```
 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 7
 9  CUSTOMER : 4
10  ENTER IF4
11  CUSTOMER : 5
12  ENTER IF 6
13  CUSTOMER : 6
14  ENTER IF 7
15  CUSTOMER : 7
16  ENTER IF 5
17  CUSTOMER : 8
18  ENTER IF 7
19  CUSTOMER : 9
20  ENTER IF 6
21  CUSTOMER : 10
22  ENTER IF 5
23  CUSTOMER : 11
24  ENTER IF 6
25  CUSTOMER : 12
26  ENTER IF 7
27  CUSTOMER : 13
28  ENTER IF 5
29  CUSTOMER : 14
30  ENTER IF 7
31  CUSTOMER : 15
32  ENTER IF4
33  CUSTOMER : 16
34  ENTER IF 6
35  CUSTOMER : 17
36  ENTER IF 5
37  CUSTOMER : 18
38  ENTER IF4
39  CUSTOMER : 19
40  ENTER IF4
41  CUSTOMER : 20
42  ENTER IF4
43  CID : 1
44  Time Since Last Arrival  : 0
45  Arrival Time : 0
46  Service Time : 4
47  Time Server Begins  : 0
48  Time Customer waits in Queue : 0
49  Time Service End : 4
50  Time Customer Spends in System : 4
51  Idle Time of Server : 0
52  Random Digit for Service Time : 75
53  Random Digit for Arrival Time : 21
54  Service Name  : ABLE
55  ++++++++++++++++++++++++++++++++++++++++++++++++++
56  CID : 2
57  Time Since Last Arrival  : 3
58  Arrival Time : 3
59  Service Time : 3
```

```
 60   Time Server Begins  : 3
 61   Time Customer waits in Queue : 0
 62   Time Service End : 6
 63   Time Customer Spends in System : 3
 64   Idle Time of Server : 0
 65   Random Digit for Service Time : 8
 66   Random Digit for Arrival Time : 84
 67   Service Name  : BACKER
 68   +++++++++++++++++++++++++++++++++++++++++++++++++
 69   CID : 3
 70   Time Since Last Arrival  : 1
 71   Arrival Time : 4
 72   Service Time : 0
 73   Time Server Begins  : 4
 74   Time Customer waits in Queue : 0
 75   Time Service End : 4
 76   Time Customer Spends in System : 0
 77   Idle Time of Server : 0
 78   Random Digit for Service Time : 0
 79   Random Digit for Arrival Time : 12
 80   Service Name  : ABLE
 81   +++++++++++++++++++++++++++++++++++++++++++++++++
 82   CID : 4
 83   Time Since Last Arrival  : 2
 84   Arrival Time : 6
 85   Service Time : 4
 86   Time Server Begins  : 6
 87   Time Customer waits in Queue : 0
 88   Time Service End : 10
 89   Time Customer Spends in System : 4
 90   Idle Time of Server : 2
 91   Random Digit for Service Time : 71
 92   Random Digit for Arrival Time : 61
 93   Service Name  : ABLE
 94   +++++++++++++++++++++++++++++++++++++++++++++++++
 95   CID : 5
 96   Time Since Last Arrival  : 1
 97   Arrival Time : 7
 98   Service Time : 6
 99   Time Server Begins  : 7
100   Time Customer waits in Queue : 0
101   Time Service End : 13
102   Time Customer Spends in System : 6
103   Idle Time of Server : 1
104   Random Digit for Service Time : 83
105   Random Digit for Arrival Time : 4
106   Service Name  : BACKER
107   +++++++++++++++++++++++++++++++++++++++++++++++++
108   CID : 6
109   Time Since Last Arrival  : 4
110   Arrival Time : 11
111   Service Time : 3
112   Time Server Begins  : 11
113   Time Customer waits in Queue : 0
114   Time Service End : 14
115   Time Customer Spends in System : 3
116   Idle Time of Server : 1
117   Random Digit for Service Time : 39
118   Random Digit for Arrival Time : 87
```

```
119   Service Name  : ABLE
120   +++++++++++++++++++++++++++++++++++++++++++++++
121   CID : 7
122   Time Since Last Arrival  : 1
123   Arrival Time : 12
124   Service Time : 3
125   Time Server Begins  : 13
126   Time Customer waits in Queue : 1
127   Time Service End : 16
128   Time Customer Spends in System : 4
129   Idle Time of Server : 0
130   Random Digit for Service Time : 9
131   Random Digit for Arrival Time : 25
132   Service Name  : BACKER
133   +++++++++++++++++++++++++++++++++++++++++++++++
134   CID : 8
