|  |  |  |  |
| --- | --- | --- | --- |
| Menu Options | Input (KEY) | Output | Remarks |
| L – List  U – unsorted | None | List printed in order of hash table |  |
| L – List  Q – as a tree (ID) | None | Indented List |  |
| L – List  T - as a tree (state) | None | Indented List |  |
| H - Help | None | Helper for List menu |  |
| E - Exit submenu | None | Return to main menu |  |
| S - Statistics | None | Display total nodes, collisions, load factor |  |
| H - Help | None | Helper for main menu |  |
| F – Search  P – by ID | absc | Not found |  |
| F – Search  P – by ID | 2793 | 2793 FL 6/12/2016 49 Other M | Primary key - only one incident |
| F – Search  S – by State | PA | 1392 PA 6/7/2017 3 White M 4023 PA 3/9/2016 6 Unknown M  4268 PA 3/9/2016 5 Unknown M | Secondary key - multiple incidents |
| E - Exit submenu | None | Return to main menu |  |
| H - Help | None | Helper for main menu |  |
| A – Insert event | ID: (enter) ID: abcdef  ID: 5333 State: x1 State: xex  State: XX Date: // Date:0/1/00 Date: 10/ab/1000 Date: 1/1/1000 Fatalities: (enter) Fatalities: a0 Fatalities: 0 Race: 0 Race: Other Gender: L Gender: U | Doesn’t accept invalid inputs | Insert a synonym |
| S - Statistics | None | Display total nodes, collisions, load factor |  |
| L- List  U - Hash List | None | Display updated hash list |  |
| E - Exit | None | Exit submenu |  |
| D – Delete event | 5000 | Not found |  |
| D - Delete event | 3121 | Deleted | Delete the root of the ID tree |
| D – Delete event | 4333 | Deleted | Delete a synonym |
| L – List  P – sorted by ID | None | Sorted list as table | To show successful deletion in ID tree |
| L - List  S - sorted by state | None | Sorted list as table | To show successful deletion in State tree |
| L - List  U - Hash List | None | List printed in order of hash table | To show successful deletion in hash table |
| E - Exit | None | Exit submenu |  |
| S - Statistics | None | Display total nodes, collisions, load factor | To show number of nodes and collisions reduced |
| W - Write to File | None | Display confirmation | Writes data to newdata.txt |
| E - Exit | None | Exit message displayed |  |