



Welcome to MySQL Workbench


MySQL Workbench is the
create and browse your
design and run SQL queries

[Browse Documentation](#)

MySQL Connections

Local instance MySQL80

 root

 localhost:3306



Connect to MySQL Server



Please enter password for the
following service:



Service: Mysql@localhost:3306

User: root

Password:

☐ Save password in vault

OK

Cancel

Akilles101

MySQL Workbench

Local instance MySQL80 x

File Edit View Query Database Server Tools Scripting Help

Navigator: agenda* x

SCHEMAS

Filter objects

- dbagenda
 - Tables
 - contatos
 - Views
 - Stored Procedures
 - Functions
- sakila
- sys
- world

Administration Schemas

Information

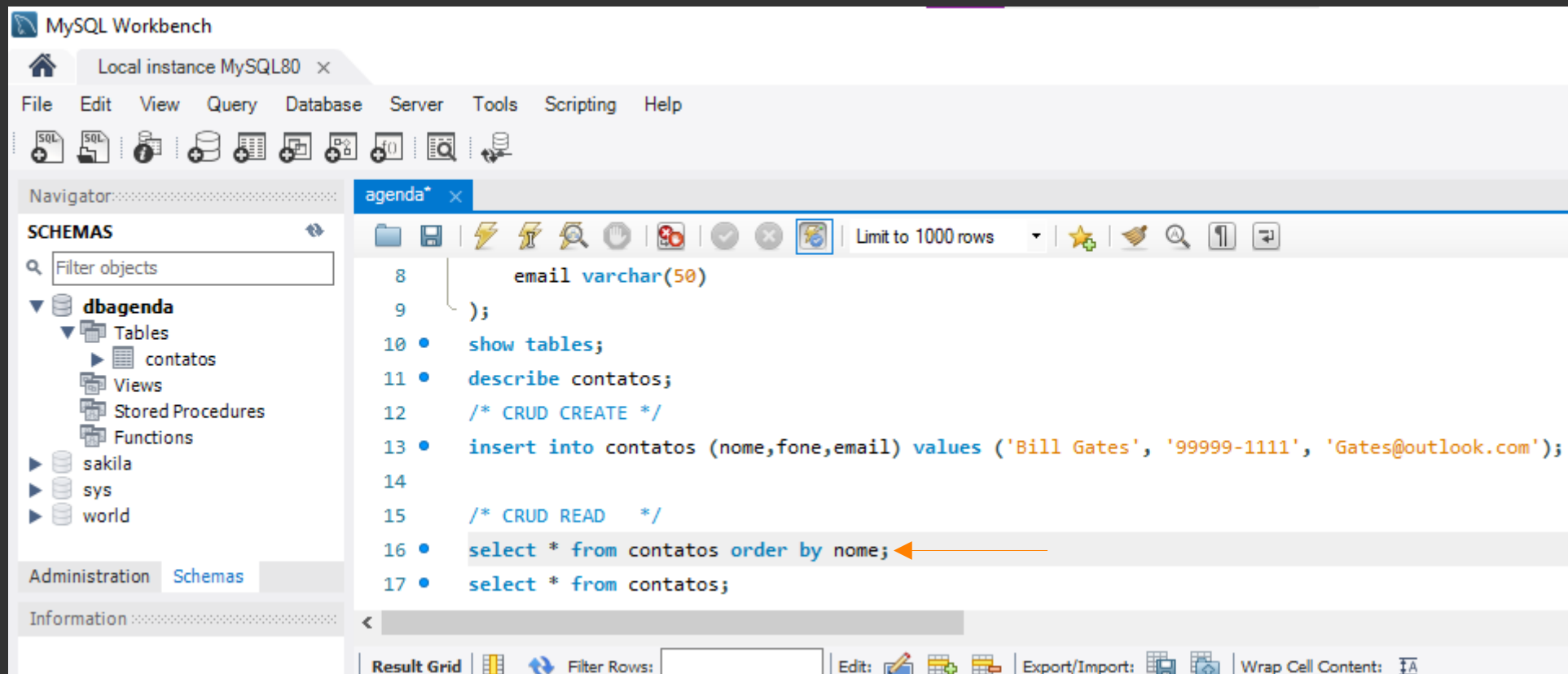
No object selected

```
6 nome varchar(50) not null,  
7 fone varchar(15) not null,  
8 email varchar(50)  
9 );  
10 • show tables;  
11 • describe contatos;  
12 /* CRUD CREATE */  
13 • insert into contatos (nome,fone,email) values ('Bill Gate  
14 /* CRUD READ */  
15 • select * from contatos;
```

Limit to 1000 rows

Result Grid

	idcon	nome	fone	email
▶	1	Bill Gates	99999-1111	Gates@outlook.com
	2	Cris Oliveira	99999-2222	cris@gmail.com
*	NULL	NULL	NULL	NULL



