

```
1 /Library/Java/JavaVirtualMachines/jdk-11.0.2.jdk/Contents/Home/bin/j
2 Please Enter number of customers :
3 20
4 ABLE CUSTOMER SIZE : 1
5 CID : 1
6 Time Since Last Arrival : 0
7 Arrival Time : 0
8 Service Time : 2
9 Time Server Begins : 0
10 Time Customer waits in Queue : 0
11 Time Service End : 2
12 Time Customer Spends in System : 2
13 Idle Time of Server : 0
14 Random Digit for Service Time : 22
15 Random Digit for Arrival Time : 64
16 Service Name : ABLE
17 +++++
18 CID : 2
19 Time Since Last Arrival : 2
20 Arrival Time : 2
21 Service Time : 3
22 Time Server Begins : 2
23 Time Customer waits in Queue : 0
24 Time Service End : 5
25 Time Customer Spends in System : 3
26 Idle Time of Server : 0
27 Random Digit for Service Time : 55
28 Random Digit for Arrival Time : 59
29 Service Name : ABLE
30 +++++
31 CID : 3
32 Time Since Last Arrival : 2
33 Arrival Time : 4
34 Service Time : 5
35 Time Server Begins : 4
36 Time Customer waits in Queue : 0
37 Time Service End : 9
38 Time Customer Spends in System : 5
39 Idle Time of Server : 0
40 Random Digit for Service Time : 79
41 Random Digit for Arrival Time : 48
42 Service Name : BACKER
43 +++++
44 CID : 4
45 Time Since Last Arrival : 2
46 Arrival Time : 6
47 Service Time : 2
48 Time Server Begins : 6
49 Time Customer waits in Queue : 0
50 Time Service End : 8
51 Time Customer Spends in System : 2
52 Idle Time of Server : 1
53 Random Digit for Service Time : 7
54 Random Digit for Arrival Time : 28
55 Service Name : ABLE
56 +++++
57 CID : 5
58 Time Since Last Arrival : 2
59 Arrival Time : 8
```

```
60 Service Time : 4
61 Time Server Begins : 8
62 Time Customer waits in Queue : 0
63 Time Service End : 12
64 Time Customer Spends in System : 4
65 Idle Time of Server : 0
66 Random Digit for Service Time : 68
67 Random Digit for Arrival Time : 30
68 Service Name : ABLE
69 ++++++
70 CID : 6
71 Time Since Last Arrival : 4
72 Arrival Time : 12
73 Service Time : 4
74 Time Server Begins : 12
75 Time Customer waits in Queue : 0
76 Time Service End : 16
77 Time Customer Spends in System : 4
78 Idle Time of Server : 0
79 Random Digit for Service Time : 79
80 Random Digit for Arrival Time : 89
81 Service Name : ABLE
82 ++++++
83 CID : 7
84 Time Since Last Arrival : 4
85 Arrival Time : 16
86 Service Time : 3
87 Time Server Begins : 16
88 Time Customer waits in Queue : 0
89 Time Service End : 19
90 Time Customer Spends in System : 3
91 Idle Time of Server : 0
92 Random Digit for Service Time : 56
93 Random Digit for Arrival Time : 89
94 Service Name : ABLE
95 ++++++
96 CID : 8
97 Time Since Last Arrival : 3
98 Arrival Time : 19
99 Service Time : 5
100 Time Server Begins : 19
101 Time Customer waits in Queue : 0
102 Time Service End : 24
103 Time Customer Spends in System : 5
104 Idle Time of Server : 0
105 Random Digit for Service Time : 88
106 Random Digit for Arrival Time : 77
107 Service Name : ABLE
108 ++++++
109 CID : 9
110 Time Since Last Arrival : 1
111 Arrival Time : 20
112 Service Time : 3
113 Time Server Begins : 20
114 Time Customer waits in Queue : 0
115 Time Service End : 23
116 Time Customer Spends in System : 3
117 Idle Time of Server : 11
118 Random Digit for Service Time : 4
```

```
119 Random Digit for Arrival Time : 23
120 Service Name : BACKER
121 ++++++
122 CID : 10
123 Time Since Last Arrival : 2
124 Arrival Time : 22
125 Service Time : 6
126 Time Server Begins : 23
127 Time Customer waits in Queue : 1
128 Time Service End : 29
129 Time Customer Spends in System : 7
130 Idle Time of Server : 0
131 Random Digit for Service Time : 86
132 Random Digit for Arrival Time : 48
133 Service Name : BACKER
134 ++++++
135 CID : 11
136 Time Since Last Arrival : 2
137 Arrival Time : 24
138 Service Time : 3
139 Time Server Begins : 24
140 Time Customer waits in Queue : 0
141 Time Service End : 27
142 Time Customer Spends in System : 3
143 Idle Time of Server : 0
144 Random Digit for Service Time : 54
145 Random Digit for Arrival Time : 57
146 Service Name : ABLE
147 ++++++
148 CID : 12
149 Time Since Last Arrival : 3
150 Arrival Time : 27
151 Service Time : 3
152 Time Server Begins : 27
153 Time Customer waits in Queue : 0
154 Time Service End : 30
155 Time Customer Spends in System : 3
156 Idle Time of Server : 0
157 Random Digit for Service Time : 34
158 Random Digit for Arrival Time : 66
159 Service Name : ABLE
160 ++++++
161 CID : 13
162 Time Since Last Arrival : 1
163 Arrival Time : 28
