

# Criação de base de dados MySQL in-app no Microsoft Azure

Aula 11 - Parte 1

Ambiente de Desenvolvimento e Operação

Curso de Sistemas da Informação

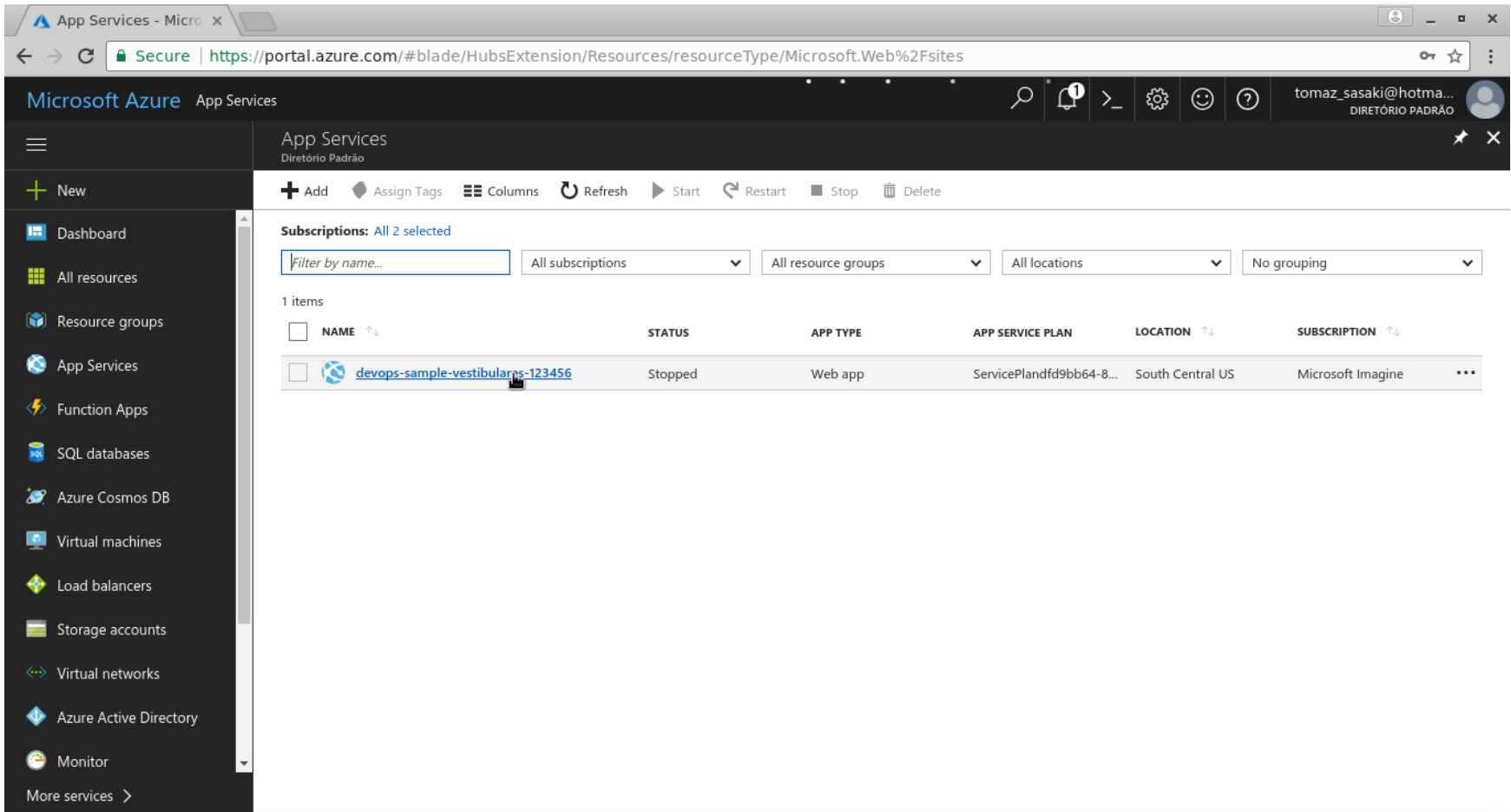
Turma 2A

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2º semestre de 2017



Acesse o serviço criado no Azure na **AULA 10**.



