```
 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  CUSTOMER : 2
 6  ENTER IF1
 7  CUSTOMER : 3
 8  ENTER IF 5
 9  CUSTOMER : 4
10  ENTER IF 5
11  CUSTOMER : 5
12  ENTER IF 5
13  CUSTOMER : 6
14  ENTER IF 5
15  CUSTOMER : 7
16  ENTER IF 5
17  CUSTOMER : 8
18  ENTER IF 5
19  CUSTOMER : 9
20  ENTER IF 7
21  CUSTOMER : 10
22  ENTER IF4
23  CUSTOMER : 11
24  ENTER IF 6
25  CUSTOMER : 12
26  ENTER IF 5
27  CUSTOMER : 13
28  ENTER IF 5
29  CUSTOMER : 14
30  ENTER IF 5
31  CUSTOMER : 15
32  ENTER IF 6
33  CUSTOMER : 16
34  ENTER IF 5
35  CUSTOMER : 17
36  ENTER IF 5
37  CUSTOMER : 18
38  ENTER IF 5
39  CUSTOMER : 19
40  ENTER IF 5
41  CUSTOMER : 20
42  ENTER IF 5
43  CID : 1
44  Time Since Last Arrival  : 0
45  Arrival Time : 0
46  Service Time : 3
47  Time Server Begins  : 0
48  Time Customer waits in Queue : 0
49  Time Service End : 3
50  Time Customer Spends in System : 3
51  Idle Time of Server : 0
52  Random Digit for Service Time : 35
53  Random Digit for Arrival Time : 16
54  Service Name  : ABLE
55  ++++++++++++++++++++++++++++++++++++++++++++++++
56  CID : 2
57  Time Since Last Arrival  : 1
58  Arrival Time : 1
59  Service Time : 4
```

```
 60   Time Server Begins  : 1
 61   Time Customer waits in Queue : 0
 62   Time Service End : 5
 63   Time Customer Spends in System : 4
 64   Idle Time of Server : 0
 65   Random Digit for Service Time : 52
 66   Random Digit for Arrival Time : 6
 67   Service Name  : BACKER
 68   ++++++++++++++++++++++++++++++++++++++++++++++
 69   CID : 3
 70   Time Since Last Arrival  : 0
 71   Arrival Time : 1
 72   Service Time : 3
 73   Time Server Begins  : 3
 74   Time Customer waits in Queue : 2
 75   Time Service End : 6
 76   Time Customer Spends in System : 5
 77   Idle Time of Server : 0
 78   Random Digit for Service Time : 34
 79   Random Digit for Arrival Time : 0
 80   Service Name  : ABLE
 81   ++++++++++++++++++++++++++++++++++++++++++++++
 82   CID : 4
 83   Time Since Last Arrival  : 2
 84   Arrival Time : 3
 85   Service Time : 3
 86   Time Server Begins  : 5
 87   Time Customer waits in Queue : 2
 88   Time Service End : 8
 89   Time Customer Spends in System : 5
 90   Idle Time of Server : 0
 91   Random Digit for Service Time : 31
 92   Random Digit for Arrival Time : 63
 93   Service Name  : BACKER
 94   ++++++++++++++++++++++++++++++++++++++++++++++
 95   CID : 5
 96   Time Since Last Arrival  : 1
 97   Arrival Time : 4
 98   Service Time : 5
 99   Time Server Begins  : 6
100   Time Customer waits in Queue : 2
101   Time Service End : 11
102   Time Customer Spends in System : 7
103   Idle Time of Server : 0
104   Random Digit for Service Time : 94
105   Random Digit for Arrival Time : 3
106   Service Name  : ABLE
107   ++++++++++++++++++++++++++++++++++++++++++++++
108   CID : 6
109   Time Since Last Arrival  : 2
110   Arrival Time : 6
111   Service Time : 4
112   Time Server Begins  : 8
113   Time Customer waits in Queue : 2
114   Time Service End : 12
115   Time Customer Spends in System : 6
116   Idle Time of Server : 0
117   Random Digit for Service Time : 41
118   Random Digit for Arrival Time : 63
```

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119   Service Name  : BACKER
120   +++++++++++++++++++++++++++++++++++++++++++++++
121   CID : 7
122   Time Since Last Arrival  : 2
123   Arrival Time : 8
124   Service Time : 3
125   Time Server Begins  : 11
126   Time Customer waits in Queue : 3
127   Time Service End : 14
128   Time Customer Spends in System : 6
129   Idle Time of Server : 0
130   Random Digit for Service Time : 36