135   Time Since Last Arrival  : 3
136   Arrival Time : 15
137   Service Time : 4
138   Time Server Begins  : 15
139   Time Customer waits in Queue : 0
140   Time Service End : 19
141   Time Customer Spends in System : 4
142   Idle Time of Server : 1
143   Random Digit for Service Time : 74
144   Random Digit for Arrival Time : 79
145   Service Name  : ABLE
146   +++++++++++++++++++++++++++++++++++++++++++++++
147   CID : 9
148   Time Since Last Arrival  : 1
149   Arrival Time : 16
150   Service Time : 3
151   Time Server Begins  : 16
152   Time Customer waits in Queue : 0
153   Time Service End : 19
154   Time Customer Spends in System : 3
155   Idle Time of Server : 0
156   Random Digit for Service Time : 15
157   Random Digit for Arrival Time : 25
158   Service Name  : BACKER
159   +++++++++++++++++++++++++++++++++++++++++++++++
160   CID : 10
161   Time Since Last Arrival  : 1
162   Arrival Time : 17
163   Service Time : 4
164   Time Server Begins  : 19
165   Time Customer waits in Queue : 2
166   Time Service End : 23
167   Time Customer Spends in System : 6
168   Idle Time of Server : 0
169   Random Digit for Service Time : 62
170   Random Digit for Arrival Time : 18
171   Service Name  : ABLE
172   +++++++++++++++++++++++++++++++++++++++++++++++
173   CID : 11
174   Time Since Last Arrival  : 4
175   Arrival Time : 21
176   Service Time : 6
177   Time Server Begins  : 21
```

```
178   Time Customer waits in Queue : 0
179   Time Service End : 27
180   Time Customer Spends in System : 6
181   Idle Time of Server : 2
182   Random Digit for Service Time : 83
183   Random Digit for Arrival Time : 96
184   Service Name  : BACKER
185   ++++++++++++++++++++++++++++++++++++++++++++++++
186   CID : 12
187   Time Since Last Arrival  : 4
188   Arrival Time : 25
189   Service Time : 4
190   Time Server Begins  : 25
191   Time Customer waits in Queue : 0
192   Time Service End : 29
193   Time Customer Spends in System : 4
194   Idle Time of Server : 2
195   Random Digit for Service Time : 59
196   Random Digit for Arrival Time : 86
197   Service Name  : ABLE
198   ++++++++++++++++++++++++++++++++++++++++++++++++
199   CID : 13
200   Time Since Last Arrival  : 1
201   Arrival Time : 26
202   Service Time : 4
203   Time Server Begins  : 27
204   Time Customer waits in Queue : 1
205   Time Service End : 31
206   Time Customer Spends in System : 5
207   Idle Time of Server : 0
208   Random Digit for Service Time : 36
209   Random Digit for Arrival Time : 10
210   Service Name  : BACKER
211   ++++++++++++++++++++++++++++++++++++++++++++++++
212   CID : 14
213   Time Since Last Arrival  : 4
214   Arrival Time : 30
215   Service Time : 2
216   Time Server Begins  : 30
217   Time Customer waits in Queue : 0
218   Time Service End : 32
219   Time Customer Spends in System : 2
220   Idle Time of Server : 1
221   Random Digit for Service Time : 20
222   Random Digit for Arrival Time : 94
223   Service Name  : ABLE
224   ++++++++++++++++++++++++++++++++++++++++++++++++
225   CID : 15
226   Time Since Last Arrival  : 2
227   Arrival Time : 32
228   Service Time : 4
229   Time Server Begins  : 32
230   Time Customer waits in Queue : 0
231   Time Service End : 36
232   Time Customer Spends in System : 4
233   Idle Time of Server : 0
234   Random Digit for Service Time : 68
235   Random Digit for Arrival Time : 55
236   Service Name  : ABLE
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237  ++++++++++++++++++++++++++++++++++++++++++++++++
238  CID : 16
239  Time Since Last Arrival  : 2
240  Arrival Time : 34
241  Service Time : 3
242  Time Server Begins  : 34
