
            pstmt.executeUpdate();
        } catch (SQLException e) {
            e.printStackTrace();
        }
    }
}
```

AcceleratorGUI.java

```
import javax.swing.*;
import javax.swing.table.DefaultTableModel;
import java.awt.*;
import java.awt.event.ActionEvent;
```

```
import java.awt.event.ActionListener;
import java.sql.ResultSet;
import java.sql.SQLException;
public class AcceleratorGUI extends JFrame {
    private JTextField nameField, locationField, industry_focusField, batch_sizeField,
program_durationField, idField;
    private JButton addButton, updateButton, deleteButton, loadButton;
    private JTable acceleratorTable;
    private DefaultTableModel tableModel1;
    private DatabaseManager1 dbManager;

    public AcceleratorGUI() {
        dbManager = new DatabaseManager1();
        setTitle("Accelerator Management");
        setLayout(new BorderLayout());
        JPanel inputPanel = new JPanel(new GridLayout(5, 2));
        inputPanel.add(new JLabel("ID:"));
        idField = new JTextField();
        inputPanel.add(idField);
        inputPanel.add(new JLabel("Name:"));
        nameField = new JTextField();
        inputPanel.add(nameField);
        inputPanel.add(new JLabel("Location:"));
        locationField = new JTextField();
        inputPanel.add(locationField);
```

```
inputPanel.add(new JLabel("Industry Focus :"));

industry_focusField = new JTextField();

inputPanel.add(industry_focusField);

inputPanel.add(new JLabel("Batch Size:"));

batch_sizeField = new JTextField();

inputPanel.add(batch_sizeField);

inputPanel.add(new JLabel("Program Duration:"));

program_durationField = new JTextField();

inputPanel.add(program_durationField);

JPanel buttonPanel = new JPanel();

addButton = new JButton("Add");

updateButton = new JButton("Update");

deleteButton = new JButton("Delete");

loadButton = new JButton("Load");

buttonPanel.add(addButton);

buttonPanel.add(updateButton);

buttonPanel.add(deleteButton);

buttonPanel.add(loadButton);

tableModel1 = new DefaultTableModel(new String[]{"ID", "Name", "Location", "Industry Focus",
"Batch Size", "Program Duration"}, 0);

acceleratorTable = new JTable(tableModel1);

JSScrollPane scrollPane = new JScrollPane(acceleratorTable);
```

```
add(inputPanel, BorderLayout.NORTH);
add(scrollPane, BorderLayout.CENTER);
add(buttonPanel, BorderLayout.SOUTH);

addButton.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        String name = nameField.getText();
        String location = locationField.getText();
        String industry_focus = industry_focusField.getText();
        int batch_size = Integer.parseInt(batch_sizeField.getText());
        int program_duration = Integer.parseInt(program_durationField.getText());
        dbManager.insertAccelerator(name, location, industry_focus, batch_size , program_duration);
        loadAccelerator();
    }
});

updateButton.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        int accelerator_id = Integer.parseInt(idField.getText());
        String name = nameField.getText();
        String location = locationField.getText();
        String industry_focus = industry_focusField.getText();
        int batch_size = Integer.parseInt(batch_sizeField.getText());
        int program_duration = Integer.parseInt(program_durationField.getText());
        dbManager.updateAccelerator(accelerator_id, name, location, industry_focus, batch_size,
program_duration);
    }
});
```

```
        loadAccelerator();  
    }  
});  
  
deleteButton.addActionListener(new ActionListener() {  
    @Override  
    public void actionPerformed(ActionEvent e) {  
        int accelerator_id = Integer.parseInt(idField.getText());  
        dbManager.deleteAccelerator(accelerator_id);  
        loadAccelerator();  
    }  
});  
  
loadButton.addActionListener(new ActionListener() {  
    @Override  
    public void actionPerformed(ActionEvent e) {  
        loadAccelerator();  
    }  
});  
  
setSize(600, 400);  
setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);  
setVisible(true);  
}  
  
private void loadAccelerator() {  
    try {
```

```

ResultSet resultSet = dbManager.readAccelerator();

tableModel1.setRowCount(0); // Clear existing data

while (resultSet != null && resultSet.next()) {

    int id = resultSet.getInt("accelerator_id");

    String name = resultSet.getString("name");

    String location = resultSet.getString("location");

    String industry_focus = resultSet.getString("industry_focus");

    int batch_size = resultSet.getInt("batch_size");

    int program_duration = resultSet.getInt("program_duration");

    tableModel1.addRow(new Object[]{id, name, location, industry_focus, batch_size,
        program_duration});

}

} catch (SQLException e) {

    e.printStackTrace();

}

}

public static void main(String[] args) {

    new AcceleratorGUI();

}

}

```

Mentor Table

DatabaseManager2.java

```

import java.sql.*;

public class DatabaseManager2 {

```

```
private static final String URL = "jdbc:postgresql://localhost:5432/DBMS_G39";
private static final String USER = "postgres";
private static final String PASSWORD = "";
public Connection connect() throws SQLException {
    return DriverManager.getConnection(URL, USER, PASSWORD);
}

public void insertMentor(String name, String expertise, String affiliation, String linkedin_profile){
    String insertSQL = "INSERT INTO \"SE\".mentor (name, expertise, affiliation, linkedin_profile)
VALUES (?, ?, ?, ?);"
    try (Connection connection = connect()) {
        PreparedStatement pstmt = connection.prepareStatement(insertSQL) {
            pstmt.setString(1, name);
            pstmt.setString(2, expertise);
            pstmt.setString(3, affiliation);
            pstmt.setString(4, linkedin_profile);
            pstmt.executeUpdate();
        } catch (SQLException e) {
            e.printStackTrace();
        }
    }
}

public ResultSet readMentor() {
    String selectSQL = "SELECT * FROM \"SE\".mentor";
    try {
        Connection connection = connect();
        PreparedStatement pstmt = connection.prepareStatement(selectSQL);
        return pstmt.executeQuery();
    }
}
```

