

Problem Set 4 Exercise #26: Largest Digit Pair

Reference: Lecture 12 notes

Learning objective: Recursion

Estimated completion time: 30 minutes

Problem statement:

[CS1010 AY2010/11 Semester 1 Exam, Q4]

Write a program **largest_pair.c** to read a positive integer and determine the largest pair of digits in that number, starting from the right to the left, using a recursive function

```
int largest_digit_pair(int num)
```

For example, if the input number is 5064321, then the pairs (from right to left) are 21, 43, 06 and 5, and hence the answer is 43.

You should **NOT** use any loop structures (*for*, *while* or *do-while* loop) in your program.

Sample run #1:

```
Enter a positive integer: 5064321
Largest pair of digits in 5064321 is 43
```

Sample run #2:

```
Enter a positive integer: 12345678
Largest pair of digits in 12345678 is 78
```