164 Service Time : 4
165 Time Server Begins : 29
166 Time Customer waits in Queue : 1
167 Time Service End : 33
168 Time Customer Spends in System : 5
169 Idle Time of Server : 0
170 Random Digit for Service Time : 43
171 Random Digit for Arrival Time : 11
172 Service Name : BACKER
173 ++++++
174 CID : 14
175 Time Since Last Arrival : 1
176 Arrival Time : 29
177 Service Time : 3
```

```
178 Time Server Begins : 30
179 Time Customer waits in Queue : 1
180 Time Service End : 33
181 Time Customer Spends in System : 4
182 Idle Time of Server : 0
183 Random Digit for Service Time : 48
184 Random Digit for Arrival Time : 19
185 Service Name : ABLE
186 ++++++
187 CID : 15
188 Time Since Last Arrival : 3
189 Arrival Time : 32
190 Service Time : 2
191 Time Server Begins : 33
192 Time Customer waits in Queue : 1
193 Time Service End : 35
194 Time Customer Spends in System : 3
195 Idle Time of Server : 0
196 Random Digit for Service Time : 25
197 Random Digit for Arrival Time : 70
198 Service Name : ABLE
199 ++++++
200 CID : 16
201 Time Since Last Arrival : 1
202 Arrival Time : 33
203 Service Time : 6
204 Time Server Begins : 33
205 Time Customer waits in Queue : 0
206 Time Service End : 39
207 Time Customer Spends in System : 6
208 Idle Time of Server : 0
209 Random Digit for Service Time : 90
210 Random Digit for Arrival Time : 21
211 Service Name : BACKER
212 ++++++
213 CID : 17
214 Time Since Last Arrival : 2
215 Arrival Time : 35
216 Service Time : 5
217 Time Server Begins : 35
218 Time Customer waits in Queue : 0
219 Time Service End : 40
220 Time Customer Spends in System : 5
221 Idle Time of Server : 0
222 Random Digit for Service Time : 89
223 Random Digit for Arrival Time : 45
224 Service Name : ABLE
225 ++++++
226 CID : 18
227 Time Since Last Arrival : 1
228 Arrival Time : 36
229 Service Time : 3
230 Time Server Begins : 39
231 Time Customer waits in Queue : 3
232 Time Service End : 42
233 Time Customer Spends in System : 6
234 Idle Time of Server : 0
235 Random Digit for Service Time : 34
236 Random Digit for Arrival Time : 1
```

```

237 Service Name : BACKER
238 ++++++
239 CID : 19
240 Time Since Last Arrival : 4
241 Arrival Time : 40
242 Service Time : 2
243 Time Server Begins : 40
244 Time Customer waits in Queue : 0
245 Time Service End : 42
246 Time Customer Spends in System : 2
247 Idle Time of Server : 0
248 Random Digit for Service Time : 9
249 Random Digit for Arrival Time : 92
250 Service Name : ABLE
251 ++++++
252 CID : 20
253 Time Since Last Arrival : 2
254 Arrival Time : 42
255 Service Time : 4
256 Time Server Begins : 42
257 Time Customer waits in Queue : 0
258 Time Service End : 46
259 Time Customer Spends in System : 4
260 Idle Time of Server : 0
261 Random Digit for Service Time : 62
262 Random Digit for Arrival Time : 44
263 Service Name : ABLE
264 ++++++
265 ABLE CALCULATIONS :
266 ABLE average waiting time for a customer : 0.14285714285714285
267 ABLE probably that a customer has to wait in queue : 0.14285714285714285
268 ABLE fraction of idle time of the server : 0.021739130434782608
269 ABLE probably of the server being busy : 0.9782608695652174
270 ABLE average service time : 3.2142857142857144
271 ABLE expected value : 3.29
272 ABLE average time between arrivals : 3.230769230769231
273 ABLE discrete uniform distribution : 2.5
274 ABLE average waiting time of those who wait : 1.0
275 ABLE average time a customer spends in the system : 3.357142857142857
276 ABLE average time customer spends in the system : 3.357142857142857
277 The able customer : 14
278 The backer customer : 6
279 ++++++
280 BACKER CALCULATIONS :
281 BACKER average waiting time for a customer : 0.8333333333333334
282 BACKER probably that a customer has to wait in queue : 0.5
283 BACKER fraction of idle time of the server : 0.2619047619047619
284 BACKER probably of the server being busy : 0.7380952380952381
285 BACKER average service time : 4.5
286 BACKER expected value : 4.25
287 BACKER average time between arrivals : 7.2
288 BACKER discrete uniform distribution : 2.5
289 BACKER average waiting time of those who wait : 1.6666666666666667
290 BACKER average time a customer spends in the system : 5.333333333333333
291 BACKER average time customer spends in the system : 5.333333333333333
292 The able customer : 14
293 The backer customer : 6
294 Excel written successfully..
295

```

296 Process finished with exit code 0
297