```
        } catch (SQLException e) {
            e.printStackTrace();
        }
        return null;
    }

    public void updateMentor(int mentor_id, String name, String expertise, String affiliation, String linkedin_profile) {
        String updateSQL = "UPDATE \"SE\".mentor SET name = ?, expertise = ?, affiliation = ?, linkedin_profile = ? WHERE mentor_id = ?";
        try (Connection connection = connect()) {
            PreparedStatement pstmt = connection.prepareStatement(updateSQL) {
                pstmt.setString(1, name);
                pstmt.setString(2, name);
                pstmt.setString(3, expertise);
                pstmt.setString(4, affiliation);
                pstmt.setInt(5, mentor_id);
                pstmt.executeUpdate();
            } catch (SQLException e) {
                e.printStackTrace();
            }
        }
    }

    public void deleteMentor(int mentor_id) {
        String deleteSQL = "DELETE FROM \"SE\".mentor WHERE mentor_id = ?";
        try (Connection connection = connect()) {
            PreparedStatement pstmt = connection.prepareStatement(deleteSQL) {
                pstmt.setInt(1, mentor_id);
            }
        }
    }
}
```

```
        pstmt.executeUpdate();

    } catch (SQLException e) {
        e.printStackTrace();
    }
}
```

MentorGUI.java

```
import javax.swing.*;
import javax.swing.table.DefaultTableModel;
import java.awt.*;
import java.awt.event.ActionEvent;
import java.awt.event.ActionListener;
import java.sql.ResultSet;
import java.sql.SQLException;
public class MentorGUI extends JFrame {

    private JTextField nameField, expertiseField, affiliationField, linkedin_profileField, idField;
    private JButton addButton, updateButton, deleteButton, loadButton;
    private JTable mentorTable;
    private DefaultTableModel tableModel1;
    private DatabaseManager2 dbManager;

    public MentorGUI() {
        dbManager = new DatabaseManager2();
        setTitle("Mentor Management");
        setLayout(new BorderLayout());
    }
}
```

```
JPanel inputPanel = new JPanel(new GridLayout(5, 2));  
inputPanel.add(new JLabel("ID:"));  
idField = new JTextField();  
inputPanel.add(idField);  
  
inputPanel.add(new JLabel("Name:"));  
nameField = new JTextField();  
inputPanel.add(nameField);  
  
inputPanel.add(new JLabel("Expertise:"));  
expertiseField = new JTextField();  
inputPanel.add(expertiseField);  
  
inputPanel.add(new JLabel("Affiliation:"));  
affiliationField = new JTextField();  
inputPanel.add(affiliationField);  
  
inputPanel.add(new JLabel("Linkedin Profile :"));  
linkedin_profileField = new JTextField();  
inputPanel.add(linkedin_profileField);  
  
JPanel buttonPanel = new JPanel();  
addButton = new JButton("Add");  
updateButton = new JButton("Update");  
deleteButton = new JButton("Delete");  
loadButton = new JButton("Load");  
buttonPanel.add(addButton);
```

```
buttonPanel.add(updateButton);
buttonPanel.add(deleteButton);
buttonPanel.add(loadButton);

tableModel1 = new DefaultTableModel(new String[]{"ID", "Name", "Expertise", "Affiliation",
"Linkedin Profile"}, 0);
mentorTable = new JTable(tableModel1);
JScrollPane scrollPane = new JScrollPane(mentorTable);

add(inputPanel, BorderLayout.NORTH);
add(scrollPane, BorderLayout.CENTER);
add(buttonPanel, BorderLayout.SOUTH);

 addButton.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        String name = nameField.getText();
        String expertise = expertiseField.getText();
        String affiliation = affiliationField.getText();
        String linkedin_profile = linkedin_profileField.getText();
        dbManager.insertMentor(name, expertise, affiliation, linkedin_profile);
        loadMentor();
    }
});

updateButton.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
```

```
int mentor_id = Integer.parseInt(idField.getText());
String name = nameField.getText();
String expertise = expertiseField.getText();
String affiliation = affiliationField.getText();
String linkedin_profile = linkedin_profileField.getText();
dbManager.updateMentor(mentor_id, name, expertise, affiliation, linkedin_profile);
loadMentor();
}

});

deleteButton.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        int mentor_id = Integer.parseInt(idField.getText());
        dbManager.deleteMentor(mentor_id);
        loadMentor();
    }
});

loadButton.addActionListener(new ActionListener() {
    @Override
    public void actionPerformed(ActionEvent e) {
        loadMentor();
    }
});

setSize(600, 400);
```

```
setDefaultCloseOperation(JFrame.EXIT_ON_CLOSE);
setVisible(true);
}

private void loadMentor() {
    try {
        ResultSet resultSet = dbManager.readMentor();
        tableModel1.setRowCount(0); // Clear existing data
        while (resultSet != null && resultSet.next()) {
            int id = resultSet.getInt("mentor_id");
            String name = resultSet.getString("name");
            String expertise = resultSet.getString("expertise");
            String affiliation = resultSet.getString("affiliation");
            String linkedin_profile = resultSet.getString("linkedin_profile");

            tableModel1.addRow(new Object[]{id, name, expertise, affiliation, linkedin_profile});
        }
    } catch (SQLException e) {
        e.printStackTrace();
    }
}

