

```
1 //Gabryella Orrego
2
3
4
5 import java.io.*;
6 import java.util.Scanner;
7
8
9 public class Lab7
10 {
11     public static void main(String[]args) throws IOException
12     {
13         //Variables
14         int i, choice;
15
16         int row, nRows;
17
18         int idFind;
19
20         int sum;
21
22         float avg;
23
24         String nameFind;
25
26         //Max Rows
27         final int maxRows=35;
28
29         int [] idNum= new int[maxRows];
30         int [] year= new int[maxRows];
31         int [] yrPlayed= new int[maxRows];
32         float [] bAvg= new float[maxRows];
33         String [] name= new String[maxRows];
34         String [] teamName= new String[maxRows];
35         //File start
36         File myFile = new File("src/Baseball.dat");
37         Scanner inFile = new Scanner(myFile);
38         Scanner kb = new Scanner(System.in);
39         //Random rn= new Random();
40
41         i=0;
42         while(inFile.hasNext())
43         {
44             idNum[i] = inFile.nextInt();
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45     inFile.nextLine();
46     name[i] = inFile.nextLine().trim();
47     year[i] = inFile.nextInt();
48     inFile.nextLine();
49     teamName[i] = inFile.nextLine().trim();
50     yrPlayed[i]= inFile.nextInt();
51     bAvg[i]= inFile.nextFloat();
52
53     i++;
54 }//End of While inFile.hasNext
55 nRows=i;
56
57
58 do
59 {
60     lines(60);
61     lines(60);
62     System.out.println("1: Average Years Played");
63     System.out.println("2: Table Printed Sorted by Team");
64     System.out.println("3: Table Printed Sorted by Batting Average(descending)");
65     System.out.println("4: Search by Name");
66     System.out.println("5: Search by Id Number");
67     System.out.println("6: Quit");
68     lines(60);
69     lines (60);
70
71     choice=kb.nextInt();
72
73     switch (choice)
74     {
75         case 1: sum=0;
76                 avg=0;
77                 lines(120);
78                 lines(120);
79                 System.out.printf("%-25s%15s%15s%15s%25s%20s\n","Player Name", "Player Id #","Year Inducted", "Team
Name", "Years Played", "Batting Average");
80                 for(i=0;i<nRows;i++)
81                 {
82                     sum=yrPlayed[i]+sum;
83                     avg=(float)sum/nRows;
84                     System.out.printf("%-25s %8d %15d %25s %15d %15.2f\n", name[i], idNum[i], year[i], teamName[i],
yrPlayed[i], bAvg[i]);

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85         }
86         lines(120);
87         System.out.printf("Average:%85s",String.format("%.2f",avg));
88         System.out.println("");
89         lines(120);
90         lines(120);
91
92
93         break;          //Average years played
94     case 2:
95         for(row=0; row<nRows-1; row++)
96         {
97             for(i=row+1; i<nRows; i++)
98             {
99                 if(teamName[i].compareToIgnoreCase(teamName[row])<0)
100                 {
101                     swap(bAvg,row,i);
102                     swap(name,row,i);
103                     swap(idNum,row,i);
104                     swap(year,row,i);
105                     swap(teamName,row,i);
106                     swap(yrPlayed,row,i);
107                 }
108             }
109             }//1st For
110             lines(120);
111             lines(120);
112             System.out.printf("%-25s%15s%15s%15s%25s%20s\n","Player Name", "Player Id #","Year Inducted", "Team
Name", "Years Played","Batting Average");
113             for(i=0;i<nRows;i++)
114                 System.out.printf("%-25s %8d %15d %25s %15d %15.2f\n", name[i], idNum[i], year[i], teamName[i],
yrPlayed[i], bAvg[i]);
115             lines(120);
116             lines(120);
117             break;          //Table print by team
118     case 3:
119         for(row=0; row<nRows-1; row++)
120         {
121             for(i=row+1; i<nRows; i++)
122             {
123                 if(bAvg[i]> bAvg[row])
124                 {

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125             swap(bAvg,row,i);
126             swap(name,row,i);
127             swap(idNum,row,i);
128             swap(year,row,i);
129             swap(teamName,row,i);
130             swap(yrPlayed,row,i);
131         } //end of if
132     } //Second for
133 } //1st For
134 lines(120);
135 lines(120);
136 System.out.printf("%-25s%15s%15s%15s%25s%20s\n","Player Name", "Player Id #","Year Inducted", "Team
Name", "Years Played","Batting Average");
137     for(i=0;i<nRows;i++)
138         System.out.printf("%-25s %8d %15d %25s %15d %15.2f\n", name[i], idNum[i], year[i], teamName[i],
yrPlayed[i], bAvg[i]);
139         lines(120);
140         lines(120);
141         break; //Table print batting average
142 case 4: kb.nextLine();
143         System.out.println("Enter Player Name");
144         nameFind= kb.nextLine().trim();
145
146         lines(120);
147         lines (120);
148         for(i=0; i<nRows; i++)
149         {
150             if(name[i].equalsIgnoreCase(nameFind))
151             {
152                 System.out.printf("%-25s%15s%15s%15s%25s%20s\n","Player Name", "Player Id #","Year Inducted", "Team
Name", "Years Played","Batting Average");
153                 System.out.printf("%-25s %8d %15d %25s %15d %15.2f\n", name[i], idNum[i], year[i], teamName[i],
yrPlayed[i], bAvg[i]);
154             }
155         }
156         lines(120);
157         lines(120);
158         break; //Search by Name
159 case 5: System.out.println("Enter Player ID Number");
160         idFind=kb.nextInt();
161
162         lines(120);