Ctrl + enter



SCHEMAS

Filter objects

- dbagenda
 - Tables
 - contatos
 - Views
 - Stored Procedures
 - Functions
- sakila
- sys
- world

No object selected

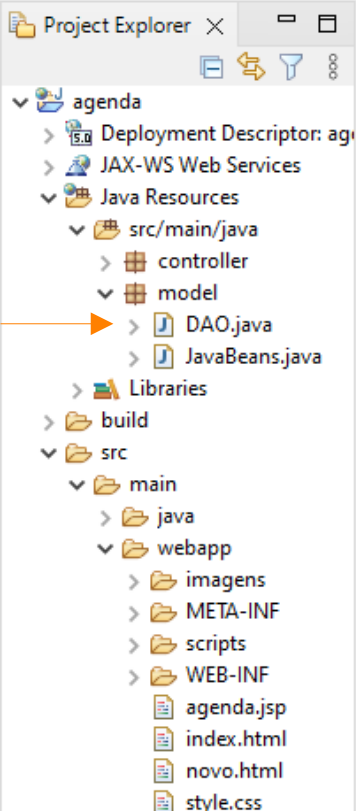


Limit to 1000 rows

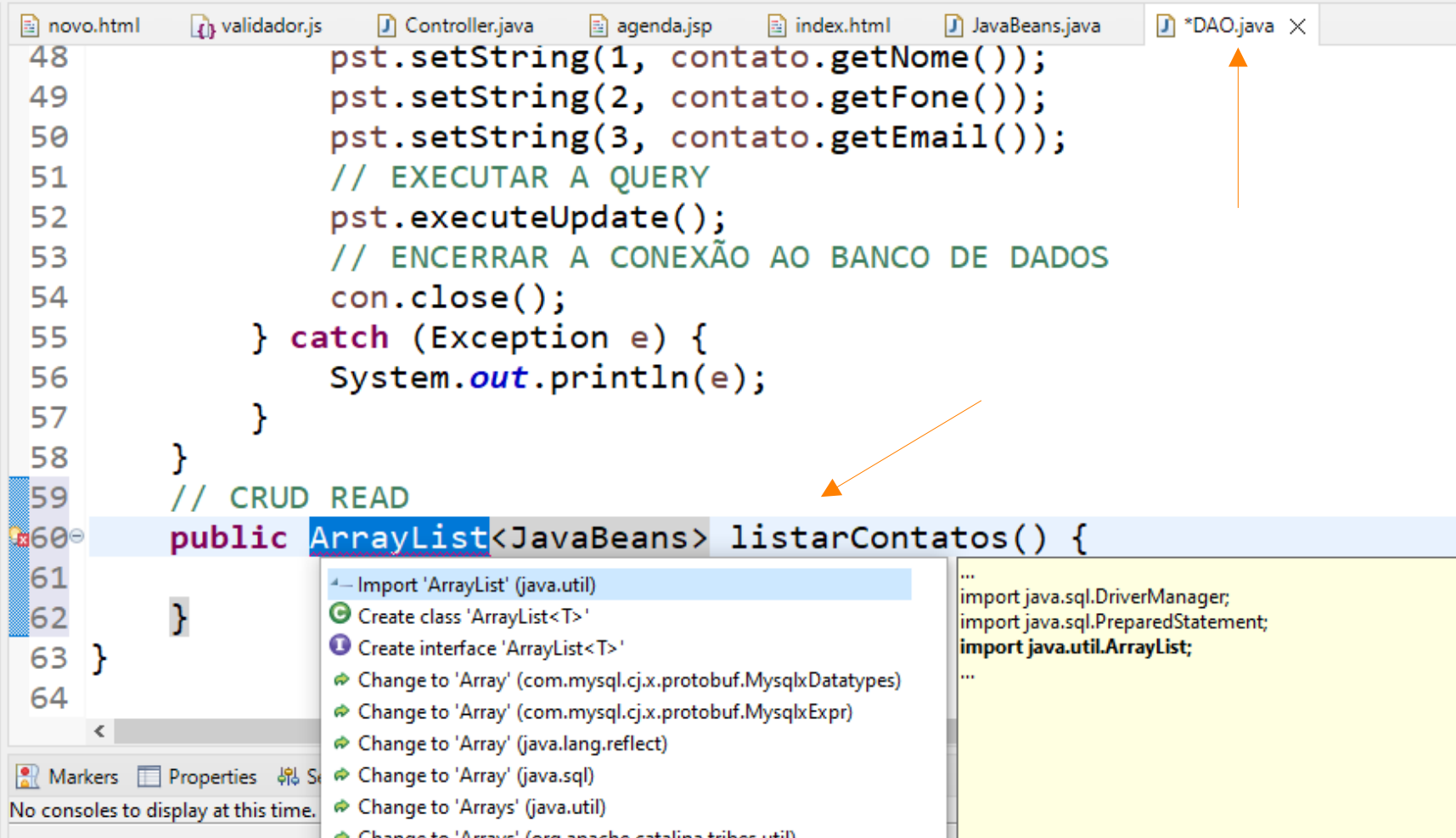
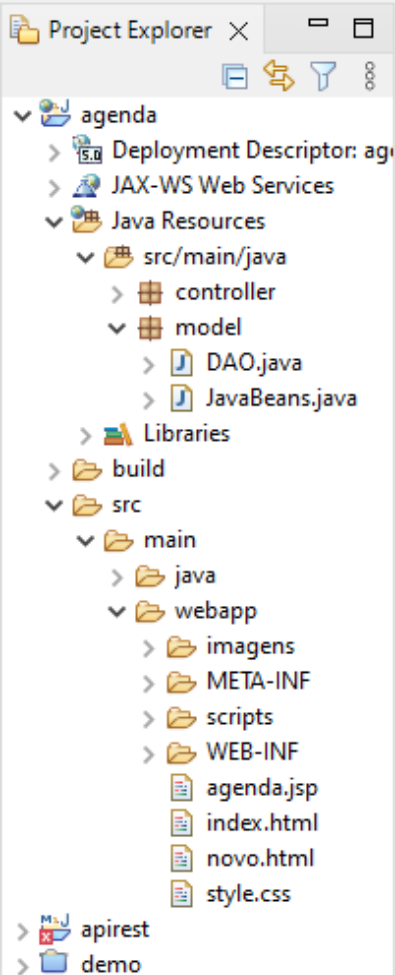
```
7      fone varchar(15) not null,  
8      email varchar(50)  
9  );  
10 • show tables;  
11 • describe contatos;  
12 /* CRUD CREATE */  
13 • insert into contatos (nome,fone,email) values ('Bill Gates', '99999-1111', 'Gates@outlook.com');  
14  
15 /* CRUD READ */  
16 • select * from contatos order by nome;
```

