

## Time Clock Application

The goal of this application is to record and report employee time. The application will have two interfaces. The main interface will be used by employees to clock in and out, go on break, and receive management messages. The administrative interface will be used to monitor employee status, create messages, perform CRUD (create, read, update, delete) actions on departments, holidays, time segments, breaks, segment types, pay types, and pay rules. Also, the data will be able to be exported to payroll software (Sage MAS90).

We will be working as a team on this project.

## Time Clock Database Description

- A. Each department is described by the name, location, number, and if lunch breaks are paid. The department number is unique.
- B. A location is described by the id, name, address, city, state, zip, country and the pay information id. The id is unique.
- C. The pay type is described by an id, a description, the weekly max, the daily max, and the next pay type (once thresholds are met). The pay type is unique.
- D. A punch type is described by an id, description, and a pay type. The id is unique.
- E. A punch is described by a punch id, employee id, the in and out times, punch type, and the department. The punch id is unique.
- F. A timecard represents a collection of punches for a given pay period and is described by the employee, the pay period, and timecard id. The timecard id is unique.
- G. The timecard lines represent a single line on a time card. They are described by a line number, timecard id, an employee id, punch id, pay type id, split start time, and split end time. The combination of line number and timecard are unique.
- H. An employee is described by first and last name, middle initial, manager id, pin, id (alpha numeric to match payroll software), department, and employment status. The employee id is unique.
- I. Messages are described by a message id, manager id, and the message text. The message id is unique.
- J. Messages indicate which employees will receive a given message. It is described by a message id, employee id, and whether or not it is pending. The combination of message id and employee id are unique.
- K. Holidays are described by an id, date, and whether or not it repeats. The holiday id is unique.
- L. Holidays held are described by a department id and holiday id.

Employee							
EmployeeID, string	Fname, string	Minit, char	Lname, string	Terminated, bool	ManagerID, string	Pin, string	DepartmentID, int

Message		
MessageID, int	Body, string	ManagerID, string

MessagesFor		
MessageID, int	EmployeeID, string	Pending, bool

Department			
DepartmentID, int	Name, string	Location, string	More?, string

Holiday		
HolidayID, int	Date, datetime	Repeats, int

HolidaysHeld	
DepartmentID, int	HolidayID, int

PayType			
PayTypeID, int	Daily max, int	Weekly max, int	Pay_type_when over time, int

PayType in Departments	
PayTypeID, int	DepartmentID, int

Punch					
PunchID, int	In-time, datetime	out-time, datetime	PunchTypeID, int	DepartmentID, int	EmployeeID, string

PunchType		
PunchTypeID, int	Description, string	punch_in_option, string

Timecard		
TimecardID, int	EmployeeID, string	PayPeriod, datetime

TimecardLines						
LineNumber, int	TimecardID, int	EmployeeID, string	PunchID, int	PayTypeID, int	Split-Start, datetime	Split-End, datetime

