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#Dear Student,
#
#Welcome to the world of Basketball Data!
#Instructions for this dataset:
#
# Simply copy ALL the lines in this script by pressing
# CTRL+A on Windows or CMND+A on Mac and run the Jupyter cell
# Once you have executed the commands the following objects
# will be created:
# Matrices:
# - Salary
# - Games
# - MinutesPlayed
# - FieldGoals
# - FieldGoalAttempts
# - Points
# Lists:
# - Players
# - Seasons
# Dictionaries:
# - Sdict
# - Pdict
#We will understand these inside the course.
#
#Sincerely,
#Kirill Eremenko
#www.superdatascience.com

#Copyright: These datasets were prepared using publicly available data.
# However, theses scripts are subject to Copyright Laws.
# If you wish to use these Python scripts outside of the Python Programming Course
# by Kirill Eremenko, you may do so by referencing www.superdatascience.com in your
work.

#Comments:
#Seasons are labeled based on the first year in the season
#E.g. the 2012-2013 season is preseneted as simply 2012

#Notes and Corrections to the data:
#Kevin Durant: 2006 - College Data Used
#Kevin Durant: 2005 - Proxied With 2006 Data
#Derrick Rose: 2012 - Did Not Play
#Derrick Rose: 2007 - College Data Used
#Derrick Rose: 2006 - Proxied With 2007 Data
#Derrick Rose: 2005 - Proxied With 2007 Data

#Import numpy
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import numpy as np

#Seasons
Seasons = ["2005","2006","2007","2008","2009","2010","2011","2012","2013","2014"]
Sdict =
{"2005":0,"2006":1,"2007":2,"2008":3,"2009":4,"2010":5,"2011":6,"2012":7,"2013":8,"2014":9}

#Players
Players =
["KobeBryant","JoeJohnson","LeBronJames","CarmeloAnthony","DwightHoward","ChrisBosh","ChrisPaul","KevinDurant","DerrickRose","DwayneWade"]
Pdict =
{"KobeBryant":0,"JoeJohnson":1,"LeBronJames":2,"CarmeloAnthony":3,"DwightHoward":4,"ChrisBosh":5,"ChrisPaul":6,"KevinDurant":7,"DerrickRose":8,"DwayneWade":9}

#Salaries
KobeBryant_Salary =
[15946875,17718750,19490625,21262500,23034375,24806250,25244493,27849149,30453805,23500000]
JoeJohnson_Salary =
[12000000,12744189,13488377,14232567,14976754,16324500,18038573,19752645,21466718,23180790]
LeBronJames_Salary =
[4621800,5828090,13041250,14410581,15779912,14500000,16022500,17545000,19067500,20644400]
CarmeloAnthony_Salary =
[3713640,4694041,13041250,14410581,15779912,17149243,18518574,19450000,22407474,22458000]
DwightHoward_Salary =
[4493160,4806720,6061274,13758000,15202590,16647180,18091770,19536360,20513178,21436271]
ChrisBosh_Salary =
[3348000,4235220,12455000,14410581,15779912,14500000,16022500,17545000,19067500,20644400]
ChrisPaul_Salary =
[3144240,3380160,3615960,4574189,13520500,14940153,16359805,17779458,18668431,20068563]
KevinDurant_Salary =
[0,0,4171200,4484040,4796880,6053663,15506632,16669630,17832627,18995624]
DerrickRose_Salary =
[0,0,0,4822800,5184480,5546160,6993708,16402500,17632688,18862875]
DwayneWade_Salary =
[3031920,3841443,13041250,14410581,15779912,14200000,15691000,17182000,18673000,15000000]