```

```

163         lines(120);
164         for(i=0; i<nRows; i++)
165         {
166             if(idNum[i]==(idFind))
167             {
168                 System.out.printf("%-25s%15s%15s%25s\n", "Player Name", "Player Id #", "Year Inducted", "Team
Name", "Years Played", "Batting Average");
169                 System.out.printf("%-25s %8d %15d %25s %15d %15.2f\n", name[i], idNum[i], year[i], teamName[i],
yrPlayed[i], bAvg[i]);
170             }
171         } //end of for
172         lines(120);
173         lines(120);
174         break; //Search by ID#
175     }
176 }
177 }while(choice !=6); //End of Do Prompt Board
178
179 inFile.close();
180 kb.close();
181 } //Main End
182
183
184
185
186 public static void lines(int nlines)
187 {
188     int i;
189     for (i=1; i<=nlines; i++)
190         System.out.print('_');
191     System.out.println("");
192 }
193
194 public static void swap (int [] a, int i, int j)
195 {
196     int temp;
197     temp=a[i];
198     a[i]=a[j];
199     a[j]=temp;
200 }
201
202 public static void swap (float [] a, int i, int j)

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203     {
204         float temp;
205         temp=a[i];
206         a[i]=a[j];
207         a[j]=temp;
208     }
209
210     public static void swap (String [] a, int i, int j)
211     {
212         String temp;
213         temp=a[i];
214         a[i]=a[j];
215         a[j]=temp;
216     }
217
218
219 }                                     //Class End
220
221 /*
222 //Gabryella Orrego
223 //Lab 7
224 //Arrays
225
226
227 1: Average Years Played
228 2: Table Printed Sorted by Team
229 3: Table Printed Sorted by Batting Average(descending)
230 4: Search by Name
231 5: Search by Id Number
232 6: Quit
233
234
235 1
236
237

```

Player Name	Player Id #	Year Inducted	Team Name	Years Played	Batting Average
Hank Aaron	1	1982	Atlanta	23	0.31
Pete Alexander	2	1938	Philadelphia	20	0.21
Roberto Alomar	3	2011	Mets	17	0.30
Walter Alston	4	1983	St. Louis	1	0.00
Cap Anson	6	1939	Chicago Cubs	27	0.33
Luis Aparicio	7	1984	Boston	18	0.26

