

## Hounds and Puppies Game

Ok, it's not really my game, but my spin on a couple of famous games. You may be familiar with Cows and Bulls, or Mastermind. In this version, you need to decode a four digit number. Here are the rules:

- 1) A four digit number is randomly generated by computer. It must not contain the same number twice.
- 2) The user guesses a four digit number.
- 3) Computer replies with the number of correct digits in the right place (Hounds) and the number of correct digits but in the wrong place (Puppies).
- 4) Computer keeps track of how many guesses it takes the user to guess the 'Cryptic Number'.
- 5) Game can be played again. High score is tracked.

E.g.:

```
Randomly Generated Number  1842 (not shown to user)
User Guess                  1234 (one guess is added to a variable representing number of guesses)
Computer replies with 1Hound, 2Puppies
User Guess                  1235
Computer replies with 1Hound, 1Puppy
User Guess                  1238
Computer replies with 1Hound, 2Puppies
User Guess                  1428
Computer replies with 1Hound, 3Puppies
User Guess                  1824
Computer replies with 2Hounds, 2Puppies
User Guess                  1842
Computer replies with You won in 6 Guesses, a new high score!
Play again?
```

Marking scheme:

```
Does the code run:          /2
Code works with loops:      /2
Random numbers, not duplicated: /2
Proper number of Hounds/puppies: /2
Your own code:              /2
```