public static void main(String[] args) {
    new MentorGUI();
}
```

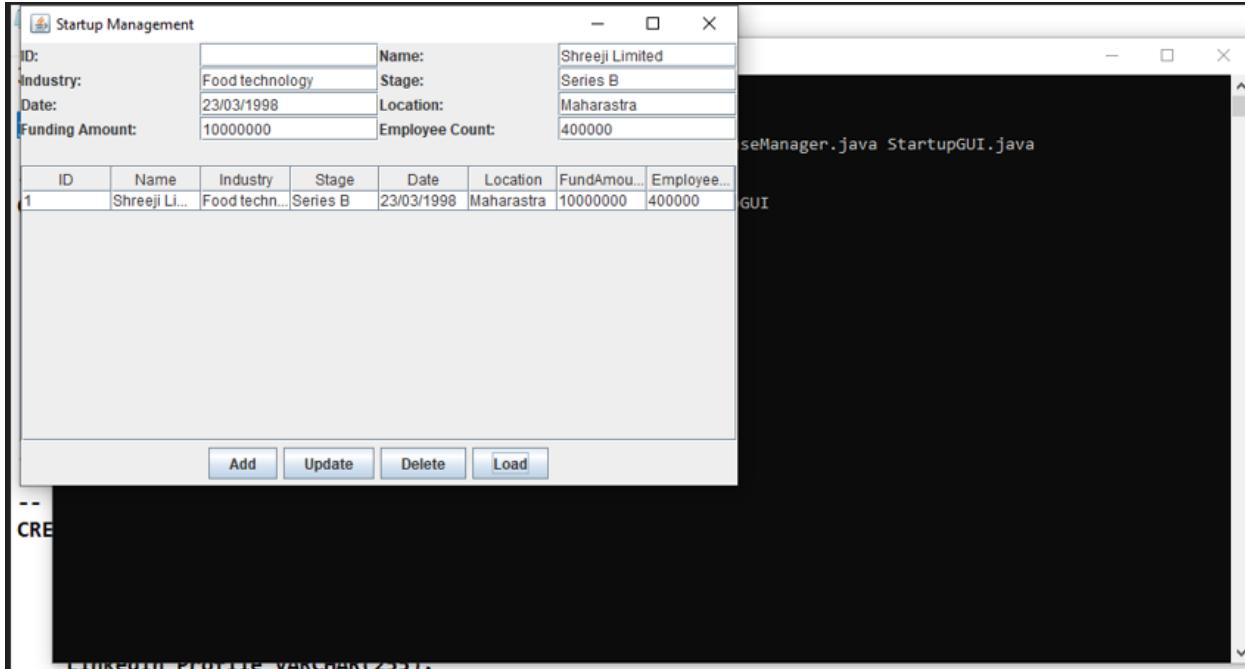
2. CRUD Operations in GUI

Startup Table

GUI

The screenshot shows a Windows application window titled "Startup Management". At the top, there are input fields for "ID", "Name", "Industry", "Stage", "Date", "Location", "Funding Amount", and "Employee Count". Below these fields is a table with columns: ID, Name, Industry, Stage, Date, Location, FundAmou..., and Employee... (partially visible). At the bottom of the window are four buttons: Add, Update, Delete, and Load.

Add Startup



Update Startup

| ID | Name | Industry | Stage | Date | Location | FundAmount | EmployeeCount |
|----|--------------------------|-------------------------|----------|------------|----------------------|------------|---------------|
| 1 | Shreeji Limited | Food technology | Series B | 23/03/1998 | Maharashtra | 10000000 | 400000 |
| 2 | HealthWave | Healthcare | Series A | 2021-03-10 | New York, NY | 2000000 | 15 |
| 3 | EcoSmart | Sustainability | Seed | 2022-06-25 | Austin, TX | 300000 | 4 |
| 4 | Agrifuture | Agriculture | Series B | 2020-09-05 | Chicago, IL | 1500000 | 20 |
| 5 | FinTrend | Finance | Series A | 2021-04-17 | Boston, MA | 1000000 | 10 |
| 6 | EduLap | Education | Seed | 2023-02-20 | Seattle, WA | 250000 | 6 |
| 7 | SmartUrban | Urban Development | Series A | 2022-05-30 | Los Angeles, CA | 800000 | 8 |
| 8 | MediaNest | Media | Seed | 2023-01-08 | Los Angeles, CA | 400000 | 3 |
| 9 | GlobalHealthTech | Healthcare | Series C | 2019-07-15 | Toronto, Canada | 5000000 | 25 |
| 10 | CyberGuard | Cybersecurity | Series A | 2021-08-12 | Washington, D.C. | 1200000 | 12 |
| 11 | AI Innovations | Artificial Intelligence | Seed | 2023-03-10 | Silicon Valley, CA | 600000 | 7 |
| 12 | FoodieTech | Food Technology | Series A | 2020-11-21 | San Diego, CA | 900000 | 9 |
| 13 | IoT Connect | Internet of Things | Seed | 2023-04-05 | New York, NY | 350000 | 5 |
| 14 | Space Ventures | Aerospace | Series B | 2019-10-30 | Houston, TX | 2500000 | 15 |
| 15 | EcomMagic | E-commerce | Series A | 2021-05-02 | Miami, FL | 850000 | 10 |
| 16 | CreativeMinds | Media & Entertainment | Seed | 2023-02-15 | Los Angeles, CA | 200000 | 4 |
| 17 | Blockchain Experts | Blockchain | Series A | 2022-06-17 | Singapore | 3000000 | 20 |
| 18 | VR Experiences | Virtual Reality | Seed | 2023-03-28 | Los Angeles, CA | 500000 | 6 |
| 19 | Digital Health Solutions | Healthcare | Series B | 2020-08-14 | Berlin, Germany | 1800000 | 14 |
| 20 | Impact Ventures | Social Impact | Seed | 2023-05-01 | London, UK | 400000 | 5 |
| 21 | TravelGenie | Travel & Tourism | Series A | 2021-07-22 | Barcelona, Spain | 700000 | 8 |
| 22 | FinBuddy | Finance | Seed | 2022-12-05 | Dublin, Ireland | 250000 | 3 |
| 23 | CleanEnergy Solutions | Clean Technology | Series A | 2020-09-10 | Vancouver, Canada | 1300000 | 11 |
| 24 | Startup Hub | Various | Seed | 2023-01-20 | Austin, TX | 300000 | 6 |
| 25 | FashionTech | Fashion | Series A | 2021-04-12 | Paris, France | 600000 | 5 |
| 26 | TechNest | Technology | Seed | 2023-02-22 | Tokyo, Japan | 750000 | 9 |
| 27 | EduTech Innovations | Education | Series B | 2021-05-30 | Melbourne, Australia | 1200000 | 12 |
| 28 | Wearable Innovations | Wearables | Seed | 2023-04-15 | Los Angeles, CA | 400000 | 4 |
| 29 | SportsConnect | Sports | Series A | 2022-11-02 | New York, NY | 900000 | 10 |
| 30 | Mobility Solutions | Transportation | Seed | 2023-03-12 | San Francisco, CA | 600000 | 7 |
| 31 | Robotics Innovations | Robotics | Series A | 2021-07-18 | Bangalore, India | 1500000 | 15 |
| 32 | Telecom Innovations | Telecommunications | Seed | 2022-10-05 | Chicago, IL | 800000 | 8 |
| 33 | GameTech | Gaming | Series A | 2021-09-30 | Seattle, WA | 1100000 | 9 |
| 34 | SustainableLiving | Sustainability | Seed | 2023-01-11 | Toronto, Canada | 450000 | 6 |

Delete Startup

| ID: | 1 | Name: | | | | | |
|-----------------|--------------------------|-------------------------|----------|------------|----------------------|---------|----|
| Industry: | | Stage: | | | | | |
| Date: | | Location: | | | | | |
| Funding Amount: | | Employee Count: | | | | | |
| 2 | HealthWave | Healthcare | Series A | 2021-03-10 | New York, NY | 2000000 | 15 |
| 3 | EcoSmart | Sustainability | Seed | 2022-06-25 | Austin, TX | 300000 | 4 |
| 4 | AgriFuture | Agriculture | Series B | 2020-09-05 | Chicago, IL | 1500000 | 20 |
| 5 | FinTrend | Finance | Series A | 2021-04-17 | Boston, MA | 1000000 | 10 |
| 6 | EdulLeap | Education | Seed | 2023-02-20 | Seattle, WA | 250000 | 6 |
