YOUR Group Details:

Group No:	35
Group Members (*Student IDs*):	Member 1 – Avinash Ramash Lakhwani (20690297) Member 2 – Shoeb Mirza Bin Mohamed Faizal (20698118) Member 3 – Eashwar Siddha Satish Nath(20717304) Member 4 - Rajul Kabir (20705932)

Truth Table:

In the context of the truth table,

- o A refers to the Location
- o B refers to Furniture
- o C refers to Helpers
- o D refers to the Menu

A	B	C	D	F
0	0	0	0	0
0	0	0	1	0
0	0	1	0	0
0	0	1	1	0
0	1	0	0	0
0	1	0	1	0
0	1	1	0	0
0	1	1	1	0
1	0	0	0	0
1	0	0	1	0
1	0	1	0	0
1	0	1	1	0
1	1	0	0	1
1	1	0	1	1
1	1	1	0	1
1	1	1	1	1

Justification:

Every scenario except for the ones where Tessa has both furniture and a location is considered false because of the fact that these two conditions are mandatory for a café.

Simplification:

F = ABC'D' + ABC'D + ABCD' + ABCD

   = ABC'(D' + D) + ABC(D' + D)   ❼Taking out the common terms

   = ABC' + ABC   ❼ Using identity – (x + x' = 1)

   = AB(C' + C)   ❼Taking out the common terms

F   = AB   ❼ Using identity – (x + x' = 1)