

```

1      OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
55
56      /* Generated Code (IMPORT) */
57      /* Source File: stanley cup NHL clean for graph.xlsx */
58      /* Source Path: /gpfs/user_home/jdemaio/MATH 8020 */
59      /* Code generated on: 1/9/18, 1:55 PM */
60
61      %web_drop_table(WORK.IMPORT);
62
63
64      FILENAME REFFILE '/gpfs/user_home/jdemaio/MATH 8020/stanley cup NHL clean for graph.xlsx';
65
66      PROC IMPORT DATAFILE=REFFILE
67      DBMS=XLSX
68      OUT=WORK.IMPORT;
69      GETNAMES=YES;
70      RUN;

```

NOTE: The import data set has 96 observations and 16 variables.

NOTE: WORK.IMPORT data set was successfully created.

NOTE: PROCEDURE IMPORT used (Total process time):

```

real time      0.05 seconds
cpu time       0.03 seconds

```

```

71
72      PROC CONTENTS DATA=WORK.IMPORT; RUN;

```

NOTE: PROCEDURE CONTENTS used (Total process time):

```

real time      0.12 seconds
cpu time       0.07 seconds

```

```

73
74      proc optgraph
75      data_links = WORK.IMPORT;
76      data_links_var
77      from = Champion
78      to = RunnerUp;
79      clique out = Cliques_SC_all;
80      * find all cliques in graph;
81      title 'All Cliques';
82      run;

```

NOTE: -----
NOTE: Running OPTGRAPH version 14.1.
NOTE: -----
NOTE: The OPTGRAPH procedure is executing in single-machine mode.
NOTE: -----

NOTE: Data input used 0.00 (cpu: 0.00) seconds.

WARNING: Link (Detroit Red Wings,Pittsburgh Penguins) in observation 10 of the DATA_LINKS= data set is a duplicate and is ignored.

WARNING: Link (Edmonton Oilers,Boston Bruins) in observation 29 of the DATA_LINKS= data set is a duplicate and is ignored.

WARNING: Link (Montreal Canadiens,Calgary Flames) in observation 31 of the DATA_LINKS= data set is a duplicate and is ignored.

WARNING: Link (Edmonton Oilers,Philadelphia Flyers) in observation 32 of the DATA_LINKS= data set is a duplicate and is ignored.

WARNING: Link (New York Islanders,Edmonton Oilers) in observation 34 of the DATA_LINKS= data set is a duplicate and is ignored.

WARNING: Link (Montreal Canadiens,Boston Bruins) in observation 40 of the DATA_LINKS= data set is a duplicate and is ignored.

WARNING: Link (Montreal Canadiens,Chicago Black Hawks) in observation 46 of the DATA_LINKS= data set is a duplicate and is ignored.

WARNING: Link (Montreal Canadiens,St. Louis Blues) in observation 49 of the DATA_LINKS= data set is a duplicate and is ignored.

WARNING: Link (Montreal Canadiens,Chicago Black Hawks) in observation 52 of the DATA_LINKS= data set is a duplicate and is ignored.

WARNING: Link (Toronto Maple Leafs,Detroit Red Wings) in observation 54 of the DATA_LINKS= data set is a duplicate and is ignored.

WARNING: 29 more messages similar to the ones above could have been issued but were suppressed. To see more messages, change the value of the LOGLEVEL= option.

NOTE: The number of nodes in the input graph is 32.

NOTE: The number of links in the input graph is 57.

NOTE: -----
NOTE: Processing clique detection.

NOTE: Processing clique detection used 0.00 (cpu: 0.00) seconds.

NOTE: -----
NOTE: Data output used 0.00 (cpu: 0.00) seconds.

NOTE: -----
NOTE: The data set WORK.CLIQUES_SC_ALL has 87 observations and 2 variables.