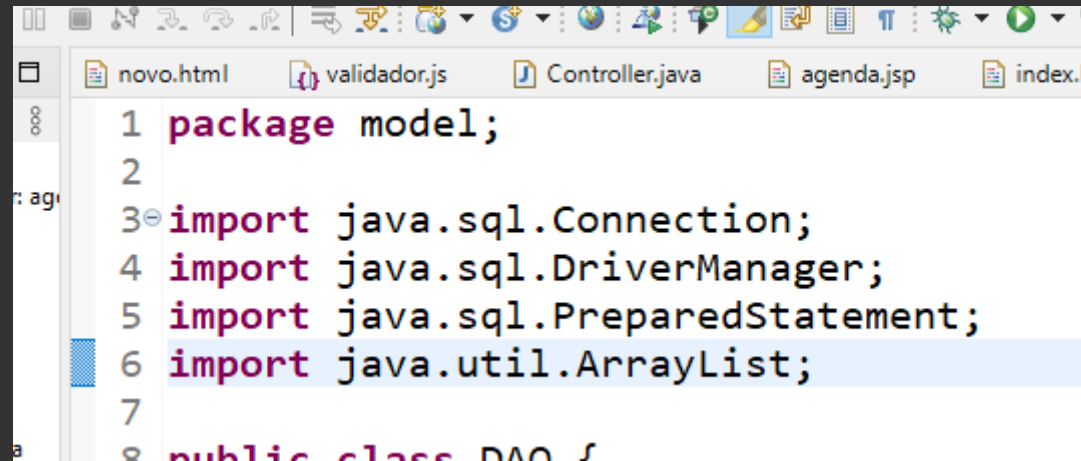
Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:

	idcon	nome	fone	email
▶	1	Bill Gates	99999-1111	Gates@outlook.com
	2	Cris Oliveira	99999-2222	cris@gmail.com
*	NULL	NULL	NULL	NULL



```
46 PreparedStatement pst = con.prepareStatement(create);
47 // substituir os parametros ? pelo conteudo das variaveis ja
48 pst.setString(1, contato.getNome());
49 pst.setString(2, contato.getFone());
50 pst.setString(3, contato.getEmail());
51 // EXECUTAR A QUERY
52 pst.executeUpdate();
53 // ENCERRAR A CONEXÃO AO BANCO DE DADOS
54 con.close();
55 } catch (Exception e) {
56     System.out.println(e);
57 }
58 }
59 // CRUD READ
60 |
61 }
62
```

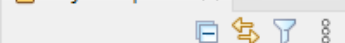




The image shows a screenshot of an IDE window with several tabs: novo.html, validador.js, Controller.java, agenda.jsp, and index.html. The Controller.java tab is active, displaying the following Java code:

```
1 package model;
2
3 import java.sql.Connection;
4 import java.sql.DriverManager;
5 import java.sql.PreparedStatement;
6 import java.util.ArrayList;
7
8 public class DAO {
```

The line `import java.util.ArrayList;` is highlighted with a blue background. The IDE interface includes a toolbar at the top with various icons for file operations, editing, and running code.

