

Sample Run

```
Programmer:      Mohamed Kaid
Course:          COSC 311, W '22
Project:         2
Due date:        2-17-22
Welcome!!
1- Create a random-access file
2- Display a random-access file
3- Build the index
4- Display the index
5- Retrieve a record
6- Modify a record
7- Add a new record
8- Delete a record
9- Exit
Choice:
```

Figure 1 Menu

```
Choice: 1
Cerating new Random File
Enter an Input File: students.txt
Enter an output file: dBase
Data sent to File
```

Figure 2 Choice 1

```
Choice: 2
Enter Random Access File Name: dBase
Display Records
1.)Tom           Wiely           1234           3.76
2.)Mike          Johnson          1111           2.78
3.)Alex          Shafer           3333           4.0
4.)Nancy         Koffman          4444           3.56
5.)Karen         Thomson          2222           3.2

What would you like to do next:
M: to return to main menu
N: for next screen
A: to display all
Choice: a
6.)Sara          Dorthy           9999           1.79
7.)Adam          Nelson            7777           2.7
8.)Kate          Peterson          6666           3.5
9.)Carla         Howard            3325           3.9
10.)Ben          Jones             5555           2.42
11.)Dan          Fuhr              1156           3.97
File done
```

Figure 3 Choice 2

```
Choice: 3
Enter a database name: dBase

DONE
```

Figure 4 Choice 3

```
Choice: 4
Enter the starting ID or -1 for the entire index: -1
(1111,1)
(1156,10)
(1234,0)
(2222,4)
(3325,8)
(3333,2)
(4444,3)
(5555,9)
(6666,7)
(7777,6)
(9999,5)
1- Create a random-access file
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7- Add a new record
8- Delete a record
9- Exit
Choice: 4
Enter the starting ID or -1 for the entire index: 5555
(5555,9)
(6666,7)
(7777,6)
(9999,5)
```

Figure 5 Choice 4

```
Choice: 5
Enter student ID: 6666
| Kate                Peterson                6666                3.5
```

Figure 6 Choice 5

```
Choice: 6
Enter student ID: 6666
Kate                Peterson                6666        3.5
1- Change the first name:
2- Change the last name:
3- Change GPA:
4- Done:
Choice: 1
Enter Student First Name:
Mohamed
1- Change the first name:
2- Change the last name:
3- Change GPA:
4- Done:
Choice: 2
Enter Student Last Name:
Kaid
1- Change the first name:
2- Change the last name:
3- Change GPA:
4- Done:
Choice: 3
Enter Student GPA:
3.6
1- Change the first name:
2- Change the last name:
3- Change GPA:
4- Done:
Choice: 4
File Modified
```

Figure 7 Choice 6

```
Choice: 7
Adding a new Record
Enter New Student's First Name: Moe
Enter New Student's Last Name: Kaid
Enter Student ID: 9090
Enter Student GPA: 3.9
Student has been added

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9- Exit
Choice: 4
Enter the starting ID or -1 for the entire index: -1
(1111,1)
(1156,10)
(1234,0)
(2222,4)
(3325,8)
(3333,2)
(4444,3)
(5555,9)
(6666,7)
(7777,6)
(9090,11) ←
(9999,5)
```

Figure 8 Choice 7

```
Choice: 8
Enter student ID: 4444
Nancy                Koffman                4444                3.56
Record Deleted

1- Create a random-access file
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7- Add a new record
8- Delete a record
9- Exit
Choice: 4
Enter the starting ID or -1 for the entire index: -1
(1111,1)
(1156,10)
(1234,0)
(2222,4)
(3325,8)
(3333,2)
(5555,9)
(6666,7)
(7777,6)
(9999,5)
```

Figure 9 Choice 8

```
1- Create a random-access file
2- Display a random-access file
3- Build the index
4- Display the index
5- Retrieve a record
6- Modify a record
7- Add a new record
8- Delete a record
9- Exit
Choice: 9
Thank you!! Have a nice day
```

Figure 10 Choice 9