#Matrix

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Salary = np.array([KobeBryant_Salary, JoeJohnson_Salary, LeBronJames_Salary, CarmeloAnthony_Salary, DwightHoward_Salary, ChrisBosh_Salary, ChrisPaul_Salary, KevinDurant_Salary, DerrickRose_Salary, DwayneWade_Salary])
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#Games
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```
KobeBryant_G = [80,77,82,82,73,82,58,78,6,35]  
JoeJohnson_G = [82,57,82,79,76,72,60,72,79,80]  
LeBronJames_G = [79,78,75,81,76,79,62,76,77,69]  
CarmeloAnthony_G = [80,65,77,66,69,77,55,67,77,40]  
DwightHoward_G = [82,82,82,79,82,78,54,76,71,41]  
ChrisBosh_G = [70,69,67,77,70,77,57,74,79,44]  
ChrisPaul_G = [78,64,80,78,45,80,60,70,62,82]  
KevinDurant_G = [35,35,80,74,82,78,66,81,81,27]  
DerrickRose_G = [40,40,40,81,78,81,39,0,10,51]  
DwayneWade_G = [75,51,51,79,77,76,49,69,54,62]
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#Matrix
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```
Games = np.array([KobeBryant_G, JoeJohnson_G, LeBronJames_G, CarmeloAnthony_G, DwightHoward_G, ChrisBosh_G, ChrisPaul_G, KevinDurant_G, DerrickRose_G, DwayneWade_G])
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#Minutes Played
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```
KobeBryant_MP = [3277,3140,3192,2960,2835,2779,2232,3013,177,1207]  
JoeJohnson_MP = [3340,2359,3343,3124,2886,2554,2127,2642,2575,2791]  
LeBronJames_MP = [3361,3190,3027,3054,2966,3063,2326,2877,2902,2493]  
CarmeloAnthony_MP = [2941,2486,2806,2277,2634,2751,1876,2482,2982,1428]  
DwightHoward_MP = [3021,3023,3088,2821,2843,2935,2070,2722,2396,1223]  
ChrisBosh_MP = [2751,2658,2425,2928,2526,2795,2007,2454,2531,1556]  
ChrisPaul_MP = [2808,2353,3006,3002,1712,2880,2181,2335,2171,2857]  
KevinDurant_MP = [1255,1255,2768,2885,3239,3038,2546,3119,3122,913]  
DerrickRose_MP = [1168,1168,1168,3000,2871,3026,1375,0,311,1530]  
DwayneWade_MP = [2892,1931,1954,3048,2792,2823,1625,2391,1775,1971]
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#Matrix
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MinutesPlayed = np.array([KobeBryant_MP, JoeJohnson_MP, LeBronJames_MP, CarmeloAnthony_MP, DwightHoward_MP, ChrisBosh_MP, ChrisPaul_MP, KevinDurant_MP, DerrickRose_MP, DwayneWade_MP])
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#Field Goals
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```
KobeBryant_FG = [978,813,775,800,716,740,574,738,31,266]  
JoeJohnson_FG = [632,536,647,620,635,514,423,445,462,446]  
LeBronJames_FG = [875,772,794,789,768,758,621,765,767,624]  
CarmeloAnthony_FG = [756,691,728,535,688,684,441,669,743,358]  
DwightHoward_FG = [468,526,583,560,510,619,416,470,473,251]  
ChrisBosh_FG = [549,543,507,615,600,524,393,485,492,343]  
ChrisPaul_FG = [407,381,630,631,314,430,425,412,406,568]  
KevinDurant_FG = [306,306,587,661,794,711,643,731,849,238]  
DerrickRose_FG = [208,208,208,574,672,711,302,0,58,338]  
DwayneWade_FG = [699,472,439,854,719,692,416,569,415,509]
```

#Matrix

```
FieldGoals = np.array([KobeBryant_FG, JoeJohnson_FG, LeBronJames_FG,  
CarmeloAnthony_FG, DwightHoward_FG, ChrisBosh_FG, ChrisPaul_FG, KevinDurant_FG,  
DerrickRose_FG, DwayneWade_FG])
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#Field Goal Attempts

```
KobeBryant_FGA = [2173,1757,1690,1712,1569,1639,1336,1595,73,713]  
JoeJohnson_FGA = [1395,1139,1497,1420,1386,1161,931,1052,1018,1025]  
LeBronJames_FGA = [1823,1621,1642,1613,1528,1485,1169,1354,1353,1279]  
CarmeloAnthony_FGA = [1572,1453,1481,1207,1502,1503,1025,1489,1643,806]  
DwightHoward_FGA = [881,873,974,979,834,1044,726,813,800,423]  
ChrisBosh_FGA = [1087,1094,1027,1263,1158,1056,807,907,953,745]  
ChrisPaul_FGA = [947,871,1291,1255,637,928,890,856,870,1170]  
KevinDurant_FGA = [647,647,1366,1390,1668,1538,1297,1433,1688,467]  
DerrickRose_FGA = [436,436,436,1208,1373,1597,695,0,164,835]  
DwayneWade_FGA = [1413,962,937,1739,1511,1384,837,1093,761,1084]
```

#Matrix

```
FieldGoalAttempts = np.array([KobeBryant_FGA, JoeJohnson_FGA, LeBronJames_FGA,  
CarmeloAnthony_FGA, DwightHoward_FGA, ChrisBosh_FGA, ChrisPaul_FGA,  
KevinDurant_FGA, DerrickRose_FGA, DwayneWade_FGA])
```

#Points

```
KobeBryant_PTS = [2832,2430,2323,2201,1970,2078,1616,2133,83,782]  
JoeJohnson_PTS = [1653,1426,1779,1688,1619,1312,1129,1170,1245,1154]  
LeBronJames_PTS = [2478,2132,2250,2304,2258,2111,1683,2036,2089,1743]  
CarmeloAnthony_PTS = [2122,1881,1978,1504,1943,1970,1245,1920,2112,966]  
DwightHoward_PTS = [1292,1443,1695,1624,1503,1784,1113,1296,1297,646]  
ChrisBosh_PTS = [1572,1561,1496,1746,1678,1438,1025,1232,1281,928]  
ChrisPaul_PTS = [1258,1104,1684,1781,841,1268,1189,1186,1185,1564]  
KevinDurant_PTS = [903,903,1624,1871,2472,2161,1850,2280,2593,686]  
DerrickRose_PTS = [597,597,597,1361,1619,2026,852,0,159,904]  
DwayneWade_PTS = [2040,1397,1254,2386,2045,1941,1082,1463,1028,1331]
```

#Matrix

```
Points = np.array([KobeBryant_PTS, JoeJohnson_PTS, LeBronJames_PTS,  
CarmeloAnthony_PTS, DwightHoward_PTS, ChrisBosh_PTS, ChrisPaul_PTS,  
KevinDurant_PTS, DerrickRose_PTS, DwayneWade_PTS])
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