The screenshot shows the Microsoft Azure App Services portal. The left sidebar contains a navigation menu with options like Dashboard, All resources, Resource groups, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, and More services. The main content area displays the 'App Services' section for the 'Diretório Padrão' subscription. It includes a table with columns for NAME, STATUS, APP TYPE, APP SERVICE PLAN, LOCATION, and SUBSCRIPTION. One item is listed: 'devops-sample-vestibularps-123456' with a status of 'Stopped' and an app type of 'Web app'. The table is filtered by 'All subscriptions' and 'All resource groups'.

NAME	STATUS	APP TYPE	APP SERVICE PLAN	LOCATION	SUBSCRIPTION
devops-sample-vestibularps-123456	Stopped	Web app	ServicePlanfd9bb64-8...	South Central US	Microsoft Imagine

Certifique-se de que a aplicação está em execução.

The screenshot displays the Microsoft Azure portal interface for an App Service named 'devops-sample-vestibulares-123456'. The top navigation bar shows the user 'tomaz\_sasaki@hotmail.com' and the 'Diretório Padrão'. The left sidebar contains a 'New' button and a list of services including Dashboard, All resources, Resource groups, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, and More services. The main content area shows the App Service details, including its status 'Stopped', location 'South Central US', and subscription ID '176d2c13-7f79-4f85-9ebe-5bfe9817a3b1'. A 'Start' button is prominently displayed. Below the status bar, there are two monitoring graphs: 'Http 5xx' and 'Data In', both showing zero values over a time period from 2:45 PM to 3:30 PM.

Microsoft Azure App Services > devops-sample-vestibulares-123456

devops-sample-vestibulares-123456  
App Service

Search (Ctrl+ /)

Overview

- Activity log
- Access control (IAM)
- Tags
- Diagnose and solve problems

DEPLOYMENT

- Quickstart
- Deployment credentials
- Deployment slots
- Deployment options
- Continuous Delivery (Preview)

SETTINGS

- Application settings
- Authentication / Authorization

Stopped

Start

Resource group (change)  
devops-sample-vestibulares-123456

Status  
Stopped

Location  
South Central US

Subscription (change)  
Microsoft Imagine

Subscription ID  
176d2c13-7f79-4f85-9ebe-5bfe9817a3b1

URL  
<http://devops-sample-vestibulares-123456.azurewebsites.net>

App Service plan/pricing tier  
ServicePlanfd9bb64-8b83 (Free: 0 Small)

GitHub Project  
<https://github.com/tmsasaki/devops-sample-vestibulares>

Http 5xx

100  
80  
60  
40  
20  
0

2:45 PM 3 PM 3:15 PM 3:30 PM

HTTP SERVER ERRORS 0

Data In

100B  
80B  
60B  
40B  
20B  
0B

2:45 PM 3 PM 3:15 PM 3:30 PM

DATA IN 0 B

Vá em **Overview**, clique na URL da aplicação e aguarde o carregamento da página inicial da aplicação.

The screenshot shows the Microsoft Azure portal interface in a Mozilla Firefox browser. The page title is "Painel - Microsoft Azure - Mozilla Firefox". The address bar shows the URL: <https://portal.azure.com/#resource/subscriptions/176d2c13-7f79-4f85-9ebe-5bfe9817a3b1/resource>. The page content is for the resource "devops-sample-vestibulares-123456" of type "App Service".

The left sidebar contains a navigation menu with the following items:

- New
- Dashboard
- All resources
- Resource groups
- App Services
- Function Apps
- SQL databases
- Azure Cosmos DB
- Virtual machines
- Load balancers
- Storage accounts
- Virtual networks

The main content area is divided into several sections:

- Overview** (selected): Shows the resource group, status (Running), location (South Central US), subscription (Microsoft Imagine), and subscription ID (176d2c13-7f79-4f85-9ebe-5bfe9817a3b1).
- DEPLOYMENT**: Includes links for Quickstart, Deployment credentials, Deployment slots, Deployment options, and Continuous Delivery (Preview).
- SETTINGS**: Includes links for Activity log, Access control (IAM), Tags, and Diagnose and solve problems.
- Http 5xx**: A line chart showing the number of HTTP 5xx errors over time. The y-axis ranges from 0 to 100. The x-axis shows time from 2:15 PM to 3 PM. A single data point is visible at 3 PM, labeled "HTTP SERVER ERRO...".
- Data In**: A line chart showing the amount of data received over time. The y-axis ranges from 0kB to 500kB. The x-axis shows time from 2:15 PM to 3 PM. A single data point is visible at 3 PM, labeled "DATA IN".