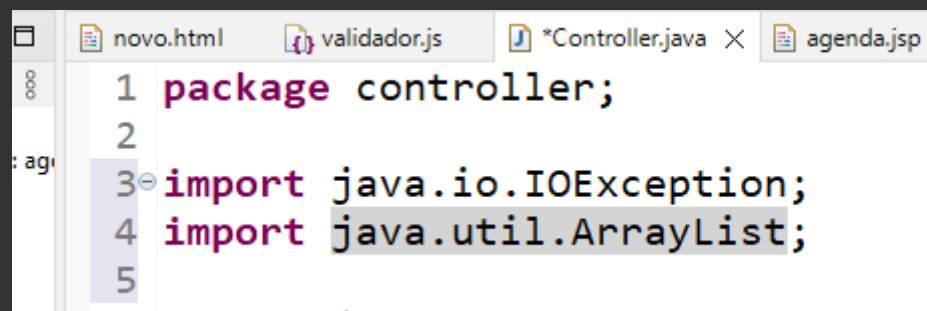


- Import 'ArrayList' (java.util)
- Create class 'ArrayList<T>'
- Create interface 'ArrayList<T>'
- Change to 'Array' (com.mysql.cj.x.protobuf.MysqlxDatatypes)
- Change to 'Array' (com.mysql.cj.x.protobuf.MysqlxExpr)
- Change to 'Array' (java.lang.reflect)
- Change to 'Array' (java.sql)
- Change to 'Arrays' (java.util)
- Change to 'Arrays' (org.apache.catalina.tribes.util)
- Rename in file (Ctrl+2, R)
- Fix project setup...

```
import jakarta.servlet.http.HttpServletResponse;
import java.io.IOException;
import java.util.ArrayList;

import model.DAO;
import model.JavaBeans;
```

Press 'Tab' from proposal table or click for focus



The screenshot shows an IDE window with four tabs: 'novo.html', 'validador.js', '*Controller.java', and 'agenda.jsp'. The active tab is '*Controller.java', which contains the following code:

```
1 package controller;
2
3 import java.io.IOException;
4 import java.util.ArrayList;
5
```

The code is displayed with syntax highlighting: 'package' is purple, 'import' is blue, and the class names 'IOException' and 'ArrayList' are greyed out. The line numbers 1 through 5 are visible on the left side of the editor.

eclipse-workspace - agenda/src/main/java/controller/Controller.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Project Explorer

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 - model
 - DAO.java
 - JavaBeans.java
 - Libraries
 - build
 - src
 - main
 - java
 - webapp
 - imagens

novos.html | validador.js | *Controller.java | agenda.jsp | index.html | JavaBeans.java | DAO.java

```
32         } else {
33             response.sendRedirect("index.html");
34         }
35     }
36     // listar contatos
37     protected void listarContatos(HttpServletRequest request, HttpServletResponse response) {
38         //response.sendRedirect("agenda.jsp");
39         /* Criando um objeto que ira receber os dados jababeans */
40         ArrayList<JavaBeans> lista = dao.listarContatos();
41     }
42
43     // Novo contato
44     protected void novoContato(HttpServletRequest request, HttpServletResponse response) {
```

Comente ou apague o
response.sendRedirect("agenda.jsp");
Linha 38

eclipse-workspace - agenda/src/main/java/model/DAO.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

The screenshot shows the Eclipse IDE interface. The Project Explorer on the left displays the project structure: agenda > src > main > java > model > DAO.java. The main editor window shows the code for DAO.java. The code includes a catch block for exceptions, a comment for a CRUD read operation, and a method listarContatos() that executes a SQL query. The line number 66 is highlighted, and the cursor is positioned at the end of the executeQuery() call. The status bar at the bottom indicates 'No consoles to display at this time.'

```
56         } catch (Exception e) {
57             System.out.println(e);
58         }
59     }
60     // CRUD READ
61     public ArrayList<JavaBeans> listarContatos() {
62         String read = "select * from contatos order by nome";
63         try {
64             Connection con = conectar();
65             PreparedStatement pst = con.prepareStatement(read);
66             ResultSet rs = pst.executeQuery();
67         } catch (Exception e) {
68             System.out.println(e);
69             return null;
70         }
71     }
72 }
```

import

```
64 Connection con = conectar();
65 PreparedStatement pst = con.prepareStatement(read);
66 ResultSet rs = pst.executeQuery();
```

```
67 } cat
68
69
```

Import 'ResultSet' (java.sql)
Create class 'ResultSet'
Create interface 'ResultSet'

```
...
import java.sql.DriverManager;
import java.sql.PreparedStatement;
import java.sql.ResultSet;
```

```
2
3 import java.sql.Connection;
4 import java.sql.DriverManager;
5 import java.sql.PreparedStatement;
6 import java.sql.ResultSet;
7 import java.util.ArrayList;
8
```

