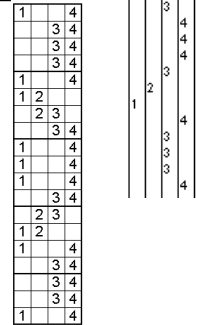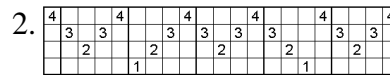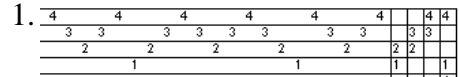# Computer Software: An Overview

Three ways to represent a fabric with a draft.
What is the minimum amount of information needed to define a fabric?
1. Threading, tie-up, and treadling. Not unique.
2. Threading, liftplan. Not Unique.
3. Drawdown. Unique.

Computer Software

Weaving software can speed up the design process. However, it should come with a warning — that the time you save in doing a draft may be consumed in exploring more weaving variations than you would ever have done with a pencil and graph paper. Whichever computer system you are using, you have several choices of software. Just as there is not one perfect loom, computer programs need to be evaluated to find a good match between the weaver and the program. Whether you are buying a program for the first time, pondering an upgrade for your software, adding another software package, or seeking a program to interface with a loom — you do have a choice of programs.

Should I use the computer for drafts?

If you already do drafts using pencil and graph paper and you own a computer, you will likely enjoy computer drafting. If you have a computer assisted loom you will need to use a drafting program. Programs are improving all of the time. Upgrade costs are usually small and new features can be useful.

A Common Language

Each weaving program saves drafts in its own format/language. In addition, most weaving software programs today will also open and save Weaving Information Files. WIF files are text files that contain the information needed to produce a weaving draft in a software program. The format was developed by a group of weaving software programmers: Ravi Nielsen, Patternland Weave Simulator; Bob Keates, Fiberworks PCW; Rob Sinkler, Swiftweave; Sally Breckenridge, WeaveIt; Dana Cartwright, WeaveMaker; Jane Eisenstein, QD-WIF; Mark Kloosterman, Proweave; and Bjorn Myhre, WeavePoint. This common language allows you to use drafts in several programs and to share drafts with other weavers by email and disk. See Page 5.

Basic features

If you are familiar with other types of computer software, it is easier to learn to use weaving software. After installing the program, start by opening the sample files, and then saving them with new names. Once you know how to save your work, you can explore the software and retrieve saved versions of your designs if you mess up. Almost all of the programs have an online help and many have a printed manuals and tutorials.

Create drafts

First try to do a draft you could easily do with pencil and graph paper. Use the mouse to enter the threading just as you would use a pencil. Enter the weft data as a tie-up/treadling or as a liftplan. Let the warp be dark as in *4.* Add color

just as you would use color pencils. Choose colors that remind you of the yarn that you will use, but don't worry about an exact match. Add these colors to the draft as in *5.*
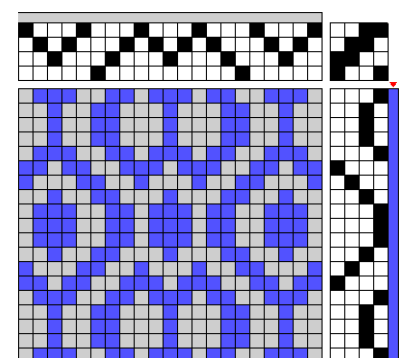
1.

2.

3.
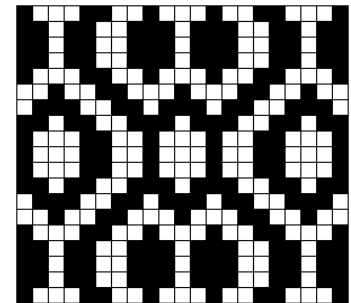
4. Drawdown. WeavePoint
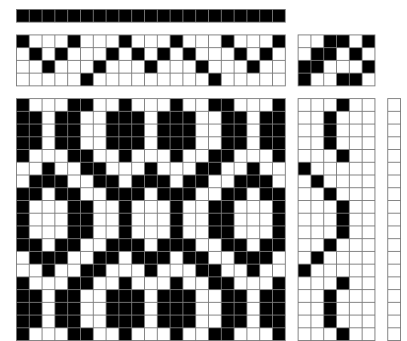
5. Color. Fiberworks