The bottom of the page shows the URL [devops-sample-vestibulares-123456.azurewebsites.net](https://devops-sample-vestibulares-123456.azurewebsites.net).

Acesse o item MySQL in-app.

The screenshot shows the Microsoft Azure portal interface. The left-hand navigation pane is open, and the 'MySQL In App' option is highlighted. The main content area displays the 'Stopped' status of the app service. The metrics section shows the following data:

Metric	Value
Http 5xx	0
Data In	0 B
Data Out	0 B

Ligue o recurso pressionando o botão On.

The screenshot shows the Microsoft Azure portal interface. The browser address bar displays the URL: <https://portal.azure.com/#resource/subscriptions/176d2c13-7f79-4f85-9ebe-5bfe9817a3b1/resourceGroups/devops-sample-vestibulares-123456/provi...>. The page title is "devops-sample-vestibulares-123456 - MySQL In App".

On the left sidebar, the "MySQL In App" resource is selected under the "App Services" category. The main content area shows the "MySQL In App" resource configuration. The "MySQL In App" toggle is currently set to "On". Below the toggle, there are "Save" and "Discard" buttons. The "MySQL In App Export" section is also visible, with an "Export" button.

The "MySQL In App" section includes the following text: "MySQL In App runs a local MySQL instance with your app and shares resources from the App Service plan. Note that apps using MySQL In App are not intended for production environments, and they will not scale beyond a single instance. [Learn more](#)".

The "MySQL In App Export" section includes the following text: "MySQL In App lets you export your data to an external mysql database. Click export below to get started."

# Salve a configuração.

The screenshot displays the Microsoft Azure portal interface for configuring MySQL In App. The top navigation bar shows the user is logged in as 'tomaz\_sasaki@hotmail.com' with the role 'DIRETÓRIO PADRÃO'. The breadcrumb trail indicates the path: 'Microsoft Azure > App Services > devops-sample-vestibulares-123456 - MySQL In App'.

The left sidebar contains a 'New' button and a list of services: Dashboard, All resources, Resource groups, App Services, Function Apps, SQL databases, Azure Cosmos DB, Virtual machines, Load balancers, Storage accounts, Virtual networks, Azure Active Directory, Monitor, and More services.

The central pane shows the 'devops-sample-vestibulares-123456 - MySQL In App' configuration page. It includes a search bar and a list of settings:

- SSL certificates
- Networking
- Scale up (App Service plan)
- Scale out (App Service plan)
- WebJobs
- Push
- MySQL In App** (selected)
- Properties
- Locks
- Automation script
- APP SERVICE PLAN
- App Service plan
- Quotas
- Change App Service plan

The right pane shows the 'Manage' section for MySQL In App. It includes a description: 'MySQL In App runs a local MySQL instance with your app and shares resources from the App Service plan. Note that apps using MySQL In App are not intended for production environments, and they will not scale beyond a single instance. [Learn more](#)'.

The configuration settings are as follows:

- MySQL In App: ☒ On
- MySQL slow query log: ☐ On ☒ Off
- MySQL general log: ☐ On ☒ Off
- Connection string environment variable:
- MySQL storage:
- MySQL log location:

At the bottom of the configuration section, there are 'Save' and 'Discard' buttons. A mouse cursor is hovering over the 'Save' button, and a tooltip with the text 'Save' is visible.

The bottom of the page features the 'MySQL In App Export' icon and text.

Clique no botão **Manage**.