Project Explorer

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 - WEB-INF
 - agenda.jsp
 - index.html
 - novo.html
 - style.css

novo.html

validador.js

Controller.java

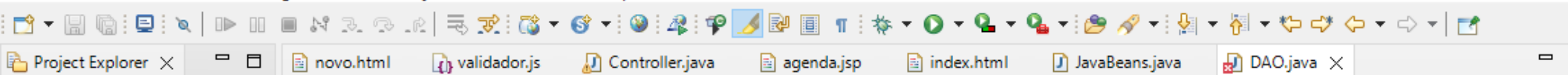
agenda.jsp

index.html

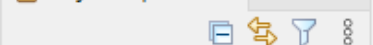
JavaBeans.java

DAO.java

```
61 // CRUD READ
62 public ArrayList<JavaBeans> listarContatos() {
63     String read = "select * from contatos order by nome";
64     try {
65         Connection con = conectar();
66         PreparedStatement pst = con.prepareStatement(read);
67         ResultSet rs = pst.executeQuery();
68         // o laço abaixo sera executado enquanto tiver contatos
69         while (rs.next()) {
70             // variaveis de apoio que recebem os dados do banco
71             String idcon = rs.getString(1);
72         }
73     } catch (Exception e) {
74         System.out.println(e);
75         return null;
76     }
77 }
```



Project Explorer X



agenda

> Deployment Descriptor: ag

> JAX-WS Web Services

Java Resources

src/main/java

> controller

model

> DAO.java

> JavaBeans.java

> Libraries

> build

src

main

> java

webapp

> imagens

> META-INF

> scripts

> WEB-INF

agenda.jsp

index.html

novo.html

style.css

> apiREST

> demo

novo.html

validador.js

Controller.java

agenda.jsp

index.html

JavaBeans.java

DAO.java X

```
64      try {
65          Connection con = conectar();
66          PreparedStatement pst = con.prepareStatement(read);
67          ResultSet rs = pst.executeQuery();
68          // o laço abaixo sera executado enquanto tiver contatos
69          while (rs.next()) {
70              // variaveis de apoio que recebem os dados do banco
71              String idcon = rs.getString(1);
72              String nome = rs.getString(2);
73              String fone = rs.getString(3);
74              String email = rs.getString(4);
75          }
76      } catch (Exception e) {
77          System.out.println(e);
78          return null;
79      }
80  }
```

Markers Properties Servers Data Source Explorer Snippets Console X

No consoles to display at this time.

eclipse-workspace - agenda/src/main/java/model/DAO.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

Project Explorer

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 - java
 - webapp
 - imagens
 - META-INF

novو.html

validador.js

Controller.java

agenda.jsp

index.html

JavaBeans.java

DAO.java

60

}

61

// CRUD READ

62

public ArrayList<JavaBeans> listarContatos() {

63

// Criando um objeto para acessar a classe javabeans

64

ArrayList<JavaBeans> contatos = new ArrayList();

65

String read = "select * from contatos order by nome";

66

try {

67

Connection con = conectar();

68

PreparedStatement pst = con.prepareStatement(read);

69

ResultSet rs = pst.executeQuery();