131   Random Digit for Arrival Time : 29
132   Service Name  : ABLE
133   +++++++++++++++++++++++++++++++++++++++++++++++
134   CID : 8
135   Time Since Last Arrival  : 2
136   Arrival Time : 10
137   Service Time : 5
138   Time Server Begins  : 12
139   Time Customer waits in Queue : 2
140   Time Service End : 17
141   Time Customer Spends in System : 7
142   Idle Time of Server : 0
143   Random Digit for Service Time : 62
144   Random Digit for Arrival Time : 28
145   Service Name  : BACKER
146   +++++++++++++++++++++++++++++++++++++++++++++++
147   CID : 9
148   Time Since Last Arrival  : 4
149   Arrival Time : 14
150   Service Time : 3
151   Time Server Begins  : 14
152   Time Customer waits in Queue : 0
153   Time Service End : 17
154   Time Customer Spends in System : 3
155   Idle Time of Server : 0
156   Random Digit for Service Time : 33
157   Random Digit for Arrival Time : 97
158   Service Name  : ABLE
159   +++++++++++++++++++++++++++++++++++++++++++++++
160   CID : 10
161   Time Since Last Arrival  : 4
162   Arrival Time : 18
163   Service Time : 4
164   Time Server Begins  : 18
165   Time Customer waits in Queue : 0
166   Time Service End : 22
167   Time Customer Spends in System : 4
168   Idle Time of Server : 1
169   Random Digit for Service Time : 72
170   Random Digit for Arrival Time : 95
171   Service Name  : ABLE
172   +++++++++++++++++++++++++++++++++++++++++++++++
173   CID : 11
174   Time Since Last Arrival  : 1
175   Arrival Time : 19
176   Service Time : 5
177   Time Server Begins  : 19
```

178 Time Customer waits in Queue : 0
179 Time Service End : 24
180 Time Customer Spends in System : 5
181 Idle Time of Server : 2
182 Random Digit for Service Time : 77
183 Random Digit for Arrival Time : 1
184 Service Name : BACKER
185 ++
186 CID : 12
187 Time Since Last Arrival : 1
188 Arrival Time : 20
189 Service Time : 4
190 Time Server Begins : 22
191 Time Customer waits in Queue : 2
192 Time Service End : 26
193 Time Customer Spends in System : 6
194 Idle Time of Server : 0
195 Random Digit for Service Time : 83
196 Random Digit for Arrival Time : 18
197 Service Name : ABLE
198 ++
199 CID : 13
200 Time Since Last Arrival : 2
201 Arrival Time : 22
202 Service Time : 3
203 Time Server Begins : 24
204 Time Customer waits in Queue : 2
205 Time Service End : 27
206 Time Customer Spends in System : 5
207 Idle Time of Server : 0
208 Random Digit for Service Time : 17
209 Random Digit for Arrival Time : 60
210 Service Name : BACKER
211 ++
212 CID : 14
213 Time Since Last Arrival : 3
214 Arrival Time : 25
215 Service Time : 5
216 Time Server Begins : 26
217 Time Customer waits in Queue : 1
218 Time Service End : 31
219 Time Customer Spends in System : 6
220 Idle Time of Server : 0
221 Random Digit for Service Time : 96
222 Random Digit for Arrival Time : 68
223 Service Name : ABLE
224 ++
225 CID : 15
226 Time Since Last Arrival : 4
227 Arrival Time : 29
228 Service Time : 5
229 Time Server Begins : 29
230 Time Customer waits in Queue : 0
231 Time Service End : 34
232 Time Customer Spends in System : 5
233 Idle Time of Server : 2
234 Random Digit for Service Time : 61
235 Random Digit for Arrival Time : 88
236 Service Name : BACKER

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237   +++++++++++++++++++++++++++++++++++++++++++++++++
238   CID : 16
239   Time Since Last Arrival  : 1
240   Arrival Time : 30
241   Service Time : 5
242   Time Server Begins  : 31
243   Time Customer waits in Queue : 1
244   Time Service End : 36
245   Time Customer Spends in System : 6
