2010 SDSU Program Design Competition

Card Matching Game

The card matching game starts with a full deck of cards (54 cards). The cards are shuffled and placed face down in a rectangular grid. Each player turns over two cards. If they match (e.g. 6 of hearts and 6 of diamonds, queen of clubs and queen of spades, or both jokers), the player keeps the cards and earns a point. The person who has earned the most points when all cards are matched, wins the game.

Make a computer version of this program. It should:
- Read the number of players and the player's names from the users and store the information for each user. You'll need at least, the name and score for each user. Include more data if you like.
- Use a full 'card deck' (54 cards), arranged in a 6 x 9 rectangular grid. An example is shown below:

```
      1 2 3 4 5 6 7 8 9
   _____
1 |  * * * * * * * * *
2 |  * * * * * * * * *
3 |  * * * * * * * * *
4 |  * * * * * * * * *
5 |  * * * * * * * * *
6 |  * * * * * * * * *
```

- Start with the first player and rotate through all players until all pairs are matched.
- On a turn, display the board and read two card choices from the player. If the pair are a match, give the player a point or flip them back over. The next player then gets a turn.
- Once all pairs have been matched, show each player's name and score.

You can design this game for either human-to-human or human-to-computer, or both. Also you can develop this game using any software tools available to you. You may create a web based application, a C/C++ program, a Visual Basic/C++/C# program, Java, or some other programming environment. Your program MUST run on a Windows XP computer using a standard installation and having Internet Explorer and Firefox web browsers.

Your work will be judged on,

1. Correctness of the solution
2. Uniqueness of the design
3. Apparent ability to hold student interest
4. Completeness of solution
5. User-interface design

Team members are encouraged to participate during the presentation. All parts of the presentation and source code must be burned to a clearly labeled CD and submitted to the program design competition committee on the day of the competition.

If you have any questions regarding the problem, please do not hesitate to ask us (onyeka.ezenwoye@sdstate.edu or sung.shin@sdstate.edu). Good luck and have fun!