```
 1 C:\Users\sebas\.jdks\openjdk-14.0.2\bin\java.exe -
   agentlib:jdwp=transport=dt_socket,address=127.0.0.1:
   52742,suspend=y,server=n -javaagent:C:\Users\sebas\
   AppData\Local\JetBrains\IdeaIC2020.2\captureAgent\
   debugger-agent.jar -Dfile.encoding=UTF-8 -classpath "
   C:\Users\sebas\Documents\GitHub\SchoolWorkYear2\Adv
   Data Structures\Assignments\Assign_2\out\production\
   Assign_2;C:\Program Files\JetBrains\IntelliJ IDEA
   Community Edition 2020.2.1\lib\idea_rt.jar" com.
   Assign_2.VirusTree
 2 Connected to the target VM, address: '127.0.0.1:52742
   ', transport: 'socket'
 3 OpenJDK 64-Bit Server VM warning: Sharing is only
   supported for boot loader classes because bootstrap
   classpath has been appended
 4 Input file name
 5 tree_of_virus_input.txt
 6 Virus:  -> DNA Virus -> RNA Virus
 7  -> Flaviviridae -> Filoviridae -> Coronaviridae
 8  -> Flavivirus -> Hepacivirus
 9  -> Cuevavirus -> Dianlovirus -> Ebolavirus ->
   Marburgvirus
10  -> Alphacoronavirus -> Betacoronavirus ->
   Deltacoronavirus -> Gammacoronavirus ->
   Alphaletovirus
11  -> Zika virus -> Yellow fever virus -> West Nile
   virus
12  -> GBV-B -> hepatitis C virus
13  -> Ebola virus -> Tai Forest virus -> Bombali virus
14  -> Marburg virus
15  -> Hcov-229E -> Hcov-NL63
16  -> HCoV-OC43 -> HCoV-HKU1
17 Betacoronavirus:  -> HCoV-OC43 -> HCoV-HKU1 -> SARS-
   CoV
18 Betacoronavirus:  -> HCoV-OC43 -> HCoV-HKU1 -> SARS-
   CoV -> MERS-CoV
19  -> Adenoviridae -> Poxviridae
20  -> Mastadenovirus
21  -> Orthopoxvirus
22  -> Canine hepatitis virus
23  -> Cowpox virus -> Smallpox virus
24 Breadth First:
25 Virus
26 DNA Virus
```

```
27 RNA Virus
28 Adenoviridae
29 Poxviridae
30 Flaviviridae
31 Filoviridae
32 Coronaviridae
33 Mastadenovirus
34 Orthopoxvirus
35 Flavivirus
36 Hepacivirus
37 Cuevavirus
38 Dianlovirus
39 Ebolavirus
40 Marburgvirus
41 Alphacoronavirus
42 Betacoronavirus
43 Deltacoronavirus
44 Gammacoronavirus
45 Alphaletovirus
46 Canine hepatitis virus
47 Cowpox virus
48 Smallpox virus
49 Zika virus
50 Yellow fever virus
51 West Nile virus
52 GBV-B
53 hepatitis C virus
54 Ebola virus
55 Tai Forest virus
56 Bombali virus
57 Marburg virus
58 Hcov-229E
59 Hcov-NL63
60 HCoV-OC43
61 HCoV-HKU1
62 SARS-CoV
63 MERS-CoV
64
65 Pre-Order
66 Virus
67 DNA Virus
68 Adenoviridae
69 Mastadenovirus
70 Canine hepatitis virus
```

```
 71 Poxviridae
 72 Orthopoxvirus
 73 Cowpox virus
 74 Smallpox virus
 75 RNA Virus
 76 Flaviviridae
 77 Flavivirus
 78 Zika virus
 79 Yellow fever virus
 80 West Nile virus
 81 Hepacivirus
 82 GBV-B
 83 hepatitis C virus
 84 Filoviridae
 85 Cuevavirus
 86 Dianlovirus
 87 Ebolavirus
 88 Ebola virus
 89 Tai Forest virus
 90 Bombali virus
 91 Marburgvirus
 92 Marburg virus
 93 Coronaviridae
 94 Alphacoronavirus
 95 Hcov-229E
 96 Hcov-NL63
 97 Betacoronavirus
 98 HCoV-OC43
 99 HCoV-HKU1
100 SARS-CoV
101 MERS-CoV
102 Deltacoronavirus
103 Gammacoronavirus
104 Alphaletovirus
105
106 Post-Order
107 Canine hepatitis virus
108 Mastadenovirus
109 Adenoviridae
110 Cowpox virus
111 Smallpox virus
112 Orthopoxvirus
113 Poxviridae
114 DNA Virus
```

```
115 Zika virus
116 Yellow fever virus
117 West Nile virus
118 Flavivirus
119 GBV-B
120 hepatitis C virus
121 Hepacivirus
122 Flaviviridae
123 Cuevavirus
124 Dianlovirus
125 Ebola virus
126 Tai Forest virus
127 Bombali virus
128 Ebolavirus
129 Marburg virus
130 Marburgvirus
131 Filoviridae
132 Hcov-229E
133 Hcov-NL63
134 Alphacoronavirus
135 HCoV-OC43
136 HCoV-HKU1
137 SARS-CoV
138 MERS-CoV
139 Betacoronavirus
140 Deltacoronavirus
141 Gammacoronavirus
142 Alphaletovirus
143 Coronaviridae
144 RNA Virus
145 Virus
146
147 Height:
148 4
149
150 The distance between Ebola virus and Bombali virus
    is 1. They have common ancestor Ebolavirus
151
152 The distance between Ebola virus and Marburg virus
    is 2. They have common ancestor Filoviridae
153
154 The distance between HCoV-OC43 and Hcov-229E is 2.
    They have common ancestor Coronaviridae
155
```

```
156 The distance between SARS-CoV and Zika virus is 3.
    They have common ancestor RNA Virus
157
158 Disconnected from the target VM, address: '127.0.0.1
    :52742', transport: 'socket'
159
160 Process finished with exit code 0
161
```