| 7 | SmartUrban | Urban Development | Series A | 2022-05-30 | Los Angeles, CA | 800000 | 8 |
| 8 | MediaNest | Media | Seed | 2023-01-08 | Los Angeles, CA | 400000 | 3 |
| 9 | GlobalHealthTech | Healthcare | Series C | 2019-07-15 | Toronto, Canada | 5000000 | 25 |
| 11 | AI Innovations | Artificial Intelligence | Seed | 2023-03-10 | Silicon Valley, CA | 600000 | 7 |
| 12 | FoodieTech | Food Technology | Series A | 2020-11-21 | San Diego, CA | 900000 | 9 |
| 13 | IoT Connect | Internet of Things | Seed | 2023-04-05 | New York, NY | 350000 | 5 |
| 14 | Space Ventures | Aerospace | Series B | 2019-10-30 | Houston, TX | 2500000 | 15 |
| 15 | EcomMagic | E-commerce | Series A | 2021-05-02 | Miami, FL | 850000 | 10 |
| 16 | CreativeMinds | Media & Entertainment | Seed | 2023-02-15 | Los Angeles, CA | 200000 | 4 |
| 17 | Blockchain Experts | Blockchain | Series A | 2022-06-17 | Singapore | 3000000 | 20 |
| 18 | VR Experiences | Virtual Reality | Seed | 2023-03-28 | Los Angeles, CA | 500000 | 6 |
| 19 | Digital Health Solutions | Healthcare | Series B | 2020-08-14 | Berlin, Germany | 1800000 | 14 |
| 20 | Impact Ventures | Social Impact | Seed | 2023-05-01 | London, UK | 400000 | 5 |
| 21 | TravelGenie | Travel & Tourism | Series A | 2021-07-22 | Barcelona, Spain | 700000 | 8 |
| 22 | FinBuddy | Finance | Seed | 2022-12-05 | Dublin, Ireland | 250000 | 3 |
| 23 | CleanEnergy Solutions | Clean Technology | Series A | 2020-09-10 | Vancouver, Canada | 1300000 | 11 |
| 24 | Startup Hub | Various | Seed | 2023-01-20 | Austin, TX | 300000 | 6 |
| 25 | FashionTech | Fashion | Series A | 2021-04-12 | Paris, France | 600000 | 5 |
| 26 | TechNest | Technology | Seed | 2023-02-22 | Tokyo, Japan | 750000 | 9 |
| 27 | EduTech Innovations | Education | Series B | 2021-05-30 | Melbourne, Australia | 1200000 | 12 |
| 28 | Wearable Innovations | Wearables | Seed | 2023-04-15 | Los Angeles, CA | 400000 | 4 |
| 29 | SportsConnect | Sports | Series A | 2022-11-02 | New York, NY | 900000 | 10 |
| 30 | Mobility Solutions | Transportation | Seed | 2023-03-12 | San Francisco, CA | 600000 | 7 |
| 31 | Robotics Innovations | Robotics | Series A | 2021-07-18 | Bangalore, India | 1500000 | 15 |
| 32 | Telecom Innovations | Telecommunications | Seed | 2022-10-05 | Chicago, IL | 800000 | 8 |
| 33 | GameTech | Gaming | Series A | 2021-09-30 | Seattle, WA | 1100000 | 9 |
| 34 | SustainableLiving | Sustainability | Seed | 2023-01-11 | Toronto, Canada | 450000 | 6 |
| 35 | MediaSpark | Media | Series B | 2020-12-01 | San Diego, CA | 2000000 | 15 |
| 36 | BioInnovations | Biotechnology | Seed | 2023-05-10 | Boston, MA | 300000 | 4 |

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Load Startup

| ID: | | Name: | | | | | |
|-----------------|--------------------------|-------------------------|----------|------------|----------------------|---------|----|
| Industry: | | Stage: | | | | | |
| Date: | | Location: | | | | | |
| Funding Amount: | | Employee Count: | | | | | |
| 2 | HealthWave | Healthcare | Series A | 2021-03-10 | New York, NY | 2000000 | 15 |
| 3 | EcoSmart | Sustainability | Seed | 2022-06-25 | Austin, TX | 300000 | 4 |
| 4 | AgriFuture | Agriculture | Series B | 2020-09-05 | Chicago, IL | 1500000 | 20 |
| 5 | FinTrend | Finance | Series A | 2021-04-17 | Boston, MA | 1000000 | 10 |
| 6 | EdulLeap | Education | Seed | 2023-02-20 | Seattle, WA | 250000 | 6 |
| 7 | SmartUrban | Urban Development | Series A | 2022-05-30 | Los Angeles, CA | 800000 | 8 |
| 8 | MediaNest | Media | Seed | 2023-01-08 | Los Angeles, CA | 400000 | 3 |
| 9 | GlobalHealthTech | Healthcare | Series C | 2019-07-15 | Toronto, Canada | 5000000 | 25 |
| 11 | AI Innovations | Artificial Intelligence | Seed | 2023-03-10 | Silicon Valley, CA | 600000 | 7 |
| 12 | FoodieTech | Food Technology | Series A | 2020-11-21 | San Diego, CA | 900000 | 9 |
| 13 | IoT Connect | Internet of Things | Seed | 2023-04-05 | New York, NY | 350000 | 5 |
| 14 | Space Ventures | Aerospace | Series B | 2019-10-30 | Houston, TX | 2500000 | 15 |
| 15 | EcomMagic | E-commerce | Series A | 2021-05-02 | Miami, FL | 850000 | 10 |
| 16 | CreativeMinds | Media & Entertainment | Seed | 2023-02-15 | Los Angeles, CA | 200000 | 4 |
| 17 | Blockchain Experts | Blockchain | Series A | 2022-06-17 | Singapore | 3000000 | 20 |
| 18 | VR Experiences | Virtual Reality | Seed | 2023-03-28 | Los Angeles, CA | 500000 | 6 |
| 19 | Digital Health Solutions | Healthcare | Series B | 2020-08-14 | Berlin, Germany | 1800000 | 14 |
| 20 | Impact Ventures | Social Impact | Seed | 2023-05-01 | London, UK | 400000 | 5 |