The screenshot shows the Microsoft Azure portal interface. The browser address bar displays the URL: <https://portal.azure.com/#resource/subscriptions/176d2c13-7f79-4f85-9ebe-5bfe9817a3b1/resourceGroups/devops-sample-vestibulares-123456/provi...>. The page title is "devops-sample-vestibulares-123456 - MySQL In App". The left sidebar contains a navigation menu with options like "New", "Dashboard", "All resources", "Resource groups", "App Services", "Function Apps", "SQL databases", "Azure Cosmos DB", "Virtual machines", "Load balancers", "Storage accounts", "Virtual networks", "Azure Active Directory", "Monitor", and "More services". The main content area shows the "MySQL In App" configuration page. A "Manage" button is highlighted with a red dashed box. Below the button, the page describes MySQL In App and provides configuration options: "MySQL In App" (On/Off), "MySQL slow query log" (On/Off), "MySQL general log" (On/Off), "Connection string environment variable" (MYSQLCONNSTR\_localdb), "MySQL storage" (d:\home\data\mysql), and "MySQL log location" (d:\home\logfiles\mysql).



## Acesse a aba Databases.

The screenshot shows the phpMyAdmin web interface in a browser. The address bar displays the URL: `https://devops-sample-vestibulares-123456.scm.azurewebsites.net/phpMyAdmin/`. The interface includes a top navigation bar with tabs: **Databases**, **SQL**, **Status**, **User accounts**, **Export**, **Import**, **Settings**, **Replication**, **Variables**, **Charsets**, and **More**. The **Databases** tab is currently active. On the left, there is a sidebar with a tree view showing database schemas: **New**, **information\_schema**, **localdb**, **mysql**, **performance\_schema**, and **sys**. The main content area is divided into several panels:

- General settings**: Displays "Server connection collation" set to `utf8mb4_unicode_ci`.
- Appearance settings**: Shows the "Theme" set to `pmahomme` and "Font size" set to `82%`. A [More settings](#) link is also present.
- Database server**: Provides details about the database server:
  - Server: 127.0.0.1 via TCP/IP
  - Server type: MySQL
  - Server version: 5.7.9 - MySQL Community Server (GPL)
  - Protocol version: 10
  - User: azure@localhost
  - Server charset: UTF-8 Unicode (utf8)
- Web server**: Displays information about the web server:
  - Microsoft-IIS/8.0
  - Database client version: libmysql - mysqlnd 5.0.11-dev - 20120503 - \$Id: 76b08b24596e12d4553bd41fc93cccd5bac2fe7a\$
  - PHP extension: mysqli, curl, mbstring
  - PHP version: 5.6.31
- phpMyAdmin**: Shows version information and links:
  - Version information: 4.6.6, latest stable version: [4.7.5](#)
  - [Documentation](#)
  - [Official Homepage](#)
  - [Contribute](#)
  - [Get support](#)
  - [List of changes](#)
  - [License](#)

The browser's status bar at the bottom shows the full URL: `https://devops-sample-vestibulares-123456.scm.azurewebsites.net/phpMyAdmin/server_databases.php?db=&token=79f3ef4c013bd4a07f42375fe020f0a0`.

Selecione a base de dados localdb.

Server: 127.0.0.1:49477

Databases SQL Status User accounts Export Import Settings Replication Variables Charsets More

### Databases

Create database

Database name Collation Create

Database	Collation	Action
<input type="checkbox"/> information_schema	utf8_general_ci	<a href="#">Check privileges</a>
<input checked="" type="checkbox"/> localdb	latin1_swedish_ci	<a href="#">Check privileges</a>
<input type="checkbox"/> mysql	latin1_swedish_ci	<a href="#">Check privileges</a>
<input type="checkbox"/> performance_schema	utf8_general_ci	<a href="#">Check privileges</a>
<input type="checkbox"/> sys	utf8_general_ci	<a href="#">Check privileges</a>
Total: 5		latin1_swedish_ci

☐ Check all With selected: [Drop](#)

Note: Enabling the database statistics here might cause heavy traffic between the web server and the MySQL server.