245	<u>Luke Appling</u>	8	1964	<u>Chicago White Sox</u>	20	0.31
246	<u>Richie Ashburn</u>	9	1995	<u>Philadelphia</u>	15	0.31
247	<u>Earl Averill</u>	10	1975	<u>Cleveland</u>	13	0.32
248	<u>Jeff Bagwell</u>	11	2017	<u>Houston</u>	15	0.30
249	<u>Harold Baines</u>	12	2019	<u>Chicago White Sox</u>	22	0.29
250	Home Run Baker	13	1955	<u>Yankees</u>	13	0.31
251	<u>Ernie Banks</u>	15	1977	<u>Chicago Cubs</u>	19	0.27
252	<u>Jake Beckley</u>	16	1971	<u>Pittsburg</u>	20	0.31
253	<u>Johnny Bench</u>	17	1989	<u>Cincinnati</u>	17	0.27
254	<u>Yogi Berra</u>	19	1972	<u>Yankees</u>	19	0.28
255	<u>Craig Biggio</u>	20	2015	<u>Houston</u>	20	0.28
256	<u>Bert Blyleven</u>	21	2011	<u>Minnesota</u>	22	0.13
257	<u>Wade Boggs</u>	22	2005	<u>Boston</u>	18	0.33
258	<u>Jim Bottomley</u>	23	1974	<u>St. Louis</u>	16	0.31
259	<u>Lou Boudreau</u>	24	1970	<u>Cleveland</u>	15	0.29
260	<u>Roger Bresnahan</u>	25	1945	<u>Chicago Cubs</u>	17	0.28
261	<u>George Brett</u>	26	1999	<u>Kansas City</u>	21	0.31
262	<u>Dan Brouthers</u>	28	1945	<u>Buffalo</u>	19	0.34
263	<u>Mordecai Brown</u>	29	1949	<u>Chicago Cubs</u>	14	0.21
264	<u>Willard Brown</u>	30	2006	<u>St. Louis</u>	1	0.18
265	<u>Jim Bunning</u>	31	1996	<u>Detroit</u>	17	0.17
266	<u>Jesse Burkett</u>	32	1946	<u>Cleveland</u>	16	0.34
267	<u>Roy Campanella</u>	33	1969	<u>Brooklyn Dodgers</u>	10	0.28
268	<u>Rod Carew</u>	34	1991	<u>Angels</u>	19	0.33
269	<u>Max Carey</u>	35	1961	<u>Brooklyn Dodgers</u>	20	0.28

270

271 Average: 16.90

272

273

274

275

276 1: Average Years Played

277 2: Table Printed Sorted by Team

278 3: Table Printed Sorted by Batting Average(descending)

279 4: Search by Name

280 5: Search by Id Number

281 6: Quit

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283

284 2

285

286

Player Name	Player Id #	Year Inducted	Team Name	Years Played	Batting Average
Rod Carew	34	1991	Angels	19	0.33
Hank Aaron	1	1982	Atlanta	23	0.31
Wade Boggs	22	2005	Boston	18	0.33
Luis Aparicio	7	1984	Boston	18	0.26
Roy Campanella	33	1969	Brooklyn Dodgers	10	0.28
Max Carey	35	1961	Brooklyn Dodgers	20	0.28
Dan Brouthers	28	1945	Buffalo	19	0.34
Mordecai Brown	29	1949	Chicago Cubs	14	0.21
Cap Anson	6	1939	Chicago Cubs	27	0.33
Roger Bresnahan	25	1945	Chicago Cubs	17	0.28
Ernie Banks	15	1977	Chicago Cubs	19	0.27
Luke Appling	8	1964	Chicago White Sox	20	0.31
Harold Baines	12	2019	Chicago White Sox	22	0.29
Johnny Bench	17	1989	Cincinnati	17	0.27
Lou Boudreau	24	1970	Cleveland	15	0.29
Earl Averill	10	1975	Cleveland	13	0.32
Jesse Burkett	32	1946	Cleveland	16	0.34
Jim Bunning	31	1996	Detroit	17	0.17
Jeff Bagwell	11	2017	Houston	15	0.30
Craig Biggio	20	2015	Houston	20	0.28
George Brett	26	1999	Kansas City	21	0.31
Roberto Alomar	3	2011	Mets	17	0.30
Bert Blyleven	21	2011	Minnesota	22	0.13
Pete Alexander	2	1938	Philadelphia	20	0.21
Richie Ashburn	9	1995	Philadelphia	15	0.31
Jake Beckley	16	1971	Pittsburg	20	0.31
Willard Brown	30	2006	St. Louis	1	0.18
Jim Bottomley	23	1974	St. Louis	16	0.31
Walter Alston	4	1983	St. Louis	1	0.00
Yogi Berra	19	1972	Yankees	19	0.28
Home Run Baker	13	1955	Yankees	13	0.31

319

320

321

322

323 1: Average Years Played

324 2: Table Printed Sorted by Team

325 3: Table Printed Sorted by Batting Average(descending)

326 4: Search by Name

327 5: Search by Id Number

328 6: Quit


```
329 _____
330 _____
331 5
332 Enter Player ID Number
333 22
334 _____
335 _____
336 Player Name           Player Id #   Year Inducted   Team Name       Years Played   Batting Average
337 Wade Boggs         22           2005           Boston         18             0.33
338 _____
339 _____
340 _____
341 _____
342 1: Average Years Played
343 2: Table Printed Sorted by Team
344 3: Table Printed Sorted by Batting Average(descending)
345 4: Search by Name
346 5: Search by Id Number
347 6: Quit
348 _____
349 _____
350 _____
351 */
```