11.520: A Workshop on Geographic Information Systems
11.188: Urban Planning and Social Science Laboratory

Notes for Homework #2 & Lab 7 (Raster Analysis)

Homework #2 Questions:

Most questions have concerned (a) computing the numbers for the table of Census data broken down by Town, and (b) using Access to combine the ma00007, mageo, and blkgrp2t.dbf tables in order to get the 'poverty by age' census data by blockgroup (for variable P87).

(a) Filing in the gaps in the Census table: use either MS-Access queries or the Field/summarize tools in ArcMap. Be careful in matching the meaning of a table column to the right one (or more) census variables - e.g., determining which block groups have seniors with known poverty status.

(b) Combining the census tables in Access

- Need to use the MS-Access templates from lab Exercise #5
- When importing the text data (using the st00007 template instructions) be sure to turn off the checkbox about using the first line of the table for field names. (If you happen to check this box, it will stay 'on' and screw up the importing of text files.)
- The 'Expression Builder' is fussy about syntax. Sometimes it will insert <<Expr>> as a place holder for a field name. For example:

```
    blkkey: <<Expr>>
[Mageo]![STATE]+[Mageo]![COUNTY]+[Mageo]![TRACT]+[Mageo]![BLKGRP]
```

  In this case, remove <<Expr>> and all is well!

- Use logrecno to join mageo and ma00007 and use the above 'blkkey' to join to blkgrp2t.dbf as well as to the blockgroup map

Lab Exercise #7 Notes:

The exercise is more or less self-explanatory. To be sure we all have the same general idea of what is going on, I'll demonstrate only the first few steps of each part of the exercise - viz., setting up 100m gridcells for Cambridge and using these to convert the sales89 and cambbgrp layers to rasters.