**Graph Theory Labs**

**Lab #1**

A

B

D

F

E

C

G

**Is there a path from A to G ?**

**Dataset.dat**

**AB AC**

**BE**

**CD**

**EC EF**

**FG**

**Lab #2**

E

B

G

A

F

C

D

H

I

1. **Is there a path from A to I?**
2. **How long is the shortest path? ( # of connections )**

**DataSet.dat**

**A BCD**

**B E**

**C H**

**D AC**

**E F**

**F CG**

**G E**

**H I**

**Lab #3**

**Find the least weighted path from A to J.**

**DataSet.dat**

**AB 1**

**AC 2**

**AG 1**

**BE 7**

**DE 1**

**CD 1**

**EF 4**

**CF 8**

**CH 1**

**HI 9**

**GH 1**

**IJ 2**

**FJ 2**

**LAB #3**

B

7

1

C

E

A

1

1

2

4

C

8

1

F

1

H

2

9

1

G

I

J

2

**Length of the paths:::**

**AGHIJ 13**

**ACDEFJ 10**

**ACFJ 12**

**ACHIJ 14**

**ABEFJ 14**