Next, start using the functions that are not available with pencil and graph paper. Save your work often to avoid frustration. Add numbers to the file name to keep track of the different variations you have tried.. (twill1, twill2, twill3, etc.) Take advantage of the notes feature to record information about the draft and each change. Notes can also be done in a word processor. Insert and delete threads. Use the repeat and copy/paste tools. Add borders and selvedges to the design. When you are pleased with the draft and ready to warp the loom print out the threading. Use legal paper and a landscape print format to print a long threading. Check for heddle counts and warp color counts to make warping easier. Now that you are getting comfortable with the basics, check out the help files for additional data entry methods. Change the tie-ups and experiment with different treadling and color variations. Look for the tool that copies the threading to the treadling when you want symmetry in the draft.

Profile drafts are often used to design and thread many block and unit weave structures. Any weave draft can be used as a profile draft. Explore tie–up and treadling variations as in *7.* Block substitution is a great program feature you should learn to use. For a computer assisted loom, the draft 0ften needs to be changed to a thread by thread draft for weaving. Tabby picks may need to be added in order to weave the draft as in *8*. Here the weft is shown as thick and thin.

Additional features

Starting with a drawdown is another way to design for the loom. Enter a design and then analyze it to complete the draft. If you are weaving on a drawloom or doing a pick-up design, this may be the primary method that you use. Some programs will import graphics files.

Namedrafts, taqueté design boards, network drafting utilities, overshot treadling, color palettes, multiple color bars and special viewing methods are among the extra features that programs offer. Each program has some fun extra features. All of the programs have a notes feature that allows you to keep records with your drafts. Some have excellent project calculators for yarn amounts and project details.

Many weavers use weaving software to control the treadling for a loom that has a computer interface. It is usually easier to use the software if you can see the screen and reach the keyboard. A keyboard extension cord can make this easier. Unweaving (for those inevitable mistakes) is handled differently in each software program. Use color, blanks, and zoom features to make it easier to see the screen and to weave.

