```cpp
1   /*
2   Course: Hardware oriented programming
3   Assignment: 11
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5   Student ID: s224948
6   */
7
8   #include "database.h"
9   #define DATABASE_SIZE 10
10
11  int main(void)
12  {
13          size_t selectVar = 0;
14          size_t temp;
15          Person person;
16          char fileName[MAX_NAME_LENGTH];
17          int sorted = 1;
18          FILE *fPtr;
19
20          puts("************************");
21          puts("Welcome to Assignment 11");
22          puts("************************");
23          puts("");
24
25          printf("Enter SCV File Name: ");
26          scanf("%s", fileName);
27
28          // Check if file can be opened.
29          fPtr = fopen(fileName,"r");
30          if (fPtr == NULL)
31          {
32                  puts("File could not be opened.");
33                  puts("Closing program...");
34                  exit(1);
35          }
36          else{
37                  fclose(fPtr);
38          }
39
40          // load and sort SCV file
41          printf("Loading and sorting %s ...\n", fileName);
42          DataBase database;
43          database.setSize(DATABASE_SIZE);
44          database.loadScvFile(fileName);
45          database.bubbleSortPhoneNumber();
46
47          while (selectVar != 6)
48          {
49                  printf("\n1: View Database.\n2: Add Person.\n3: Delete Person.\n4:
    Search on Phone Number.\n5: Save to SCV File.\n6: Close Program.\nPlease Choose
    Option: ");
50                  scanf("%lu", &selectVar);
51                  getchar();
52
53                  switch (selectVar)
54                  {
55                          case 1:
56                          {
57                                  database.view();
58                                  break;
59                          }
```

```cpp
60                                    case 2:
61                                    {
62                                            puts("");
63                                            database.addPerson();
64                                            sorted = 0;
65                                            break;
66                                    }
67                                    case 3:
68                                    {
69                                            puts("");
70                                            printf("Enter entry number to delete: ");
71                                            scanf("%lu",&temp);
72                                            getchar();
73                                            database.deletePerson(temp);
74                                            break;
75                                    }
76                                    case 4:
77                                    {
78                                            if (sorted == 0)
79                                            {
80                                                    database.bubbleSortPhoneNumber();
81                                                    sorted = 1;
82                                            }
83                                            puts("");
84                                            printf("Enter Phone Number: ");
85                                            scanf("%lu", &temp);
86                                            getchar();
87                                            long res = database.searchOnPhoneNumber(temp);
88                                            if (res == -1)
89                                            {
90                                                    puts("No Match Found.");
91                                                    break;
92                                            }
93                                            else
94                                            {
95                                                    puts("Match Found:");
96                                                    person = database.getEntry((size_t)res);
97                                                    person.view();
98                                                    break;
99                                            }
100                                   }
101                                   case 5:
102                                   {
103                                           puts("");
104                                           database.saveToScv();
105                                           break;
106                                   }
107                                   default:
108                                           break;
109                           }
110                   }
111
112   puts("\nClosing program...");
113   }
```