70

// o laço abaixo sera executado enquanto tiver contatos

71

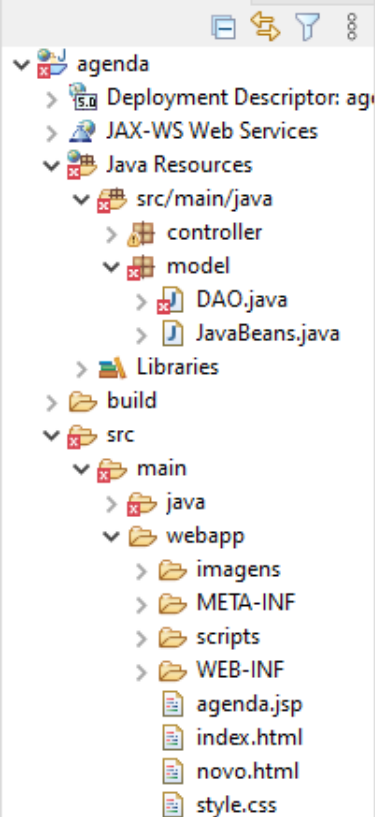
while (rs.next()) {

72

// variaveis de apoio que recebem os dados do banco



Project Explorer



novo.html

validador.js

Controller.java

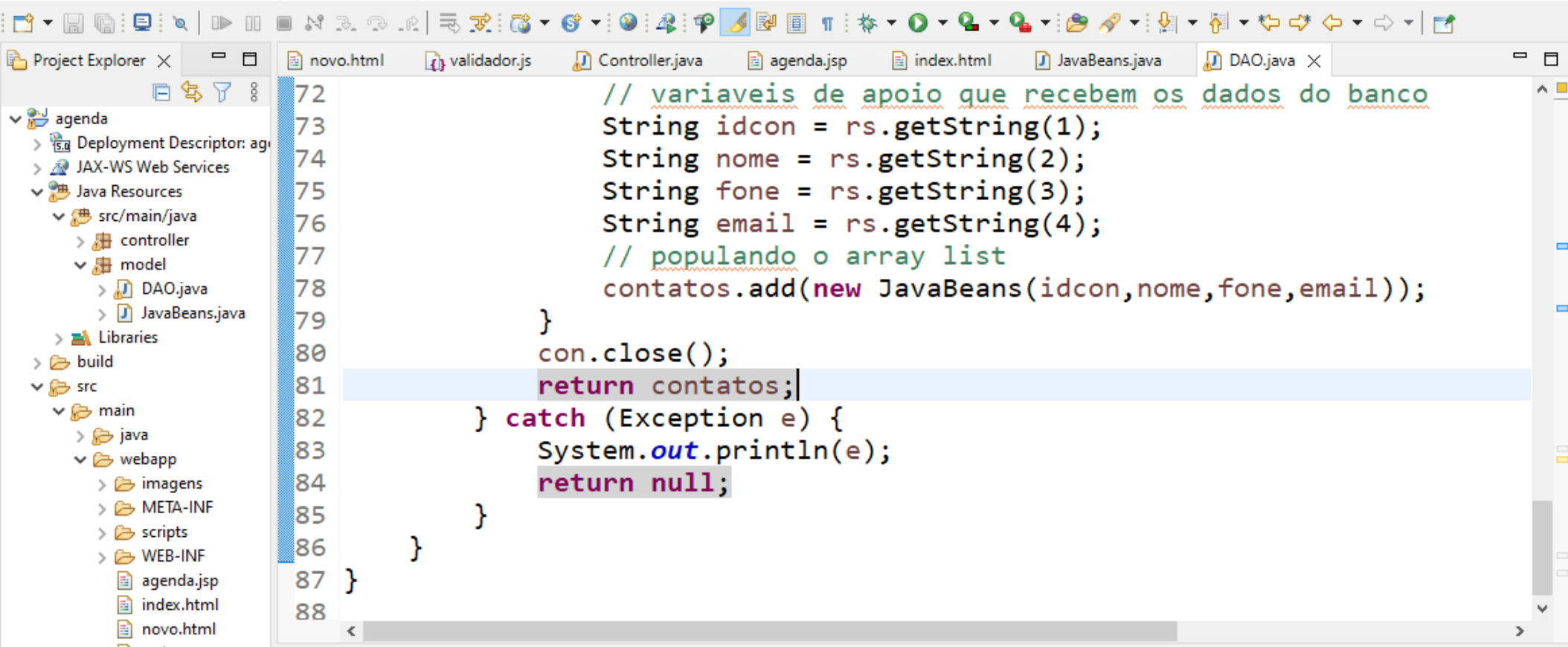
agenda.jsp

index.html

JavaBeans.java

DAO.java

```
67      Connection con = conectar();
68      PreparedStatement pst = con.prepareStatement(read);
69      ResultSet rs = pst.executeQuery();
70      // o laço abaixo sera executado enquanto tiver contatos
71      while (rs.next()) {
72          // variaveis de apoio que recebem os dados do banco
73          String idcon = rs.getString(1);
74          String nome = rs.getString(2);
75          String fone = rs.getString(3);
76          String email = rs.getString(4);
77          // populando o array list
78          contatos.add(new JavaBeans(idcon,nome,fone,email));
79      }
80      } catch (Exception e) {
81          System.out.println(e);
82          return null;
83      }
```



The screenshot shows the Eclipse IDE interface. The Project Explorer on the left displays the project structure: 'agenda' (containing 'Deployment Descriptor: ag...'), 'Java Resources' (containing 'src/main/java' with subfolders 'controller' and 'model', and files 'DAO.java' and 'JavaBeans.java'), 'Libraries', 'build', and 'src' (containing 'main' with subfolders 'java' and 'webapp', and files 'imagens', 'META-INF', 'scripts', 'WEB-INF', 'agenda.jsp', 'index.html', and 'novo.html'). The main editor window shows the 'DAO.java' file with the following code:

```
72      // variaveis de apoio que recebem os dados do banco
73      String idcon = rs.getString(1);
74      String nome = rs.getString(2);
75      String fone = rs.getString(3);
76      String email = rs.getString(4);
77      // populando o array list
78      contatos.add(new JavaBeans(idcon,nome,fone,email));
79  }
80  con.close();
81  return contatos;
82  } catch (Exception e) {
83      System.out.println(e);
84      return null;
85  }
86  }
87  }
88  }
```

eclipse-workspace - agenda/src/main/java/controller/Controller.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