| 21 | TravelGenie | Travel & Tourism | Series A | 2021-07-22 | Barcelona, Spain | 700000 | 8 |
| 22 | FinBuddy | Finance | Seed | 2022-12-05 | Dublin, Ireland | 250000 | 3 |
| 23 | CleanEnergy Solutions | Clean Technology | Series A | 2020-09-10 | Vancouver, Canada | 1300000 | 11 |
| 24 | Startup Hub | Various | Seed | 2023-01-20 | Austin, TX | 300000 | 6 |
| 25 | FashionTech | Fashion | Series A | 2021-04-12 | Paris, France | 600000 | 5 |
| 26 | TechNest | Technology | Seed | 2023-02-22 | Tokyo, Japan | 750000 | 9 |
| 27 | EduTech Innovations | Education | Series B | 2021-05-30 | Melbourne, Australia | 1200000 | 12 |
| 28 | Wearable Innovations | Wearables | Seed | 2023-04-15 | Los Angeles, CA | 400000 | 4 |
| 29 | SportsConnect | Sports | Series A | 2022-11-02 | New York, NY | 900000 | 10 |
| 30 | Mobility Solutions | Transportation | Seed | 2023-03-12 | San Francisco, CA | 600000 | 7 |
| 31 | Robotics Innovations | Robotics | Series A | 2021-07-18 | Bangalore, India | 1500000 | 15 |
| 32 | Telecom Innovations | Telecommunications | Seed | 2022-10-05 | Chicago, IL | 800000 | 8 |
| 33 | GameTech | Gaming | Series A | 2021-09-30 | Seattle, WA | 1100000 | 9 |
| 34 | SustainableLiving | Sustainability | Seed | 2023-01-11 | Toronto, Canada | 450000 | 6 |
| 35 | MediaSpark | Media | Series B | 2020-12-01 | San Diego, CA | 2000000 | 15 |
| 36 | BioInnovations | Biotechnology | Seed | 2023-05-10 | Boston, MA | 300000 | 4 |

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Accelerator Table

 Accelerator Management

| ID: | <input type="text"/> | Name: | | | | | | |
|---|----------------------|-------------|----------------|------------|------------------|----------------|------------|------------------|
| | <input type="text"/> | | | | | | | |
| Industry Focus : | <input type="text"/> | Batch Size: | | | | | | |
| | <input type="text"/> | | | | | | | |
| <table border="1"> <thead> <tr> <th>ID</th> <th>Name</th> <th>Location</th> <th>Industry Focus</th> <th>Batch Size</th> <th>Program Durat...</th> </tr> </thead> </table> | | | ID | Name | Location | Industry Focus | Batch Size | Program Durat... |
| ID | Name | Location | Industry Focus | Batch Size | Program Durat... | | | |
| <table border="1"> <tbody> <tr> <td>Add</td> <td>Update</td> <td>Delete</td> <td>Load</td> </tr> </tbody> </table> | | | Add | Update | Delete | Load | | |
| Add | Update | Delete | Load | | | | | |

Add Accelerator

 Accelerator Management

| ID: | <input type="text"/> | Name: | | | | | | | | | | | | |
|---|----------------------|---------------|----------------|------------|------------------|----------------|------------|------------------|---|--------------|---------------|----|----|----|
| TechStarters | <input type="text"/> | San Francisco | | | | | | | | | | | | |
| Industry Focus : | <input type="text"/> | Batch Size: | | | | | | | | | | | | |
| 10 | <input type="text"/> | 12 | | | | | | | | | | | | |
| <table border="1"> <thead> <tr> <th>ID</th> <th>Name</th> <th>Location</th> <th>Industry Focus</th> <th>Batch Size</th> <th>Program Duration</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>TechStarters</td> <td>San Francisco</td> <td>CA</td> <td>10</td> <td>12</td> </tr> </tbody> </table> | | | ID | Name | Location | Industry Focus | Batch Size | Program Duration | 1 | TechStarters | San Francisco | CA | 10 | 12 |
| ID | Name | Location | Industry Focus | Batch Size | Program Duration | | | | | | | | | |
| 1 | TechStarters | San Francisco | CA | 10 | 12 | | | | | | | | | |
| <table border="1"> <tbody> <tr> <td>Add</td> <td>Update</td> <td>Delete</td> <td>Load</td> </tr> </tbody> </table> | | | Add | Update | Delete | Load | | | | | | | | |
| Add | Update | Delete | Load | | | | | | | | | | | |

Update Accelerator

| Accelerator Management | | | | | | |
|------------------------|-------------------------------------|------------------------|---------------------------|-------------|------------------|--|
| ID: | 140 | Name: | Ahmedabad | Batch Size: | | |
| Industry Focus : | Virtual/Augmented Reality | Program Duration: | 5 | | | |
| ID | Name | Location | Industry Focus | Batch Size | Program Duration | |
| 117 | Blockchain Foundry | Singapore | Blockchain | 5 | 6 | |
| 118 | VR Incubator | San Francisco, CA | Virtual Reality | 7 | 10 | |
| 119 | Digital Health Accelerator | Berlin, Germany | Healthcare | 6 | 6 | |
| 120 | Impact Innovators | London, UK | Social Impact | 10 | 12 | |
| 121 | TravelTech Hub | Barcelona, Spain | Travel & Tourism | 8 | 10 | |
| 122 | Fintech Factory | Dublin, Ireland | Finance | 9 | 8 | |
