

Time Tracker

Seiko Wacobee, the president of Widget Confabulators, a service based business, is beside himself because his company is spending way too much time managing their billable hours. Employees currently track their time on Excel spreadsheets and assorted cocktail napkins, all of which are submitted to the home office once per week. The current system is pretty pathetic and Seiko knows it. It's labor intensive, prone to error, and does not allow Seiko to have his data when he wants it.

He wants his employees to be able to easily and conveniently enter their project hours any time, day or night, and for the home office to be able to produce up-to-date reports 24-7.

Seiko has a laundry list of things he thinks are important. Here they are:

- Security is important, so employees must login to the system before they can record time.
- In order to bill a valued customer, we need to know:
 - when the work was done (date)
 - the customer for whom the work was done
 - the customer project for which the task was performed
 - who did the work (the current system user by default)
 - how long the task took
 - a brief description of the task
- To help avoid data entry mistakes, employees should be able to select customers and projects in a convenient fashion when entering their time.
- Customers, Employees, and Projects should be able to be entered through the web site.
- To speed data entry, Seiko has provided a CSV file which contains a list of their current customers.
- The timer should be able to stop and resume as needed. Because Seiko encourages his employees to work on several projects per day, the timer needs to reliably record time for a task even when :
 - Task1 is started
 - Task1 is stopped
 - Task2 is started
 - Task2 is stopped
 - Task1 is resumed
 - Task1 is stopped
- Sometimes Seiko's employees get so engrossed in their work that they forget to start the timer. When this happens, these dedicated employees need to be able to manually enter a task's duration after the fact.
- The information entered should be stored in a relational database.
- The timer should be able to export the timer entries as a CSV file.
- A time report should be able to be produced through the web timer. You should be able to view this report (time by customer) on-line and as a printable document.
- Finally, Seiko is about to go through an ISO 9000 audit, so he needs to have brief, but effective, user documentation for the timer. This documentation can be presented via the web or via a PDF document.