243  Time Customer waits in Queue : 0
244  Time Service End : 37
245  Time Customer Spends in System : 3
246  Idle Time of Server : 3
247  Random Digit for Service Time : 24
248  Random Digit for Arrival Time : 26
249  Service Name  : BACKER
250  ++++++++++++++++++++++++++++++++++++++++++++++++
251  CID : 17
252  Time Since Last Arrival  : 1
253  Arrival Time : 35
254  Service Time : 3
255  Time Server Begins  : 36
256  Time Customer waits in Queue : 1
257  Time Service End : 39
258  Time Customer Spends in System : 4
259  Idle Time of Server : 0
260  Random Digit for Service Time : 46
261  Random Digit for Arrival Time : 25
262  Service Name  : ABLE
263  ++++++++++++++++++++++++++++++++++++++++++++++++
264  CID : 18
265  Time Since Last Arrival  : 4
266  Arrival Time : 39
267  Service Time : 2
268  Time Server Begins  : 39
269  Time Customer waits in Queue : 0
270  Time Service End : 41
271  Time Customer Spends in System : 2
272  Idle Time of Server : 0
273  Random Digit for Service Time : 9
274  Random Digit for Arrival Time : 92
275  Service Name  : ABLE
276  ++++++++++++++++++++++++++++++++++++++++++++++++
277  CID : 19
278  Time Since Last Arrival  : 3
279  Arrival Time : 42
280  Service Time : 2
281  Time Server Begins  : 42
282  Time Customer waits in Queue : 0
283  Time Service End : 44
284  Time Customer Spends in System : 2
285  Idle Time of Server : 1
286  Random Digit for Service Time : 13
287  Random Digit for Arrival Time : 70
288  Service Name  : ABLE
289  ++++++++++++++++++++++++++++++++++++++++++++++++
290  CID : 20
291  Time Since Last Arrival  : 3
292  Arrival Time : 45
293  Service Time : 2
294  Time Server Begins  : 45
295  Time Customer waits in Queue : 0
```

```
296  Time Service End : 47
297  Time Customer Spends in System : 2
298  Idle Time of Server : 1
299  Random Digit for Service Time : 7
300  Random Digit for Arrival Time : 78
301  Service Name  : ABLE
302  +++++++++++++++++++++++++++++++++++++++++++++++
303  ABLE CALCULATIONS :
304  ABLE average waiting time for a customer : 0.23076923076923078
305  ABLE probably that a customer has to wait in queue  : 0.153846153846
306  ABLE fraction of idle time of the server : 0.19148936170212766
307  ABLE probably of the server being busy : 0.8085106382978724
308  ABLE average service time : 2.923076923076923
309  ABLE expected value : 3.29
310  ABLE average time between arrivals : 3.75
311  ABLE discrete uniform distribution : 2.5
312  ABLE average waiting time of those who wait : 1.5
313  ABLE average time a customer spends in the system : 3.153846153846
314  ABLE average time customer spends in the system : 3.15384615384615
315  The able customer  : 13
316  The backer customer : 7
317  +++++++++++++++++++++++++++++++++++++++++++++++
318  BACKER CALCULATIONS :
319  BACKER average waiting time for a customer : 0.2857142857142857
320  BACKER probably that a customer has to wait in queue  : 0.2857142857
321  BACKER fraction of idle time of the server : 0.16216216216216217
322  BACKER probably of the server being busy : 0.8378378378378378
323  BACKER average service time : 4.0
324  BACKER expected value : 4.25
325  BACKER average time between arrivals : 5.6666666666666667
326  BACKER discrete uniform distribution : 2.5
327  BACKER average waiting time of those who wait : 1.0
328  BACKER average time a customer spends in the system : 4.2857142857
329  BACKER average time customer spends in the system : 4.285714285714
330  The able customer  : 13
331  The backer customer : 7
332  Excel written successfully..
333
334  Process finished with exit code 0
335
```