Report 8042
Final Project
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The main program is run in GIS.cpp from which each line is read from the command script and sent to the CommandProcessor class to parse out the commands and the flags for each line.

From there the process is logged by the Logger class. When we import the data, each line is read and converted to GISRecord Object and is validated for the coordinates, if the record exists in the "world" , we hash it and write it to the db file.

For this project, I could only implement the FeatureName and State Alpha hashing using the elfhash function.

The Bufferpool is also implemented and it is printed from MRU to LRU.

The code is run from the command line as needed.

Here is a sample screenshot from the logs:

```
Course Project for COMP 8042
Student Name: Aadi Bisht, Student Id: A01053490
Begin of GIS Program log:
dbFile: db.txt
script: script01.txt
log:    log01.txt
; Script 1
;
; Testing using a small dataset
;
; Specify boundaries of coordinate space:
;
Command 2:
------------------------------------------------------------------------------------
;
; Import the dataset [the address here is a relative address]
Imported Features by name: 63
Longest probe sequence:   4
Imported Locations:63Command 3:
------------------------------------------------------------------------------------
;
; Lets visualize our already imported geographical data [this is an optional command]
Command 4:
------------------------------------------------------------------------------------
;
; Also lets see what is inside name and coordinate indices
Command 5: 'Quad' command not implemented.\n\n
------------------------------------------------------------------------------------
Command 6: Format of display is
Slot number: data record
Current table size is 1024
Number of elements in table is 63

33: [Ginseng Mountain:VA, [13]]
49: [Peck Run:VA, [29]]
65: [Clover Creek:VA, [45]]
81: [Forks of Waters:VA, [11]]
82: [Highland Wildlife Management Area:VA, [17]]
97: [Trimble Knob:VA, [53]]
113: [Buck Hill:VA, [3]]
129: [Bluegrass Valley:VA, [2]]
130: [Town of Monterey:VA, [62]]
161: [Hupman Valley:VA, [19]]
162: [New Salem Church:VA, [28]]
193: [Hightown Church:VA, [18]]
209: [Doe Hill:VA, [46]]
225: [Barren Rock:VA, [30]]
241: [Union Chapel:VA, [38]]
242: [Monterey:VA, [54]]
273: [Hannah Field Airport:VA, [43]]
305: [Hamilton Chapel:VA, [15]]
306: [Thorny Bottom Church:VA, [37]]
309: [Trimble:VA, [52]]
321: [Blue Grass School (historical):VA, [56]]
337: [Claylick Hollow:VA, [7]]
338: [Lantz Mountain:VA, [22]]
341: [Sounding Knob:VA, [51]]
353: [Central Church:VA, [6]]
354: [Wooden Run:VA, [42]]
369: [Jack Mountain:VA, [20]]
401: [Southall Chapel:VA, [34]]
402: [Vance Hollow:VA, [39]]
```