

```
1 //Gabryella Orrego
2
3 import java.io.*;
4 import java.util.Scanner;
5
6
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
36         //File start
37         File myFile = new File("src/Baseball.dat");
38         Scanner inFile = new Scanner(myFile);
39         Scanner kb = new Scanner(System.in);
40
41         int i=0;
42         while(inFile.hasNext())
43         {
44             idNum[i] = inFile.nextInt();
```

```
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]);
```

```
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              {
```

```
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
137     Name", "Years Played", "Batting Average");
138     for(i=0; i<nRows; i++)
139         System.out.printf("%-25s %8d %15d %25s %15d %15.2f\n", name[i], idNum[i], year[i], teamName[i],
140     yrPlayed[i], bAvg[i]);
141     Lines(120);
142     Lines(120);
143     break; //Table print batting average
144 case 4: kb.nextLine();
145     System.out.println("Enter Player Name");
146     nameFind= kb.nextLine().trim();
147
148     Lines(120);
149     Lines (120);
150     for(i=0; i<nRows; i++)
151     {
152         if(name[i].equalsIgnoreCase(nameFind))
153         {
154             System.out.printf("%-25s%15s%15s%15s%25s%20s\n", "Player Name", "Player Id #", "Year Inducted", "Team
155             Name", "Years Played", "Batting Average");
156             System.out.printf("%-25s %8d %15d %25s %15d %15.2f\n", name[i], idNum[i], year[i], teamName[i],
157             yrPlayed[i], bAvg[i]);
158         }
159     }
160     Lines(120);
161     Lines(120);
162     break; //Search by Name
163 case 5: System.out.println("Enter Player ID Number");
164     idFind=kb.nextInt();
165
166     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%15s%25s%20s\n", "Player Name", "Player Id #", "Year Inducted", "Team
169                     Name", "Years Played", "Batting Average");
170                     System.out.printf("%-25s %8d %15d %25s %15d %15.2f\n", name[i], idNum[i], year[i], teamName[i],
171                     yrPlayed[i], bAvg[i]);
172                 }
173             } //end of for
174             lines(120);
175             lines(120);
176             break;      //Search by ID#
177         }
178     }while(choice !=6); //End of Do Prompt Board
179
180     inFile.close();
181     kb.close();
182 } //Main End
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)
```

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

245 Luke Appling	8	1964	Chicago White Sox	20	0.31
246 Richie Ashburn	9	1995	Philadelphia	15	0.31
247 Earl Averill	10	1975	Cleveland	13	0.32
248 Jeff Bagwell	11	2017	Houston	15	0.30
249 Harold Baines	12	2019	Chicago White Sox	22	0.29
250 Home Run Baker	13	1955	Yankees	13	0.31
251 Ernie Banks	15	1977	Chicago Cubs	19	0.27
252 Jake Beckley	16	1971	Pittsburg	20	0.31
253 Johnny Bench	17	1989	Cincinnati	17	0.27
254 Yogi Berra	19	1972	Yankees	19	0.28
255 Craig Biggio	20	2015	Houston	20	0.28
256 Bert Blyleven	21	2011	Minnesota	22	0.13
257 Wade Boggs	22	2005	Boston	18	0.33
258 Jim Bottomley	23	1974	St. Louis	16	0.31
259 Lou Boudreau	24	1970	Cleveland	15	0.29
260 Roger Bresnahan	25	1945	Chicago Cubs	17	0.28
261 George Brett	26	1999	Kansas City	21	0.31
262 Dan Brouthers	28	1945	Buffalo	19	0.34
263 Mordecai Brown	29	1949	Chicago Cubs	14	0.21
264 Willard Brown	30	2006	St. Louis	1	0.18
265 Jim Bunning	31	1996	Detroit	17	0.17
266 Jesse Burkett	32	1946	Cleveland	16	0.34
267 Roy Campanella	33	1969	Brooklyn Dodgers	10	0.28
268 Rod Carew	34	1991	Angels	19	0.33
269 Max Carey	35	1961	Brooklyn Dodgers	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  
 282  
 283  
 284 2  
 285  
 286

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

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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

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329

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330

---

331 5

---

332 Enter Player ID Number

---

333 22

---

334

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335

---

336 Player Name          Player Id #  Year Inducted      Team Name      Years Played    Batting Average

---

337 Wade Boggs           22            2005             Boston          18              0.33

---

338

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339

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340

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341

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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

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348

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349

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350

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351 */
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