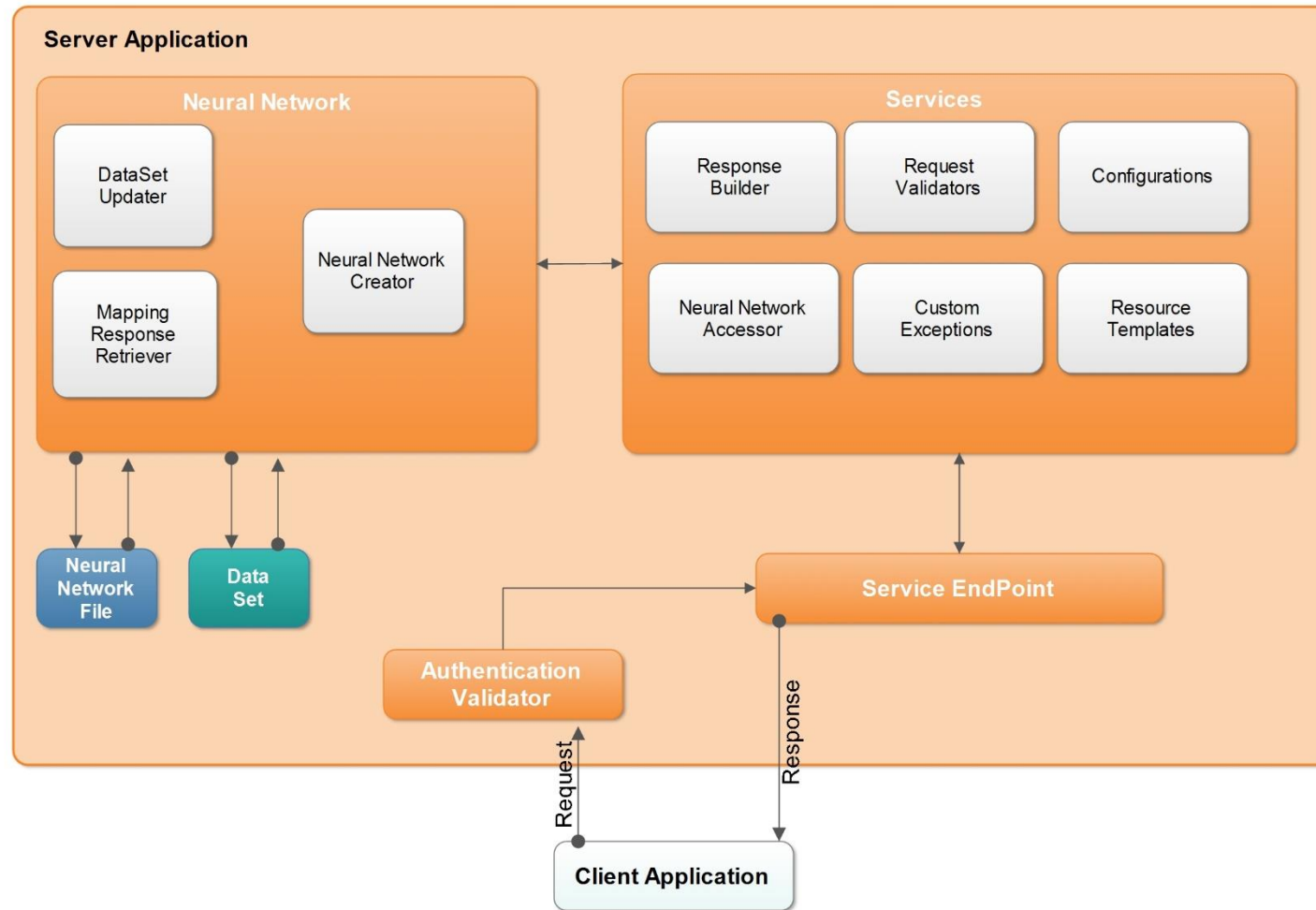




Sri Lanka Institute of Information Technology
CDAP Prototype Presentation 2016
MigDB Project

High Level Diagram of Neural Network



Arguments of Neural Network

Parameter Name	Primary Data Type	Included Data Types
COLUMN_COUNT (columnCount)	Number	N/A
NUMERIC_COUNT(numericCount)	Number	DOUBLE,BIGINT,FLOAT,MONEY
STRING_COUNT(stringCount)	Number	BLOB,TEXT,VARCHAR_MIN_64, CHAR_MIN_64,NCHAR_MIN_12, NVARCHAR_MIN_32
CALENDER_COUNT(calenderCount)	Number	DATETIME,TIMESTAMP

Why map relationships?