Fiberworks and WeaveIt provide a choice of structures from Atwater-Bronson lace to turned twill to substitute. Patternland and WeavePoint allow you to create and save blocks to substitute. For tied-weaves, WeavePoint will allow insertion of the ties below the profile draft.
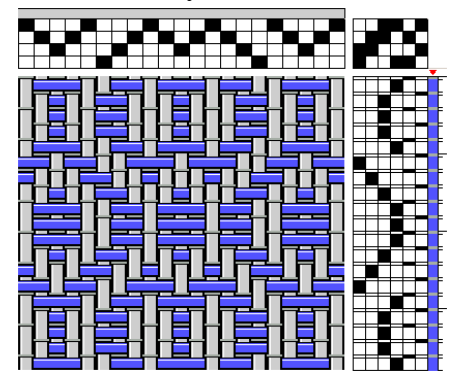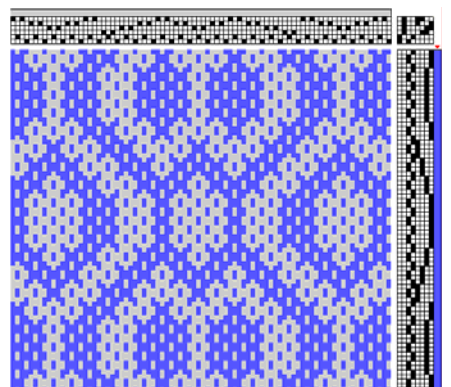
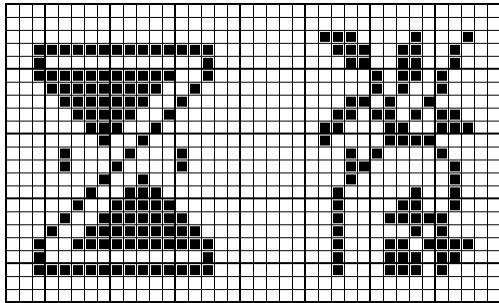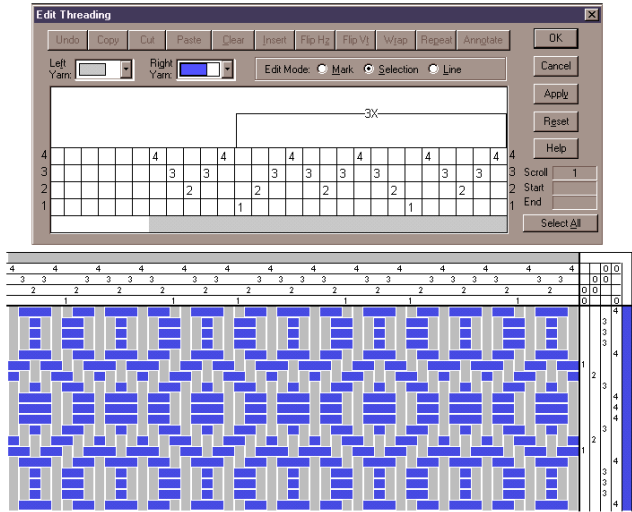6. Labels. Patternland
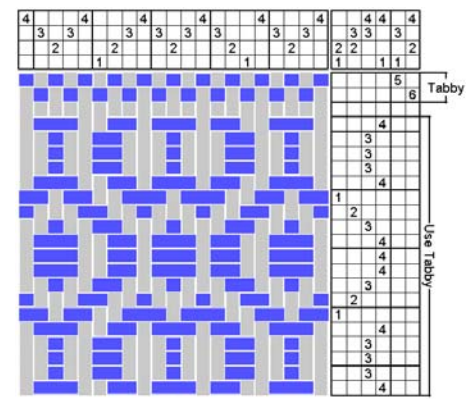
7. Profile draft. Fiberworks
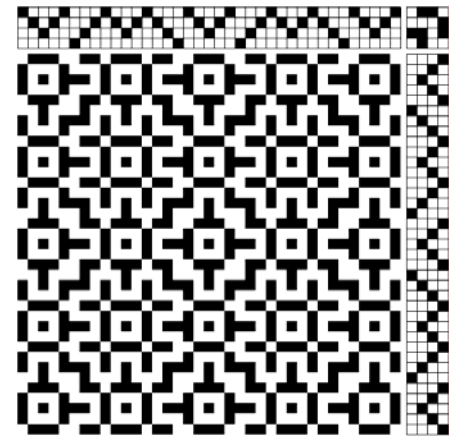
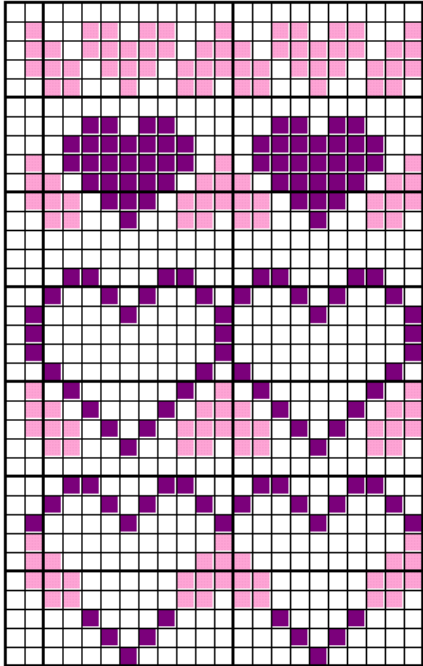8. With Tabby. Fiberworks

