CPSC 3125, Operating Systems Lab Assignment

Lab 02

1 Instructions

Write a C program that produces a table of reciprocals from 1 to 12. Print the table. See below for the expected output. Please work together in pairs. The word " pair" means exactly two people. (Exception: one trio will be permitted if the class has an odd number of students and no student elects to work alone.)

The first row begins with $\frac{1}{1}$, $\frac{1}{2}$, $\frac{1}{3}$, ... The second row begins with $\frac{2}{1}$, $\frac{2}{2}$ $\frac{2}{3}$, ... And so on. The last row 3ns with ..., $\frac{12}{10}$, $\frac{12}{11}$ $\frac{12}{12}$.

2 Output

Your program should produce the following output:

```
 the reciprocal table is
1      2      3      4      5      6      7      8      9      10     11     12
 1.0000 0.5000 0.3333 0.2500 0.2000 0.1667 0.1429 0.1250 0.1111 0.1000 0.0909 0.0833
 2.0000 1.0000 0.6667 0.5000 0.4000 0.3333 0.2857 0.2500 0.2222 0.2000 0.1818 0.1667
 3.0000 1.5000 1.0000 0.7500 0.6000 0.5000 0.4286 0.3750 0.3333 0.3000 0.2727 0.2500
 4.0000 2.0000 1.3333 1.0000 0.8000 0.6667 0.5714 0.5000 0.4444 0.4000 0.3636 0.3333
 5.0000 2.5000 1.6667 1.2500 1.0000 0.8333 0.7143 0.6250 0.5556 0.5000 0.4545 0.4167
 6.0000 3.0000 2.0000 1.5000 1.2000 1.0000 0.8571 0.7500 0.6667 0.6000 0.5455 0.5000
 7.0000 3.5000 2.3333 1.7500 1.4000 1.1667 1.0000 0.8750 0.7778 0.7000 0.6364 0.5833
 8.0000 4.0000 2.6667 2.0000 1.6000 1.3333 1.1429 1.0000 0.8889 0.8000 0.7273 0.6667
 9.0000 4.5000 3.0000 2.2500 1.8000 1.5000 1.2857 1.1250 1.0000 0.9000 0.8182 0.7500
10.0000 5.0000 3.3333 2.5000 2.0000 1.6667 1.4286 1.2500 1.1111 1.0000 0.9091 0.8333
11.0000 5.5000 3.6667 2.7500 2.2000 1.8333 1.5714 1.3750 1.2222 1.1000 1.0000 0.9167
12.0000 6.0000 4.0000 3.0000 2.4000 2.0000 1.7143 1.5000 1.3333 1.2000 1.0909 1.0000
```

3 Lab deliverable

Your deliverable consists of (1) the C source code, and (2) a text document showing the output of the program.