NOTE: PROCEDURE OPTGRAPH used (Total process time):

```

real time      0.08 seconds
cpu time       0.05 seconds

```

```

83
84      proc optgraph
85      data_links = WORK.IMPORT (obs=23);
86      data_links_var
87      from = Champion
88      to = RunnerUp;
89      clique out = Cliques_SC_streak;
90      * find all cliques in graph since 1994;
91      title 'All Cliques since 1994';
92      run;

```

NOTE: -----
NOTE: Running OPTGRAPH version 14.1.

```

NOTE: -----
NOTE: The OPTGRAPH procedure is executing in single-machine mode.
NOTE: -----
NOTE: Data input used 0.00 (cpu: 0.01) seconds.
WARNING: Link (Detroit Red Wings,Pittsburgh Penguins) in observation 10 of the DATA_LINKS= data set is a duplicate and is ignored.
NOTE: The number of nodes in the input graph is 23.
NOTE: The number of links in the input graph is 22.
NOTE: -----
NOTE: Processing clique detection.
NOTE: Processing clique detection used 0.00 (cpu: 0.00) seconds.
NOTE: -----
NOTE: Data output used 0.00 (cpu: 0.00) seconds.
NOTE: -----
NOTE: The data set WORK.CLIQUES_SC_STREAK has 44 observations and 2 variables.
NOTE: PROCEDURE OPTGRAPH used (Total process time):
      real time          0.05 seconds
      cpu time           0.03 seconds

```

```

93
94     proc optgraph
95         data_links = WORK.IMPORT (firstobs=24);
96         data_links_var
97         from = Champion
98         to = RunnerUp;
99         clique out = Cliques_SC_pre_streak;
100        * find all cliques in graph prior to 1994;
101        title 'All Cliques prior to 1994';
102    run;

```

```

NOTE: -----
NOTE: Running OPTGRAPH version 14.1.
NOTE: -----
NOTE: The OPTGRAPH procedure is executing in single-machine mode.
NOTE: -----
NOTE: Data input used 0.00 (cpu: 0.00) seconds.
WARNING: Link (Edmonton Oilers,Boston Bruins) in observation 6 of the DATA_LINKS= data set is a duplicate and is ignored.
WARNING: Link (Montreal Canadiens,Calgary Flames) in observation 8 of the DATA_LINKS= data set is a duplicate and is ignored.
WARNING: Link (Edmonton Oilers,Philadelphia Flyers) in observation 9 of the DATA_LINKS= data set is a duplicate and is ignored.
WARNING: Link (New York Islanders,Edmonton Oilers) in observation 11 of the DATA_LINKS= data set is a duplicate and is ignored.
WARNING: Link (Montreal Canadiens,Boston Bruins) in observation 17 of the DATA_LINKS= data set is a duplicate and is ignored.
WARNING: Link (Montreal Canadiens,Chicago Black Hawks) in observation 23 of the DATA_LINKS= data set is a duplicate and is ignored.
WARNING: Link (Montreal Canadiens,St. Louis Blues) in observation 26 of the DATA_LINKS= data set is a duplicate and is ignored.
WARNING: Link (Montreal Canadiens,Chicago Black Hawks) in observation 29 of the DATA_LINKS= data set is a duplicate and is ignored.
WARNING: Link (Toronto Maple Leafs,Detroit Red Wings) in observation 31 of the DATA_LINKS= data set is a duplicate and is ignored.
WARNING: Link (Montreal Canadiens,Toronto Maple Leafs) in observation 34 of the DATA_LINKS= data set is a duplicate and is ignored.
WARNING: 28 more messages similar to the ones above could have been issued but were suppressed. To see more messages, change the
value of the LOGLEVEL= option.
NOTE: The number of nodes in the input graph is 21.
NOTE: The number of links in the input graph is 35.
NOTE: -----
NOTE: Processing clique detection.
NOTE: Processing clique detection used 0.00 (cpu: 0.00) seconds.
NOTE: -----
NOTE: Data output used 0.00 (cpu: 0.01) seconds.
NOTE: -----
NOTE: The data set WORK.CLIQUES_SC_PRE_STREAK has 47 observations and 2 variables.
NOTE: PROCEDURE OPTGRAPH used (Total process time):
      real time          0.05 seconds
      cpu time           0.02 seconds

```

```

103
104     OPTIONS NONOTES NOSTIMER NOSOURCE NOSYNTAXCHECK;
116

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