9. Block Substitution. Fiberworks

10. Enter warp/weft as repeats. WeaveIt
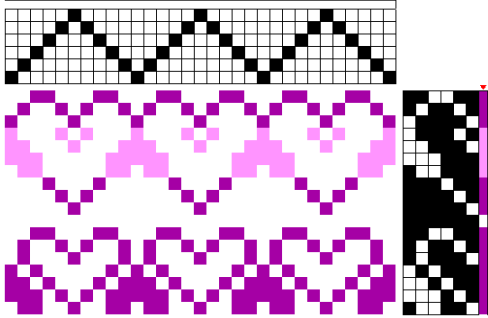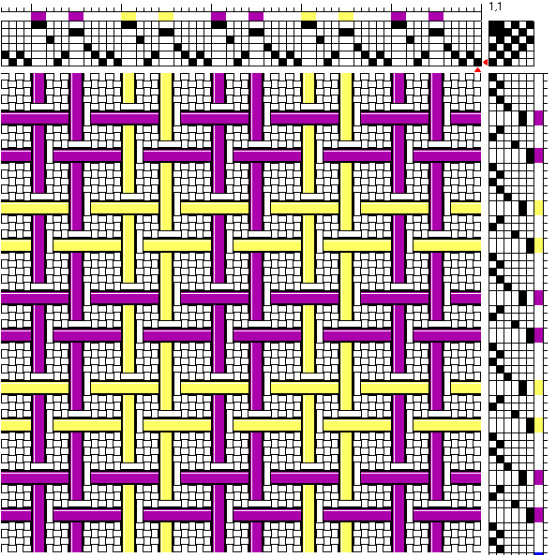

11. Design editor. Patternland

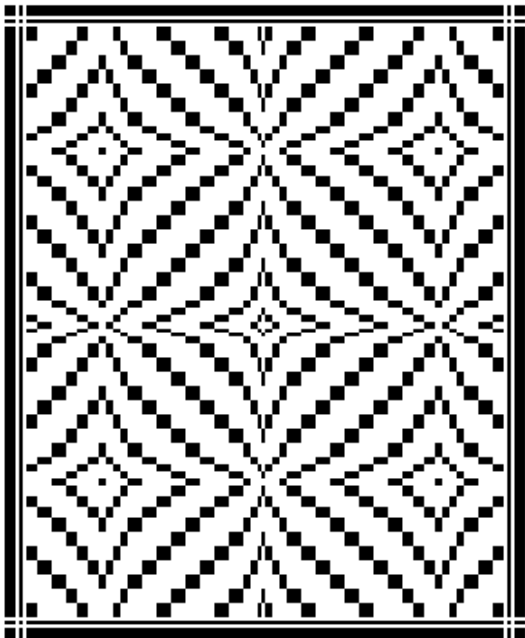12. Design Editor. Patternland

13. Profile. Fiberworks

14. Color and Interlacement. Fiberworks

15. Placemant Profile. Patternland

Software – A list of some of my favorite features to give you ideas:

Fiberworks PCW4 the straight and point mouse draw modes; repeat, mirror repeats; weave as drawn in—exactly or overshot; color and thread thickness (8); click on the drawdown area to change the tie-up or liftplan; block substitution (9); undo
Patternland: Keyboard entry and numbers on screen to verify correct typing; graph paper highlight lines; style (layout templates) files; lots of shafts and treadles; design board (11 and 12); notations for blocks (6).
WeaveIt Basic/Pro: Enter data as repeats; enter color and weave with right and left mouse buttons (10); float search; enter symbols, numbers, or squares for the weaving data; color sequences; import bmp files
WeavePoint 5: The repeat button, change draft to straight threading, numeric input – 3(4-2-4 1-4-2-4-1) 4-2-4; change the order of shafts, treadles; insert/delete threading or treadling—such as tie-down threading; lots of shafts and treadles; copy treadling to threading.
PixeLoom: Move shafts or treadles, Warp-faced and Weft-faced drafting with multiple color bars
ProWeave: graphics enviornment, draft manipulation
WeaveMaker Mi: alternate threadings, colorways
WinWeave: price
TurnStyler (cardweaving): lots of features for card weaving, price
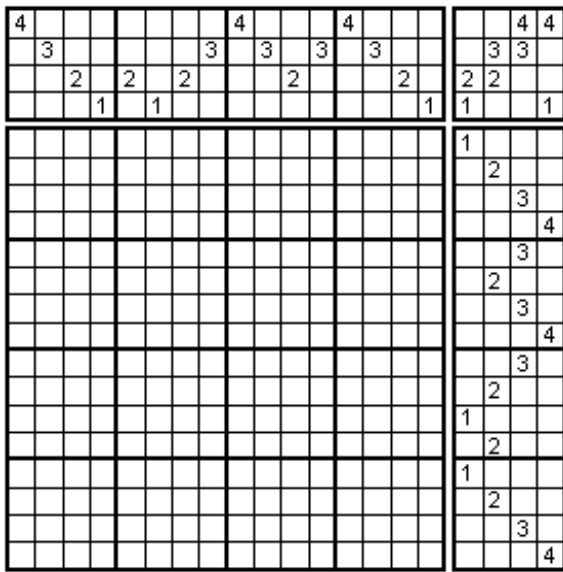**PatternMaker**: cross stitch program with good graphics tools
Stitch 2000: numbers columns which would be useful for drawloom
**Tim's Rudimentary Treadle Reducer**: find a skeleton tie-up