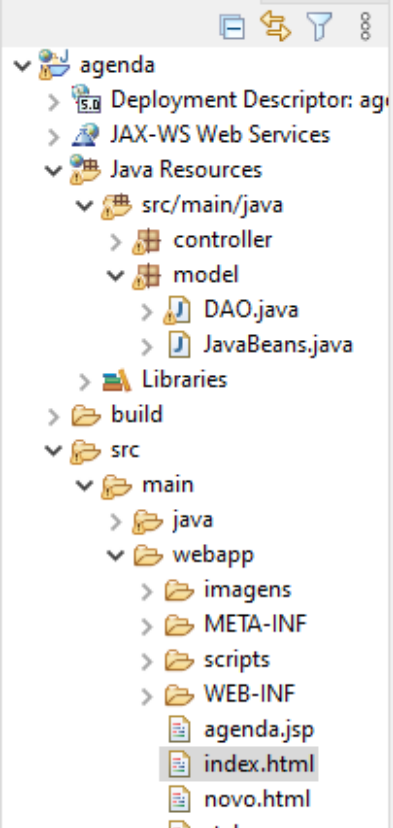
Project Explorer

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 - webapp
 - imagens
 - META-INF
 - scripts
 - WEB-INF
 - agenda.jsp
 - index.html

novο.html | validador.js | Controller.java | agenda.jsp | index.html | JavaBeans.java | DAO.java

```
37 // listar contatos
38 protected void contatos(HttpServletRequest request, HttpServletResponse response) {
39     //response.sendRedirect("agenda.jsp");
40     /* Criando um objeto que ira receber os dados jababeans */
41     ArrayList<JavaBeans> lista = dao.listarContatos();
42     // teste de recebimento da lista
43     for (int i = 0; i < lista.size(); i++) {
44         System.out.println(lista.get(i).getIdcon());
45         System.out.println(lista.get(i).getNome());
46         System.out.println(lista.get(i).getFone());
47         System.out.println(lista.get(i).getEmail());
48     }
49 }
50
51 // Novo contato
52 protected void novoContato(HttpServletRequest request, HttpServletResponse response) {
53     //teste de recebimento dos dados do formulario
```

Salve tudo selecione o index.html e execute



```
1 <!DOCTYPE html>
2 <html lang="pt-br">
3 <head>
4 <meta charset="utf-8">
5 <title>Agenda de contatos</title>
6 <link rel="icon" href="imagens/favicon.png">
7 <link rel="stylesheet" href="style.css">
8 </head>
9 <body>
10     
11     <h1>Agenda de contatos</h1>
12     <a href="main" class="Botao1">Acessar</a>
13 </body>
14 </html>
```

Run On Server

Run On Server

Select which server to use

How do you want to select the server?

☒ Choose an existing server

☐ Manually define a new server

Select the server that you want to use:

type filter text

Server	State
localhost	
Tomcat v10.0 Server at localhost	Stopped

Apache Tomcat v10.0 supports J2EE 1.2, 1.3, 1.4, and Java EE 5, 6, 7, 8 and Jakarta EE 9 Web modules.

☐ Always use this server when running this project

?

< Back

Next >

Finish

Cancel

Run On Server

Add and Remove

agenda is required and cannot be removed from the server

Move resources to the right to configure them on the server

Available:

Configured:

Hello

Hello Tomcat

HelloJSP

agenda

Add >

< Remove

Add All >>

<< Remove All

?

