How to Run the Code

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- You need the following files from **nauty**:

  nauty.h, naututil.h, rng.h, nauty.c, naututil.c, rng.c, nautil.c,naugraph.c.

  The **nauty** package is available at http://cs.anu.edu.au/~bdm/nauty/.

- **#define N** n

  This line in *main.cpp* specifies that the input are drawings of K_n and the output will be drawings of K_{n+1}.

- **#define SKIP_SAVING**

  When this option is turned on, each time a new drawing D of K_{n+1} is generated, a lower bound $Lb[\{D\}]$ for $cr(\{D\}^+)$ be computed. Then D will be abandoned and the code continues to search for the next drawing of K_{n+1}.

  This option allows us to compute $Lb\left[\mathcal{D}_{10}^{\leqslant 62}\right]$ directly from $\mathcal{D}_9^{36}$. We first obtained $Lb\left[\mathcal{D}_{10}^{\leqslant 62}\right]$, which is 100, by turning on this option. Then we turned it off and ran the code again to get all the optimal drawings of K_{10}.

  The reason why we didn't first obtain $\mathcal{D}_{10}^{\leqslant 62}$ then compute $Lb\left[\mathcal{D}_{10}^{\leqslant 62}\right]$ is because the size of $\mathcal{D}_{10}^{\leqslant 62}$ seems to be very large; it would take much time to check isomorphism and much space to save the drawings.

- File names for input and output:

n	Input File Names	Output File Names	Log File Names
4	#0_K4.txt	#0_K4to5.txt	myLog_K4to5.txt
5	#0_K5.txt	#0_K5to6.txt	myLog_K5to6.txt
6	#0_K6.txt	#0_K6to7.txt	myLog_K6to7.txt
7	#0_K7.txt	#0_K7to8.txt #1_K7to8.txt #2_K7to8.txt	myLog_K7to8.txt
8	#0_K8.txt #1_K8.txt #2_K8.txt	#0_K8to9.txt	myLog_K5to6.txt
9	#0_K9.txt	#0_K9to10.txt #1_K9to10.txt #2_K9to10.txt	myLog_K9to10.txt