| 123 | CleanTech Accelerator | Vancouver, Canada | Clean Technology | 12 | 9 | |
| 124 | Startup Garage | Austin, TX | Various | 15 | 10 | |
| 125 | Fashion Forward | Paris, France | Fashion | 10 | 6 | |
| 126 | Tech Quest | Tokyo, Japan | Technology | 11 | 12 | |
| 127 | EduLab | Melbourne, Australia | Education | 20 | 10 | |
| 128 | Wearable Tech Incubator | Los Angeles, CA | Wearables | 6 | 8 | |
| 129 | Sports Tech Accelerator | New York, NY | Sports | 8 | 10 | |
| 130 | Smart Mobility Hub | San Francisco, CA | Transportation | 7 | 9 | |
| 131 | Robotics Lab | Bangalore, India | Robotics | 10 | 6 | |
| 132 | Telecom Innovators | Chicago, IL | Telecommunications | 12 | 12 | |
| 133 | Gaming Accelerator | Seattle, WA | Gaming | 10 | 8 | |
| 134 | Sustainable Living Accelerator | Toronto, Canada | Sustainability | 9 | 10 | |
| 135 | Digital Media Hub | San Diego, CA | Media | 11 | 8 | |
| 136 | BioTech Innovators | Boston, MA | Biotechnology | 5 | 12 | |
| 137 | Smart Home Incubator | San Francisco, CA | Home Automation | 8 | 6 | |
| 138 | AgriFood Accelerator | Atlanta, GA | Food Technology | 10 | 10 | |
| 139 | Global Impact Accelerator | Amsterdam, Netherlands | Social Entrepreneurship | 15 | 8 | |
| 141 | Investment Accelerator | New York, NY | Finance | 10 | 10 | |
| 142 | Healthcare Innovations | Dublin, Ireland | Healthcare | 6 | 12 | |
| 143 | Tech Frontier | Singapore | Technology | 12 | 10 | |
| 144 | Elder Tech Hub | Sydney, Australia | Healthcare | 9 | 8 | |
| 145 | Smart Fashion Accelerator | Paris, France | Fashion | 5 | 6 | |
| 146 | Energy Innovators | Berlin, Germany | Energy | 10 | 9 | |
| 147 | Pet Tech Incubator | Austin, TX | Pets | 8 | 10 | |
| 148 | Youth Empowerment Hub | Mumbai, India | Social Impact | 20 | 12 | |
| 149 | Artificial Intelligence Accelerator | Los Angeles, CA | AI | 15 | 10 | |
| 150 | FinTech 101 | New York, NY | Finance | 12 | 8 | |
| 140 | VR/AR Hub | Ahmedabad | Virtual/Augmented Reality | 7 | 5 | |

Add Update Delete Load

Delete Accelerator

| Accelerator Management | | | | | | |
|------------------------|-------------------------------------|------------------------|---------------------------|-------------|------------------|--|
| ID: | 115 | Name: | | Batch Size: | | |
| Industry Focus : | | Program Duration: | | | | |
| ID | Name | Location | Industry Focus | Batch Size | Program Duration | |
| 117 | Blockchain Foundry | Singapore | Blockchain | 5 | 6 | |
| 118 | VR Incubator | San Francisco, CA | Virtual Reality | 7 | 10 | |
| 119 | Digital Health Accelerator | Berlin, Germany | Healthcare | 6 | 6 | |
| 120 | Impact Innovators | London, UK | Social Impact | 10 | 12 | |
| 121 | TravelTech Hub | Barcelona, Spain | Travel & Tourism | 8 | 10 | |
| 122 | Fintech Factory | Dublin, Ireland | Finance | 9 | 8 | |
| 123 | CleanTech Accelerator | Vancouver, Canada | Clean Technology | 12 | 9 | |
| 124 | Startup Garage | Austin, TX | Various | 15 | 10 | |
| 125 | Fashion Forward | Paris, France | Fashion | 10 | 6 | |
| 126 | Tech Quest | Tokyo, Japan | Technology | 11 | 12 | |
| 127 | EduLab | Melbourne, Australia | Education | 20 | 10 | |
| 128 | Wearable Tech Incubator | Los Angeles, CA | Wearables | 6 | 8 | |
| 129 | Sports Tech Accelerator | New York, NY | Sports | 8 | 10 | |
| 130 | Smart Mobility Hub | San Francisco, CA | Transportation | 7 | 9 | |
| 131 | Robotics Lab | Bangalore, India | Robotics | 10 | 6 | |
| 132 | Telecom Innovators | Chicago, IL | Telecommunications | 12 | 12 | |
| 133 | Gaming Accelerator | Seattle, WA | Gaming | 10 | 8 | |
| 134 | Sustainable Living Accelerator | Toronto, Canada | Sustainability | 9 | 10 | |
| 135 | Digital Media Hub | San Diego, CA | Media | 11 | 8 | |
| 136 | BioTech Innovators | Boston, MA | Biotechnology | 5 | 12 | |
| 137 | Smart Home Incubator | San Francisco, CA | Home Automation | 8 | 6 | |
| 138 | AgriFood Accelerator | Atlanta, GA | Food Technology | 10 | 10 | |
| 139 | Global Impact Accelerator | Amsterdam, Netherlands | Social Entrepreneurship | 15 | 8 | |
| 140 | VR/AR Hub | Los Angeles, CA | Virtual/Augmented Reality | 7 | 6 | |
| 141 | Investment Accelerator | New York, NY | Finance | 10 | 10 | |
| 142 | Healthcare Innovations | Dublin, Ireland | Healthcare | 6 | 12 | |
| 143 | Tech Frontier | Singapore | Technology | 12 | 10 | |
| 144 | Elder Tech Hub | Sydney, Australia | Healthcare | 9 | 8 | |
| 145 | Smart Fashion Accelerator | Paris, France | Fashion | 5 | 6 | |
| 146 | Energy Innovators | Berlin, Germany | Energy | 10 | 9 | |
| 147 | Pet Tech Incubator | Austin, TX | Pets | 8 | 10 | |