- To avoid the necessity for multiple query execution when retrieving data from more than one collection.

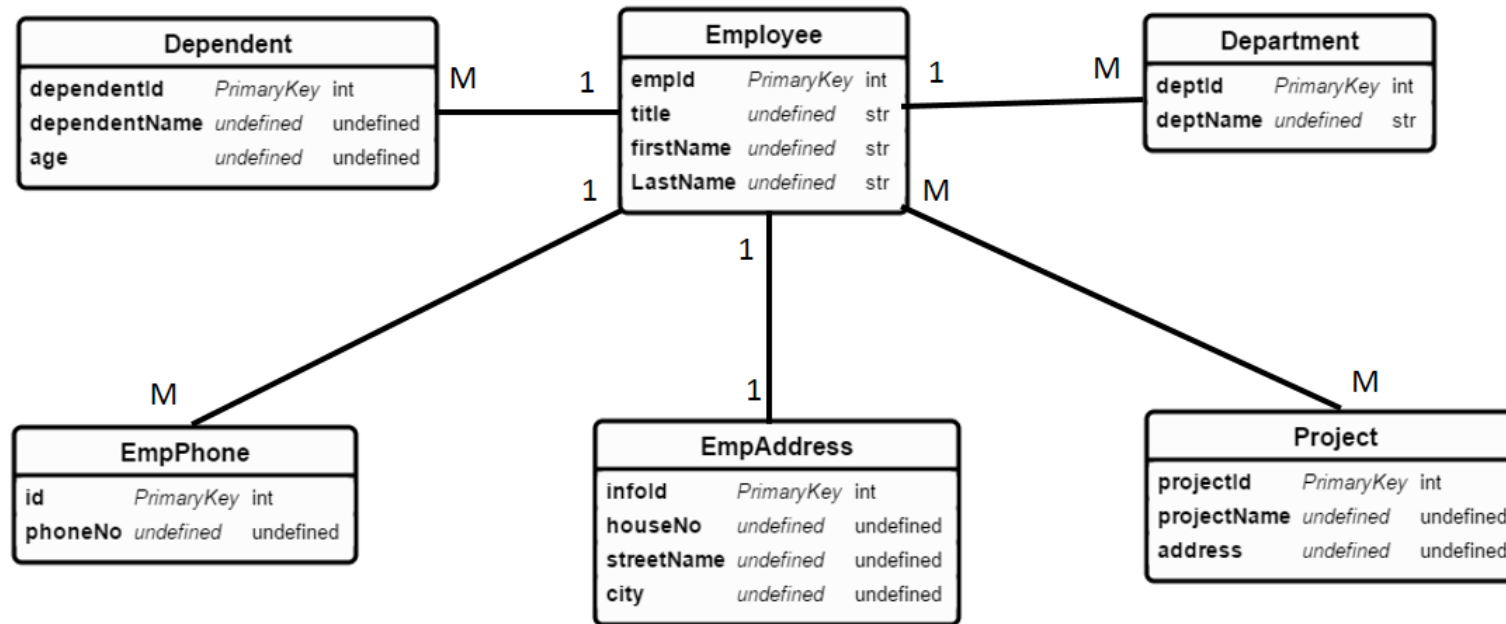
When to use Embedding

- To avoid the necessity for multiple query execution if the referencing data is retrieved frequently.

When to use Referencing

- To avoid data redundancy which can occur in embedding method.

Sample Scenario



One to One - Embedding

```
{
  "empId": "E008",
  "firstName": "Mark",
  "lastName": "Watson",
  "empaddress": {
    "infoId": "I008",
    "streetNo": "Galle Rd",
    "city": "Dehiwala",
    "houseNo": "No 44"
  },
  "deptId": "D001",
  "tittle": "Mr"
}
```


One to many - Embedding

```
"collections": [
  {
    "values": [
      {
        "empId": "E001",
        "firstName": "Max",
        "lastName": "Evans",
        "emp_phone": [
          { },
          { }
        ],
        "dependant": [
          {
            "dependentId": "DP001",
            "dependentName": "Belle",
            "age": "16"
          },
          { }
        ],
        "_id": "575f84421db2b63a40463842",
        "tittle": "Mr"
      },
      { },
      { }
    ]
  }
]
```