WIF files. These are text files that can be used by the various software programs to create a weave draft. If you want to edit these files use a text editor and not a word processor.

[WIF]
Version=1.1
Date=April 20, 1997
Developers=wif@mhsoft.com
Source Program=WeavePoint
Source Version=5.1

[CONTENTS]
COLOR PALETTE=yes
WEAVING=yes
WARP=yes
WEFT=yes
NOTES=yes
COLOR TABLE=yes
THREADING=yes
TREADLING=yes
TIEUP=yes

[COLOR PALETTE]
Entries=15
Range=0,255

[WEAVING]
Shafts=4
Treadles=4
Rising Shed=yes

[WARP]
Threads=8
Color=16
Units=Decipoints
Spacing=103

[WEFT]
Threads=8
Color=7
Units=Decipoints
Spacing=103

[NOTES]
1=sample.wif

2=WIF Version 1.1
3=Source Program: Patternland Weave
Simulator for Windows V 6.07 Alpha 4
4=
5=

[COLOR TABLE]
1=0,0,128
2=0,128,0
3=0,128,128
4=128,0,0
5=128,0,128
6=128,128,0
7=160,160,164
8=128,128,128
9=0,0,255
10=0,255,0
11=0,255,255
12=255,0,0
13=255,0,255
14=255,255,0
15=255,255,255
16=0,0,0

[THREADING]
1=1
2=2
3=3
4=4
5=1
6=2
7=3
8=4

[TREADLING]
1=1
2=2
3=3
4=4
5=1
6=2
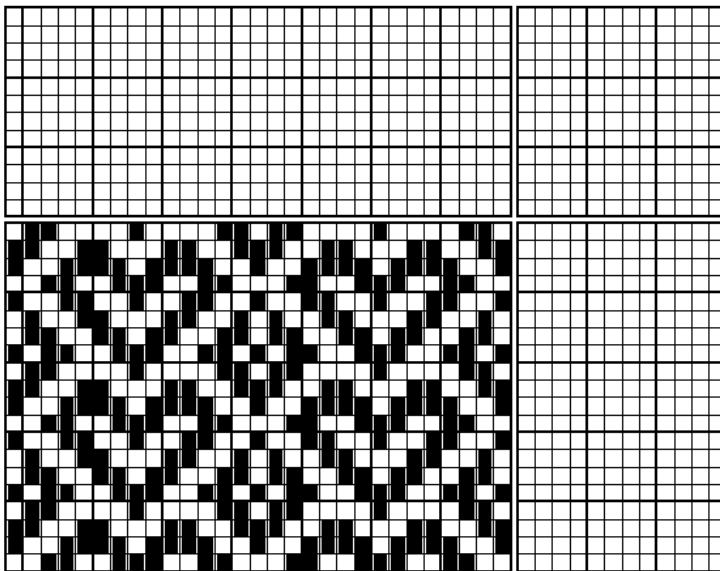
7=3
8=4