| 148 | Youth Empowerment Hub | Mumbai, India | Social Impact | 20 | 12 | |
| 149 | Artificial Intelligence Accelerator | Los Angeles, CA | AI | 15 | 10 | |
| 150 | FinTech 101 | New York, NY | Finance | 12 | 8 | |

Add Update Delete Load

Load Accelerator

Accelerator Management

| ID: | Location: | Name: | | | |
|------------------|--------------------------------|----------------------|-------------------------|------------|------------------|
| TechStarters | CA | San Francisco | | | |
| Industry Focus : | | Batch Size: | | | |
| 10 | | 12 | | | |
| ID | Name | Location | Industry Focus | Batch Size | Program Duration |
| 1 | TechStarters | San Francisco | CA | 10 | 12 |
| 102 | Health Innovators | New York, NY | Healthcare | 8 | 6 |
| 103 | Eco Boost | Austin, TX | Sustainability | 15 | 9 |
| 104 | AgriTech Hub | Chicago, IL | Agriculture | 12 | 8 |
| 105 | FinTech Fastlane | Boston, MA | Finance | 10 | 12 |
| 106 | EduAccelerate | Seattle, WA | Education | 20 | 10 |
| 107 | Smart Cities Accelerator | Los Angeles, CA | Urban Development | 5 | 6 |
| 108 | Media Mavericks | Los Angeles, CA | Media | 7 | 12 |
| 109 | Global Health Ventures | Toronto, Canada | Healthcare | 6 | 8 |
| 110 | CyberSecure | Washington, D.C. | Cybersecurity | 9 | 6 |
| 111 | AI Innovations | Silicon Valley, CA | Artificial Intelligence | 11 | 10 |
| 112 | FoodTech Labs | San Diego, CA | Food Technology | 8 | 8 |
| 113 | IoT Incubator | New York, NY | Internet of Things | 10 | 10 |
| 114 | Space Startups | Houston, TX | Aerospace | 4 | 12 |
| 115 | E-commerce Launchpad | Miami, FL | E-commerce | 12 | 8 |
| 116 | Creative Labs | Los Angeles, CA | Media & Entertainment | 15 | 9 |
| 117 | Blockchain Foundry | Singapore | Blockchain | 5 | 6 |
| 118 | VR Incubator | San Francisco, CA | Virtual Reality | 7 | 10 |
| 119 | Digital Health Accelerator | Berlin, Germany | Healthcare | 6 | 6 |
| 120 | Impact Innovators | London, UK | Social Impact | 10 | 12 |
| 121 | TravelTech Hub | Barcelona, Spain | Travel & Tourism | 8 | 10 |
| 122 | Fintech Factory | Dublin, Ireland | Finance | 9 | 8 |
| 123 | CleanTech Accelerator | Vancouver, Canada | Clean Technology | 12 | 9 |
| 124 | Startup Garage | Austin, TX | Various | 15 | 10 |
| 125 | Fashion Forward | Paris, France | Fashion | 10 | 6 |
| 126 | Tech Quest | Tokyo, Japan | Technology | 11 | 12 |
| 127 | EduLab | Melbourne, Australia | Education | 20 | 10 |
| 128 | Wearable Tech Incubator | Los Angeles, CA | Wearables | 6 | 8 |
| 129 | Sports Tech Accelerator | New York, NY | Sports | 8 | 10 |
| 130 | Smart Mobility Hub | San Francisco, CA | Transportation | 7 | 9 |
| 131 | Robotics Lab | Bangalore, India | Robotics | 10 | 6 |
| 132 | Telecom Innovators | Chicago, IL | Telecommunications | 12 | 12 |
| 133 | Gaming Accelerator | Seattle, WA | Gaming | 10 | 8 |
| 134 | Sustainable Living Accelerator | Toronto, Canada | Sustainability | 9 | 10 |

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Mentor Table**GUI**

Mentor Management

| ID: | | | | |
|--------------------|------|-----------|-------------|------------------|
| Name: | | | | |
| Expertise: | | | | |
| Affiliation: | | | | |
| LinkedIn Profile : | | | | |
| ID | Name | Expertise | Affiliation | LinkedIn Profile |

Add Update Delete Load

Add Mentor

Mentor Management

| ID: | Andrew Product Development Professional https://linkedin.com/in/andrewmentor | | | |
|--------------------|--|---------------------|--------------|---|
| Name: | | | | |
| Expertise: | | | | |
| Affiliation: | | | | |
| LinkedIn Profile : | | | | |
| ID | Name | Expertise | Affiliation | LinkedIn Profile |
| 1 | Andrew | Product Development | Professional | https://linkedin.com/in/andrewmentor |

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Update Mentor

Mentor Management

| ID: | 515 Jloni Public Expertise Academic https://linkedin.com/in/jalonimentor | | | |
|--------------------|---|-------------------------|----------------|---|
| Name: | | | | |
| Expertise: | | | | |
| Affiliation: | | | | |
| LinkedIn Profile : | | | | |
| ID | Name | Expertise | Affiliation | LinkedIn Profile |
| 1 | Andrew | Product Development | Professional | https://linkedin.com/in/andrewmentor |
| 501 | Brittany | Finance | Academic | https://linkedin.com/in/brittanymentor |
| 503 | Denise | Marketing Strategy | Professional | https://linkedin.com/in/denisementor |
| 504 | Ethan | Business Development | Partnership | https://linkedin.com/in/ethanmentor |
| 505 | Fiona | Human Resources | Academic | https://linkedin.com/in/fionamentor |
