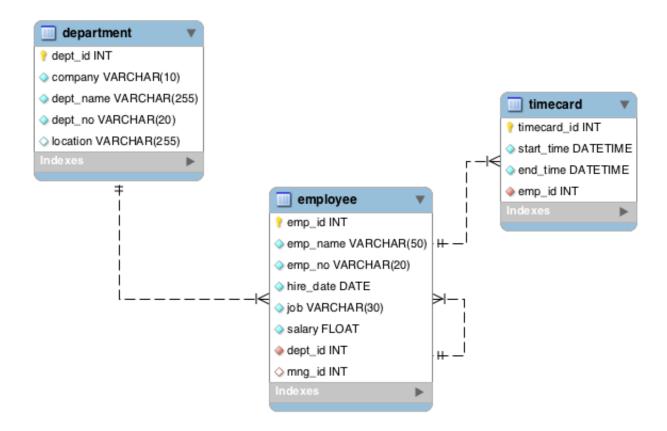**companydata Data Layer Documentation**

Use the DataLayer similar to Project 2, the main difference is the constructors for each class. The ones that are available are shown at the end.

Methods (all throw an exception if there is an error, such as the requested object doesn't exist)**:**

//Delete all Departments, Employees and Timecards for a company
//Returns the number of rows deleted
public int deleteCompany(String companyName)

//Insert a department
//Returns the inserted Department
public Department insertDepartment(Department department)

//Get all Departments for a given company
//Returns a list of Department objects
public List<Department> getAllDepartment(String companyName)

//Get a given Department for a given company
//Returns the requested Department
public Department getDepartment(String companyName, int dept_id)

//Get a given Department for a given company
//Returns the requested Department
public Department getDepartmentNo(String companyName, String dept_no)

//Update a Department
//Returns the updated Department
public Department updateDepartment(Department department)

//Delete a given Department for a given company
//Returns the number of rows deleted
public int deleteDepartment(String company, int dept_id)

//Insert an Employee
//Returns the inserted Employee
public Employee insertEmployee(Employee employee)

//Get a list of Employees for a given company
//Returns the list of Employee objects

public List<Employee> getAllEmployee(String companyName)

//Get the requested Employee
//Returns the requested Employee
public Employee getEmployee(int emp_id)

//Update an Employee
//Returns the updated Employee object
public Employee updateEmployee(Employee employee)

//Delete the given Employee
//Returns the number of rows deleted
public int deleteEmployee(int emp_id)

//Insert a Timecard
//Returns the inserted Timecard
public Timecard insertTimecard(Timecard timecard)

//Get all Timecards for a given Employee
//Returns the list of Timecard objects
public List<Timecard> getAllTimecard(int emp_id)

//Get the requested Timecard
//Returns the requested Timecard
public Timecard getTimecard(int timecard_id)

//Update a given Timecard
//Returns the updated Timecard
public Timecard updateTimecard(Timecard timecard)

//Delete the given Timecard
//Returns the number of rows deleted
public int deleteTimecard(int timecard_id)

//Close the connection
public void close()

department
- 🔑 dept_id INT
- ◇ company VARCHAR(10)
- ◇ dept_name VARCHAR(255)
- ◇ dept_no VARCHAR(20)
- ◇ location VARCHAR(255)
- Indexes ▶

timecard
- 🔑 timecard_id INT
- ◇ start_time DATETIME
- ◇ end_time DATETIME
- ◆ emp_id INT
- Indexes ▶

employee
- 🔑 emp_id INT
- ◇ emp_name VARCHAR(50)
- ◇ emp_no VARCHAR(20)
- ◇ hire_date DATE
- ◇ job VARCHAR(30)
- ◇ salary FLOAT
- ◆ dept_id INT
- ◇ mng_id INT
- Indexes ▶

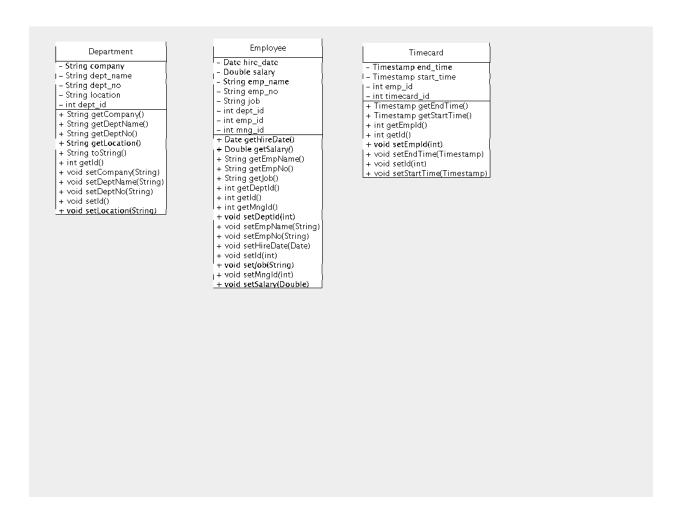The **employee** table has two foreign keys:
1. mng_id references **employee**.emp_id
2. dept_id references **department**.dept_id

The **employee** table has an additional unique index of emp_no besides the the primary key

The **timecard** table has one foreign key:
1. emp_id references **employee**.emp_id

The **department** table has one additional unique index of dept_no besides the primary key

```
         Department
──────────────────────────
– String company
– String dept_name
– String dept_no
– String location
– int dept_id
──────────────────────────
+ String getCompany()
+ String getDeptName()
+ String getDeptNo()
+ String getLocation()
+ String toString()
+ int getId()
+ void setCompany(String)
+ void setDeptName(String)
+ void setDeptNo(String)
+ void setId()
+ void setLocation(String)
```

```
          Employee
──────────────────────────
– Date hire_date
– Double salary
– String emp_name
– String emp_no
– String job
– int dept_id
– int emp_id
– int mng_id
──────────────────────────
+ Date getHireDate()
+ Double getSalary()
+ String getEmpName()
+ String getEmpNo()
+ String getJob()
+ int getDeptId()
+ int getId()
+ int getMngId()
+ void setDeptId(int)
+ void setEmpName(String)
+ void setEmpNo(String)
+ void setHireDate(Date)
+ void setId(int)
+ void setJob(String)
+ void setMngId(int)
+ void setSalary(Double)
```

```
          Timecard
──────────────────────────
– Timestamp end_time
– Timestamp start_time
– int emp_id
– int timecard_id
──────────────────────────
+ Timestamp getEndTime()
+ Timestamp getStartTime()
+ int getEmpId()
+ int getId()
+ void setEmpId(int)
+ void setEndTime(Timestamp)
+ void setId(int)
+ void setStartTime(Timestamp)
```

Each class has constructors of (the dates and timestamps are in the format in the project description):

Employee:

        Employee(String emp_name, String emp_no, String hire_date,
                String job, Double salary, int dept_id, int mng_id)

Department:

        Department(String company, String dept_name, String dept_no,
            String location)

        Department()

Timecard:

        Timecard(String start_time, String end_time, int emp_id)

        Timecard()