[TIEUP]
1=1,2
2=2,3
3=3,4
4=1,4

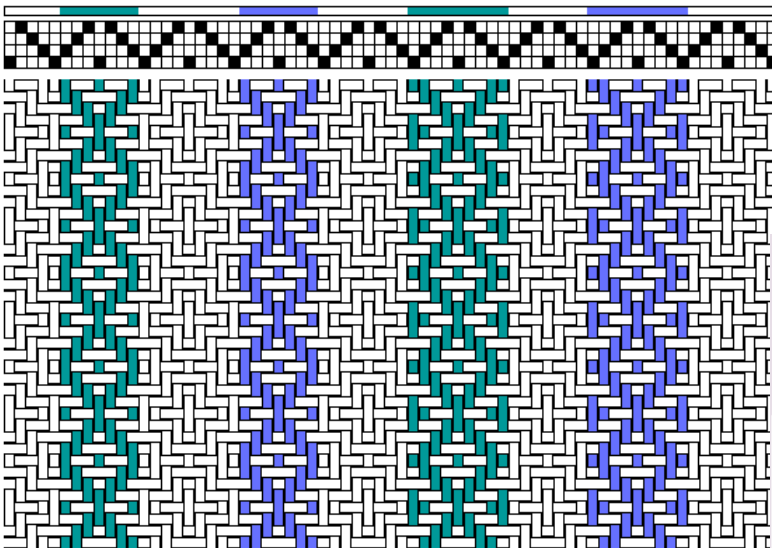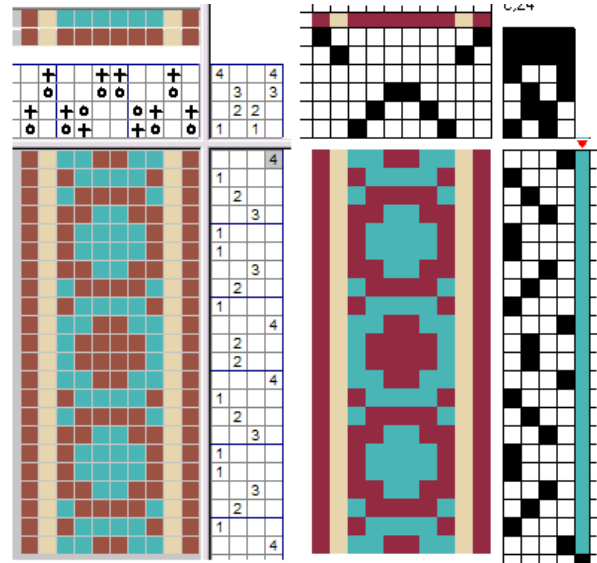## White warp and weft create grid for a class

Thick and thin and grid create design grid
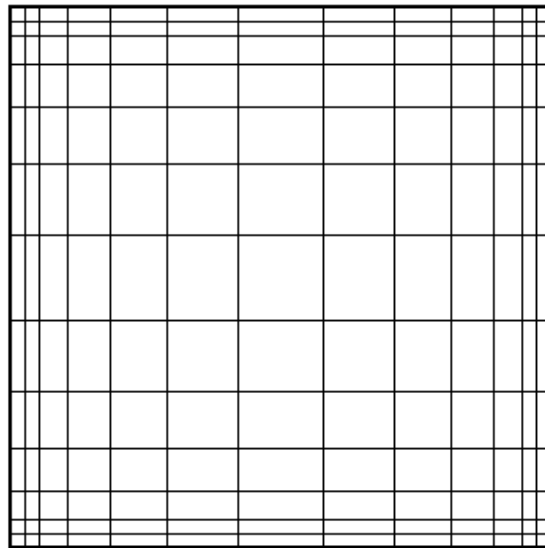
Print with blank data for exam question

PixeLoom and Fiberworks – rep draft

Plan color placement and proportions with computer software.

Heddle and color counts in Fiberworks

| Title and Notes | Heddles used per shaft | Thread counts by color |

Heddle Counts by Shaft Number:

Shaft	1	2	3	4	5	6	7	8
Count	34	34	32	32	33	33	36	36

| Title and Notes | Heddles used per shaft | Thread counts by color |

Color description		Warp	Weft
Thread counts by color in HSB values:			
white	0, 0, 100	135	135
dark violet	288, 100, 60	135	135