| 506 | Gavin | Data Science | Professional | https://linkedin.com/in/gavimentor |
| 507 | Hannah | Legal Consulting | Organizational | https://linkedin.com/in/hannahmentor |
| 508 | Isaac | Cybersecurity | Professional | https://linkedin.com/in/isaacmentor |
| 509 | Julia | Software Engineering | Partnership | https://linkedin.com/in/juliamentor |
| 510 | Kyle | Sales Strategy | Academic | https://linkedin.com/in/kylementor |
| 511 | Lily | Cloud Computing | Professional | https://linkedin.com/in/lilymentor |
| 512 | Marcus | Artificial Intelligence | Organizational | https://linkedin.com/in/marcusmentor |
| 513 | Nora | Investment Strategy | Professional | https://linkedin.com/in/noramenter |
| 514 | Oscar | Supply Chain Management | Academic | https://linkedin.com/in/oscarmentor |
| 515 | Paula | Machine Learning | Partnership | https://linkedin.com/in/paulamentor |
| 516 | Quentin | Product Design | Organizational | https://linkedin.com/in/quentinmentor |
| 517 | Rachel | Corporate Strategy | Professional | https://linkedin.com/in/rachelmentor |
| 518 | Steve | Healthcare | Academic | https://linkedin.com/in/stevementor |
| 519 | Tina | Renewable Energy | Partnership | https://linkedin.com/in/tinamentor |
| 520 | Umar | E-commerce | Organizational | https://linkedin.com/in/umarmentor |
| 521 | Violet | Marketing Research | Professional | https://linkedin.com/in/violetmentor |
| 522 | Wesley | User Experience | Academic | https://linkedin.com/in/wesleymentor |
| 523 | Xander | Blockchain | Partnership | https://linkedin.com/in/xandermentor |
| 524 | Yvonne | Real Estate | Organizational | https://linkedin.com/in/yvonnementor |
| 525 | Zachary | Ethics | Professional | https://linkedin.com/in/zacharymentor |
| 526 | Alicea | Telecommunications | Academic | https://linkedin.com/in/aliceamentor |
| 527 | Ben | Retail Strategy | Organizational | https://linkedin.com/in/benmentor |
| 528 | Cathy | Content Strategy | Professional | https://linkedin.com/in/cathymentor |
| 529 | Darius | Biotechnology | Academic | https://linkedin.com/in/dariusmentor |
| 530 | Elena | Fashion | Partnership | https://linkedin.com/in/elenamentor |
| 531 | Fred | Public Relations | Organizational | https://linkedin.com/in/fredmentor |
| 532 | Gretchen | Venture Capital | Professional | https://linkedin.com/in/gretchenmentor |
| 533 | Henry | Legal Affairs | Academic | https://linkedin.com/in/henrymentor |
| 534 | Isabel | Accounting | Partnership | https://linkedin.com/in/isabelmentor |

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Delete Mentor

Mentor Management

| ID: | Name: | Expertise: | Affiliation: | LinkedIn Profile: |
|-----|----------|-------------------------|----------------|---|
| 502 | | | | |
| 1 | Andrew | Product Development | Professional | https://linkedin.com/in/andrewmentor |
| 501 | Brittany | Finance | Academic | https://linkedin.com/in/brittanymentor |
| 503 | Denise | Marketing Strategy | Professional | https://linkedin.com/in/denisementor |
| 504 | Ethan | Business Development | Partnership | https://linkedin.com/in/ethanmentor |
| 505 | Fiona | Human Resources | Academic | https://linkedin.com/in/fionamentor |
| 506 | Gavin | Data Science | Professional | https://linkedin.com/in/gavimentor |
| 507 | Hannah | Legal Consulting | Organizational | https://linkedin.com/in/hannahmentor |
| 508 | Isaac | Cybersecurity | Professional | https://linkedin.com/in/isaacmentor |
| 509 | Julia | Software Engineering | Partnership | https://linkedin.com/in/juliamentor |
| 510 | Kyle | Sales Strategy | Academic | https://linkedin.com/in/kylementor |
| 511 | Lily | Cloud Computing | Professional | https://linkedin.com/in/lillymentor |
| 512 | Marcus | Artificial Intelligence | Organizational | https://linkedin.com/in/marcusmentor |
| 513 | Nora | Investment Strategy | Professional | https://linkedin.com/in/noramenter |
| 514 | Oscar | Supply Chain Management | Academic | https://linkedin.com/in/oscarmentor |
| 515 | Paula | Machine Learning | Partnership | https://linkedin.com/in/paulamentor |
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Chapter 6: Technical Issues and Solution

1. Technical Issues

- List all technical challenges encountered during project development.
- Provide a detailed description of each issue, including its impact on the project and why it was a challenge.

2. Solution

- Describe the approach taken to resolve each issue.
- Include specific steps, techniques, or tools used to address the problem.
- If applicable, mention alternative solutions considered and why the chosen solution was selected.