[Enable statistics](#)

https://devops-sample-vestibulares-123456.scm.azurewebsites.net/phpMyAdmin/db\_structure.php?db=&token=79f3ef4c013bd4a07f42375fe020f0a0&db=localdb

## Acesse a aba SQL.

The screenshot displays the phpMyAdmin web interface in a browser. The address bar shows a secure connection to an Azure website. The interface includes a top navigation bar with tabs for Structure, SQL, Search, Query, Export, Import, Operations, Privileges, Routines, Events, and More. The SQL tab is currently active. On the left, a sidebar shows a tree view of databases, including 'localdb'. The main content area features a message 'No tables found in database.' and a 'Create table' button. Below this, there are input fields for 'Name' and 'Number of columns' (set to 4), and a 'Go' button. The browser's status bar at the bottom shows the URL for the SQL tab.

Server: 127.0.0.1:49477 » Database: localdb

Structure SQL Search Query Export Import Operations Privileges Routines Events More

No tables found in database.

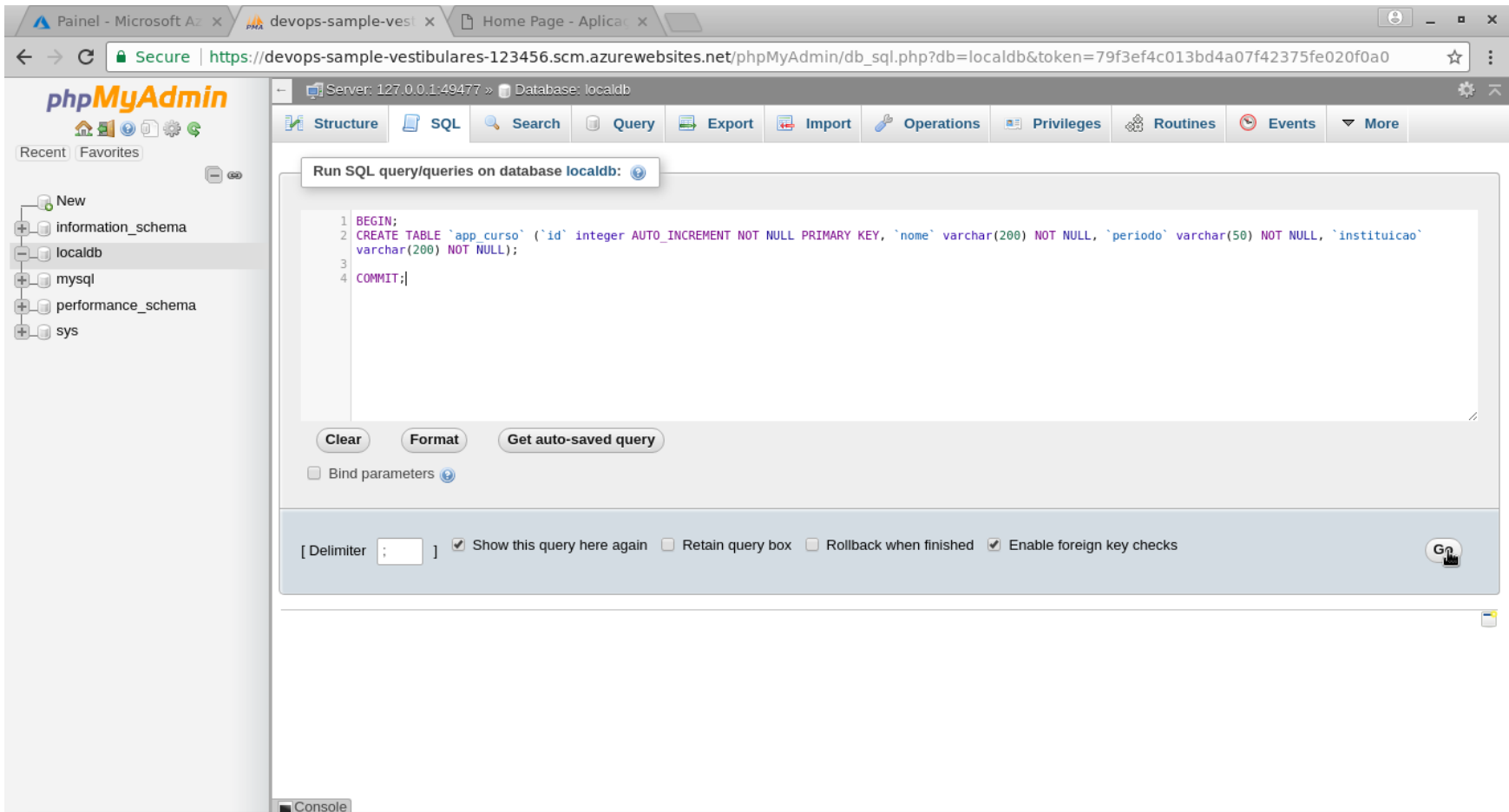
Create table

Name:  Number of columns:

