

```
1 /Library/Java/JavaVirtualMachines/jdk-15.0.1.jdk/
  Contents/Home/bin/java -javaagent:/Applications/
  IntelliJ IDEA.app/Contents/lib/idea_rt.jar=53320:/
  Applications/IntelliJ IDEA.app/Contents/bin -Dfile.
  encoding=UTF-8 -classpath /Users/muhammadmahmood/
  Documents/libs/opencv.jar:/Users/muhammadmahmood/
  Documents/libs/javacv.jar:/Users/muhammadmahmood/
  Documents/libs/openblas-macosx-x86_64.jar:/Users/
  muhammadmahmood/Documents/libs/opencv-macosx-x86_64
  .jar:/Users/muhammadmahmood/Documents/libs/json-
  simple-1.1.1.jar:/Users/muhammadmahmood/Documents/
  libs/net-datastructures-4-0.jar:/Users/
  muhammadmahmood/Documents/PS4/out/production/PS4
  KevinBaconGame
2 Commands:
3 c <#>: list top (positive number) or bottom (
  negative) <#> centers of the universe, sorted by
  average separation
4 d <low> <high>: list actors sorted by degree, with
  degree between low and high
5 i: list actors with infinite separation from the
  current center
6 p <name>: find path from <name> to current center
  of the universe
7 s <low> <high>: list actors sorted by non-infinite
  separation from the current center, with separation
  between low and high
8 u <name>: make <name> the center of the universe
9 n: print the commands again
10 q: quit game
11 Kevin Bacon is now the center of the acting
  universe, connected to 4/7 actors with average
  separation 1.75
12
13 c r
14 Please insert a number
15 Invalid Command
16 c5
17 Invalid Command
18 c 4
19 This took 0 seconds
20 Top 4 center of the universe sorted by the average
  separation
21 2.000000000000 Dartmouth (Earl thereof)
```

```
22 1.7500000000 Kevin Bacon
23 1.2500000000 Bob
24 1.2500000000 Alice
25 d
26 3
27 d
28 Invalid input
29 d
30 2
31 3
32 List of actors sorted by degree:
33 List of actors with 2 degrees:
34 Kevin Bacon
35 List of actors with 3 degrees:
36 Bob
37 Alice
38 Charlie
39 n
40 Commands:
41 c <#>: list top (positive number) or bottom (
    negative) <#> centers of the universe, sorted by
    average separation
42 d <low> <high>: list actors sorted by degree, with
    degree between low and high
43 i: list actors with infinite separation from the
    current center
44 p <name>: find path from <name> to current center
    of the universe
45 s <low> <high>: list actors sorted by non-infinite
    separation from the current center, with separation
    between low and high
46 u <name>: make <name> the center of the universe
47 n: print the commands again
48 q: quit game
49 i
50 Actors infinite separation from Kevin Bacon
51 Nobody
52 Nobody's Friend
53 p Charlie
54 Charlie's number is 2
55 Charlie was in [C movie] with Bob
56 Bob was in [A movie] with Kevin Bacon
57 p h
58 Name not found, please input a valid name
```

```
59 Charlie
60 Charlie's number is 2
61 Charlie was in [C movie] with Bob
62 Bob was in [A movie] with Kevin Bacon
63 s
64 3
65 k
66 Invalid Input
67 s
68 1
69 3
70 Here are actors sorted by 1 to 3 separations from
    Kevin Bacon
71 1 separations from Kevin Bacon:
72 Bob
73 Alice
74 2 separations from Kevin Bacon:
75 Charlie
76 3 separations from Kevin Bacon:
77 Dartmouth (Earl thereof)
78 n
79 Commands:
80 c <#>: list top (positive number) or bottom (
    negative) <#> centers of the universe, sorted by
    average separation
81 d <low> <high>: list actors sorted by degree, with
    degree between low and high
82 i: list actors with infinite separation from the
    current center
83 p <name>: find path from <name> to current center
    of the universe
84 s <low> <high>: list actors sorted by non-infinite
    separation from the current center, with
    separation between low and high
85 u <name>: make <name> the center of the universe
86 n: print the commands again
87 q: quit game
88 u Charlie
89 Charlie is now the center of the acting universe,
    connected to 4/7 actors with average separation 1.
    25
90 s
91 1
92 2
```

```
93 Here are actors sorted by 1 to 2 separations from
    Charlie
94 1 separations from Charlie:
95 Bob
96 Alice
97 Dartmouth (Earl thereof)
98 2 separations from Charlie:
99 Kevin Bacon
100 q
101 Thanks for playing!!
102
103 Process finished with exit code 0
104
```