< Back

Next >

Finish

Cancel



Agenda de contatos

Acessar



(733) Curso Java WEB (Java E

localhost:8080/agenda/main



localhost:8080/agenda/main



c++



C++



C++



C



C++ VISUAL STUDIO



Domestika



ASSEMBLY



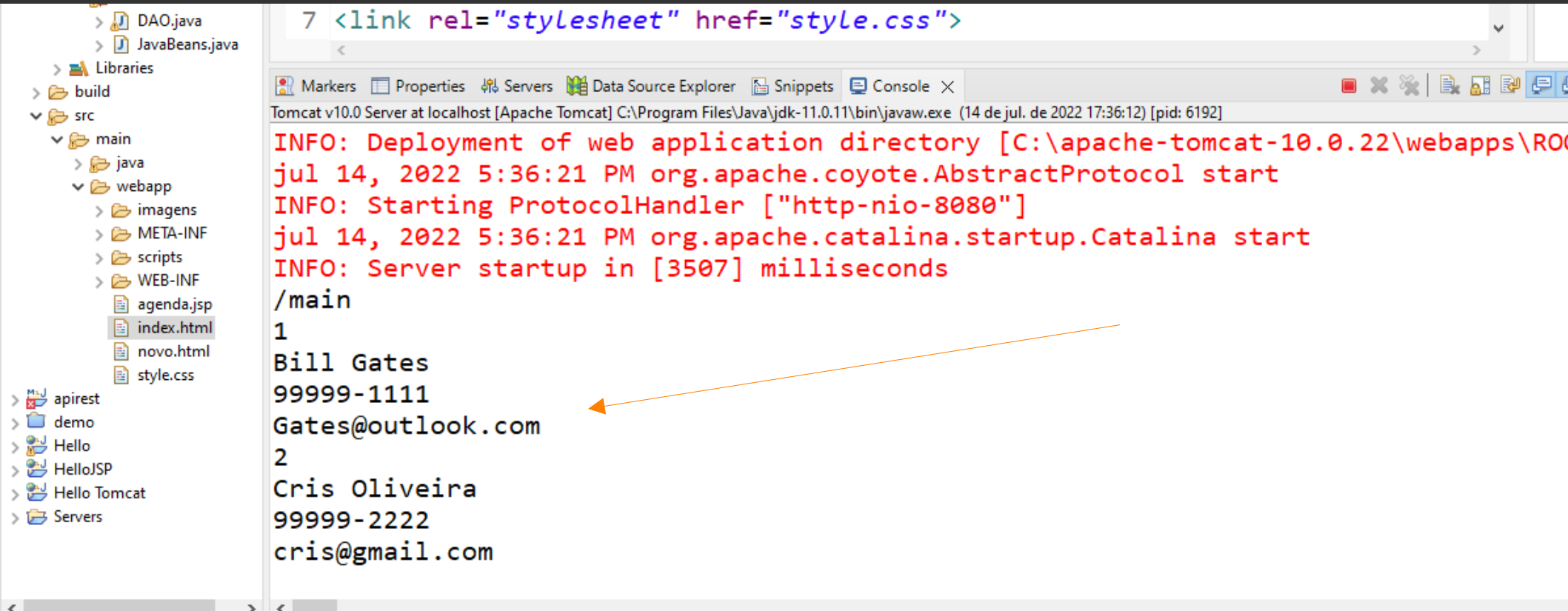
ss64



kernel.org



Linux kernel



Ele retorna tudo que esta armazenado no banco de dados

eclipse-workspace - agenda/src/main/java/controller/Controller.java - Eclipse IDE

File Edit Source Refactor Navigate Search Project Run Window Help

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 - agenda.jsp
 - index.html
 - novo.html
 - style.css
- apirest

novor.html | validator.js | Controller.java | agenda.jsp | index.html | JavaBeans.java | DAO.java

```
37 // listar contatos
38 protected void contatos(HttpServletRequest request, HttpServletResponse response) {
39     //response.sendRedirect("agenda.jsp");
40     /* Criando um objeto que ira receber os dados jababeans */
41     ArrayList<JavaBeans> lista = dao.listarContatos();
42     // teste de recebimento da lista
43     for (int i = 0; i < lista.size(); i++) {
44         System.out.println(lista.get(i).getIdcon());
45         System.out.println(lista.get(i).getNome());
46         System.out.println(lista.get(i).getFone());
47         System.out.println(lista.get(i).getEmail());
48     }
49 }
50
51 // Novo contato
52 protected void novoContato(HttpServletRequest request, HttpServletResponse response) {
```

Markers Properties Servers Data Source Explorer Snippets Console

Tomcat v10.0 Server at localhost [Apache Tomcat] C:\Program Files\Java\jdk-11.0.11\bin\javaw.exe (14 de jul. de 2022 17:36:12) [pid: 6192]

INFO: Deployment of web application directory [C:\apache-tomcat-10.0.22\webapps\

Comente ou delete esse teste



Project Explorer

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 - WEB-INF
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 - index.html
 - novo.html
 - style.css

```
37 // listar contatos
38 protected void contatos(HttpServletRequest request, HttpServletResponse response) {
39     //response.sendRedirect("agenda.jsp");
40     /* Criando um objeto que ira receber os dados jababeans */
41     ArrayList<JavaBeans> lista = dao.listarContatos();
42     // teste de recebimento da lista
43     /*for (int i = 0; i < lista.size(); i++) {
44         System.out.println(lista.get(i).getIdcon());
45         System.out.println(lista.get(i).getNome());
46         System.out.println(lista.get(i).getFone());
47         System.out.println(lista.get(i).getEmail());
48     }*/
49 }
50
51 // Novo contato
52 protected void novoContato(HttpServletRequest request, HttpServletResponse response) {
```

Markers Properties Servers Data Source Explorer Snippets Console

Tomcat v10.0 Server at localhost [Apache Tomcat] C:\Program Files\Java\jdk-11.0.11\bin\javaw.exe (14 de jul. de 2022 17:36:12) [pid: 6192]

```
INFO: Deployment of web application directory [C:\apache-tomcat-10.0.22\webapps\ROOT]
jul 14, 2022 5:36:21 PM org.apache.coyote.AbstractProtocol start
INFO: Starting ProtocolHandler ["http-nio-8080"]
```