**Shared Expenses Manager**

**Overview**

A group of people, for example, Jerry, George, Elaine and Kramer sometimes eat together, in various combinations and in different places with varying costs. They don't want to settle the score each time and want the computer to help them. So after they have lunch, somebody logs into the computer and quickly inputs the participants, the amount and who paid the bill.

After the data is entered, everyone can bring their personal page and see their score with respect to other people. For example:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **George's scores:**     |  |  | | --- | --- | | **Name** | **Score** | | Jerry | -$12.56 | | Elaine | -$23.00 | | Kramer | $0.52 | | **Total** | **-$35.04** | |
|  |

So if George's score with Jerry is -$12.56 then George owes Jerry $12.56. If George's score with Kramer is (+) $0.52 then Kramer owes George money.

Looking at his page, George can conclude  that next time he has lunch with Jerry or Elaine he should pay. And in general, he could be of a more social type.

If the system is easy to use people will use it and over time the scores will tend to balance. So they can spend time together without being concerned too much about who is going to pay this time.

**The Assignment**

The assignment is to implement a system that fits the above description as a Web application or Windows application. The ultimate feature set of the application is listed below. You can add your features to this list. Implement as many features as you can.

**Features**

The features listed here are in alphabetical order, with no reference to their importance.

|  |  |
| --- | --- |
| **Feature** | **Description** |
| Administration | Add/remove users, reset user passwords |
| Automatic registration of new users | When entering a new expense and if the person entered is not on the system, give an option to add this person to the system. Ask for name and e-mail address and send e-mail invitation to a newly registered person |
| Default values in new expense entry | When entering a new expense, try to make input faster to make reasonable defaults using user preferences and past history |
| History | Display expenses a particular person have been involved in. As the usage of the system will grow over time it will be important to allow the history output to be displayed in pages. |
| Login | Provide each user with a login name and password |
| New Expense Entry | Input participants, date/time, expense description, who paid and the amount paid. |
| Privacy | As the number of users grow it is increasingly important to keep personal data private. Care has to be taken to disclose only the relevant personal data. |
| Score Page | Display name of the person and the score. Also display a total of all scores. Display only scores that are not zero |
| Self-registration | Users can register themselves in the system |
| User Preferences | Each user can go to their preferences page, change their name, password and possibly other parameters |

**The Environment**

The purpose of this assignment is to test your abilities, not the skills with particular environment. You may use the Web development environment you feel comfortable with.

**Conclusion**

The assignment source files should be put in a ZIP archive and sent via email.

Thank you for your time and for your effort and good luck!