Project I

(due: Tuesday, February 17, 9:30 am)
paper due at beginning of class, presentations in class

1. Use your program of the game of life or the solution programs to the in-class work (see below). Do some variation on the game of life. For example you might change the rules of the game of life, or you might change the boundary conditions, or you might add or take out cells from time to time, or any other change of your choice.

2. Try different initial configurations and watch the patterns how they evolve over time and/or measure for example $N(t)$. What do you observe? (periodic behavior? dying out?...)

3. Write a **paper** about 1. and 2. The paper (2 pages or more) should contain a short introduction which explains clearly which task you tried to do (e.g. change of boundary conditions from periodic boundary conditions to absorbing boundary conditions). The next section should explain what exactly your new model is, such that everybody in class could write a program, which does exactly the same as what your program does. View this section as the "Model/Simulation" section you have seen in many of the papers you read for your project. For completeness include the rules of game of life (even if you did not change them) and a reference (e.g. the book of Gaylord and Wellin of which I gave you copies). Include a description of all parameters you used (e.g. what is your initial condition and which lattice size). Then describe your results. What have you observed. End with conclusions and possibly some ideas for future work.

4. Prepare a mini **talk** (about 7 min each student) which has the same content as your paper (model, variation(s), results). Prepare what you will say and some transparencies (powerpoint or any other tools are fine). Make sure that you can get to your powerpoint etc. on the computers in RCHM017.

5. Put the sourcecode (file.cc) into your ~/share.dir/ and make it readable. Please send to me an email in which you tell me the name of your sourcecode.

6. Comments As always, any comments about the course and/or assignment are welcome! Thank you for all your feedback!

Solutions:
~kvollmay/classes.dir/capstone_s2009.dir/game_of_life.dir/game2a.cc etc.

Schedule:

- Feb.17: Project I (as described here)
- Feb.24: 1^{1st} Version of 1^{1st} Paper (Main Project)