246   Idle Time of Server : 0
247   Random Digit for Service Time : 87
248   Random Digit for Arrival Time : 13
249   Service Name  : ABLE
250   +++++++++++++++++++++++++++++++++++++++++++++++++
251   CID : 17
252   Time Since Last Arrival  : 1
253   Arrival Time : 31
254   Service Time : 3
255   Time Server Begins  : 34
256   Time Customer waits in Queue : 3
257   Time Service End : 37
258   Time Customer Spends in System : 6
259   Idle Time of Server : 0
260   Random Digit for Service Time : 32
261   Random Digit for Arrival Time : 19
262   Service Name  : BACKER
263   +++++++++++++++++++++++++++++++++++++++++++++++++
264   CID : 18
265   Time Since Last Arrival  : 1
266   Arrival Time : 32
267   Service Time : 4
268   Time Server Begins  : 36
269   Time Customer waits in Queue : 4
270   Time Service End : 40
271   Time Customer Spends in System : 8
272   Idle Time of Server : 0
273   Random Digit for Service Time : 67
274   Random Digit for Arrival Time : 21
275   Service Name  : ABLE
276   +++++++++++++++++++++++++++++++++++++++++++++++++
277   CID : 19
278   Time Since Last Arrival  : 2
279   Arrival Time : 34
280   Service Time : 4
281   Time Server Begins  : 37
282   Time Customer waits in Queue : 3
283   Time Service End : 41
284   Time Customer Spends in System : 7
285   Idle Time of Server : 0
286   Random Digit for Service Time : 46
287   Random Digit for Arrival Time : 65
288   Service Name  : BACKER
289   +++++++++++++++++++++++++++++++++++++++++++++++++
290   CID : 20
291   Time Since Last Arrival  : 3
292   Arrival Time : 37
293   Service Time : 5
294   Time Server Begins  : 40
295   Time Customer waits in Queue : 3
```

```
296  Time Service End : 45
297  Time Customer Spends in System : 8
298  Idle Time of Server : 0
299  Random Digit for Service Time : 90
300  Random Digit for Arrival Time : 71
301  Service Name  : ABLE
302  +++++++++++++++++++++++++++++++++++++++++++++++++
303  ABLE CALCULATIONS :
304  ABLE average waiting time for a customer : 1.6363636363636365
305  ABLE probably that a customer has to wait in queue  : 0.7272727272727
306  ABLE fraction of idle time of the server : 0.02222222222222223
307  ABLE probably of the server being busy : 0.9777777777777777
308  ABLE average service time : 4.0
309  ABLE expected value : 3.29
310  ABLE average time between arrivals : 3.7
311  ABLE discrete uniform distribution : 2.5
312  ABLE average waiting time of those who wait : 2.25
313  ABLE average time a customer spends in the system : 5.6363636363636(
314  ABLE average time customer spends in the system : 5.6363636363636(
315  The able customer  : 11
316  The backer customer : 9
317  +++++++++++++++++++++++++++++++++++++++++++++++++
318  BACKER average waiting time for a customer : 1.5555555555555556
319  BACKER probably that a customer has to wait in queue  : 0.6666666666
320  BACKER fraction of idle time of the server : 0.0975609756097561
321  BACKER probably of the server being busy : 0.9024390243902439
322  BACKER CALCULATIONS :
323  BACKER average service time : 4.0
324  BACKER expected value : 4.25
325  BACKER average time between arrivals : 4.25
326  BACKER discrete uniform distribution : 2.5
327  BACKER average waiting time of those who wait : 2.3333333333333335
328  BACKER average time a customer spends in the system : 5.5555555555
329  BACKER average time customer spends in the system : 5.55555555555(
330  The able customer  : 11
331  The backer customer : 9
332  Excel written successfully..
333
334  Process finished with exit code 0
335
```