CS211 ALGORITHMS & DATA STRUCTURES II

LAB 8

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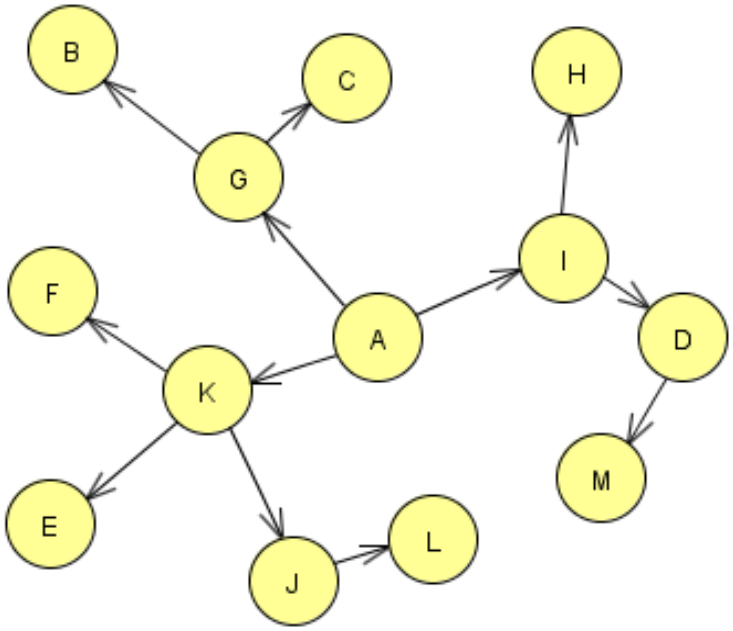
GRAPHS

PART I: Pen and paper exercise

Show the orders in which breadth-first search and depth-first search would traverse the following graph starting at vertex A. Show how the contents of the search queue and search stack are updated during the searches.



PART II: Programming exercise

Write a program that identifies the following:

1) The S&P 500 company with the lowest drawdown between 2008 and mid-2011, the actual percentage, and the dates between which it occurred
2) The S&P 500 company with the highest drawdown between 2008 and mid-2011, the actual percentage, and the dates between which it occurred

A drawdown is the peak-to-trough decline during a specific record period of an investment, fund or commodity. A drawdown is usually quoted as the percentage between the peak and the trough. Use the data in the file StockData.txt. The following code can be used for loading it in:

```
public class StockData{

    public static void main(String[] args){

        FileIO io = new FileIO();
        String[] original = io.load("C:\\stockdata.txt");
        int numrows=original.length;
        int numcols=original[0].split("\t").length;
        double[][] array = new double[numrows][numcols];

        for(int i=1;i<numrows;i++){
            for(int j=1;j<numcols;j++){

           array[i][j]=Double.parseDouble(original[i].split("\t")[j]);
            }
        }
    }
}
```