Go

https://devops-sample-vestibulares-123456.scm.azurewebsites.net/phpMyAdmin/db\_sql.php?db=localdb&token=79f3ef4c013bd4a07f42375fe020f0a0

Digite os comandos para criar a tabela **app\_curso** e pressione o botão **Go**.



Verifique se a execução foi bem-sucedida antes de seguir adiante.

The screenshot shows the phpMyAdmin web interface in a browser. The address bar displays a secure connection to an Azure website. The interface includes a sidebar with a database tree showing 'information\_schema', 'localdb', 'mysql', 'performance\_schema', and 'sys'. The main panel shows the 'SQL' tab with three executed queries, each with a green success message and a 'Show query box' link. The queries are: 1) 'BEGIN', 2) 'CREATE TABLE `app\_curso` (`id` integer AUTO\_INCREMENT NOT NULL PRIMARY KEY, `nome` varchar(200) NOT NULL, `periodo` varchar(50) NOT NULL, `instituicao` varchar(200) NOT NULL);', and 3) 'COMMIT'. Each query result shows 'MySQL returned an empty result set (i.e. zero rows)'. The bottom of the interface has a 'Console' tab.

Server: 127.0.0.1:49477 » Database: localdb

Structure SQL Search Query Export Import Operations Privileges Routines Events More

Show query box

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0003 seconds.)

BEGIN

[ Edit inline ] [ Edit ] [ Create PHP code ]

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.2148 seconds.)

```
CREATE TABLE `app_curso` (`id` integer AUTO_INCREMENT NOT NULL PRIMARY KEY, `nome` varchar(200) NOT NULL, `periodo` varchar(50) NOT NULL, `instituicao` varchar(200) NOT NULL);
```

[ Edit inline ] [ Edit ] [ Create PHP code ]

✓ MySQL returned an empty result set (i.e. zero rows). (Query took 0.0002 seconds.)

COMMIT

[ Edit inline ] [ Edit ] [ Create PHP code ]

Console

Execute a inserção de alguns registros.

The screenshot shows the phpMyAdmin web interface in a browser. The address bar displays a secure connection to a devops-sample-vestibulares-123456.scm.azurewebsites.net. The interface includes a sidebar with a database tree showing 'localdb' selected. The main panel is titled 'Run SQL query/queries on database localdb:'. It contains a text area with three SQL INSERT statements for the 'app\_curso' table. Below the text area are buttons for 'Clear', 'Format', and 'Get auto-saved query'. There is also a checkbox for 'Bind parameters'. At the bottom, there are options for the delimiter (set to semicolon), checkboxes for 'Show this query here again', 'Retain query box', 'Rollback when finished', and 'Enable foreign key checks', along with a 'Go' button. A 'Console' tab is visible at the bottom left.

```
1 INSERT INTO app_curso (nome, periodo, instituicao) VALUES ('ADS', 'noturno', 'Impacta');
2 INSERT INTO app_curso (nome, periodo, instituicao) VALUES ('Filosofia', 'matutino', 'PUC');
3 INSERT INTO app_curso (nome, periodo, instituicao) VALUES ('Engenharia', 'integral', 'Mackenzie');
```

# Exercício

Faça a execução de mais alguns comandos SQL:

- Insira mais 10 cursos na tabela **app\_curso**.
- Execute algumas frases SQL de consulta para verificar o conteúdo.
- Crie pelo menos mais 2 tabelas relacionadas ao seu projeto da OPE e insira pelos menos 5 registros em cada tabela.



F a c u l d a d e  
**IMPACTA**  
T E C N O L O G I A

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