One to many – Referencing Method 1

```
{
  "values": [
    {
      "deptName": "Sales",
      "deptId": "D001",
      "employee": [
        "575f84421db2b63a40463842",
        "575f84421db2b63a40463843",
        "575f84421db2b63a40463844",
        "575f84421db2b63a40463845",
        "575f84421db2b63a40463846",
        "575f84421db2b63a40463847"
      ]
    },
    { }
  ],
  "collectionName": "department"
}
```

One to many – Referencing Method 2

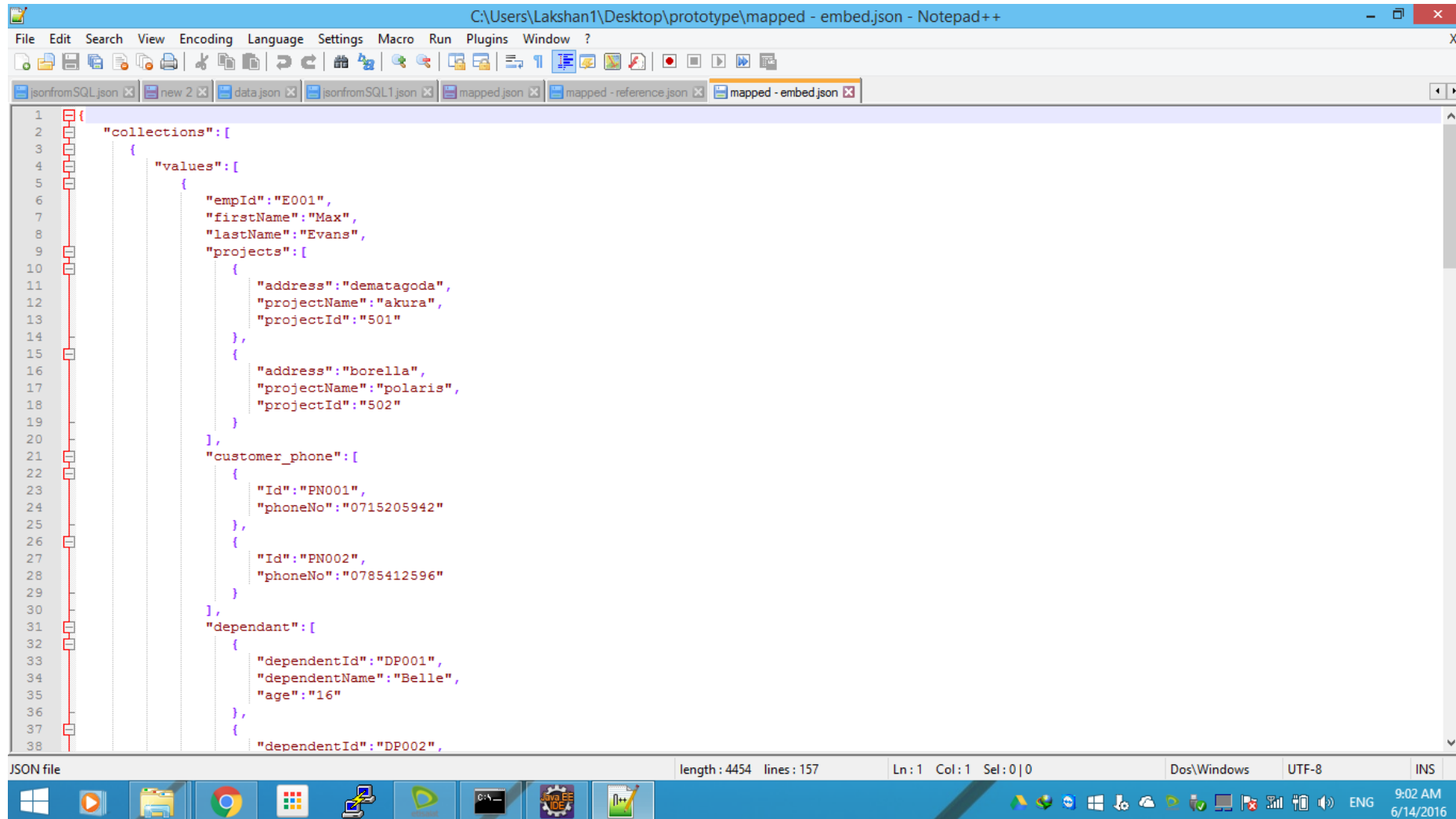
```
"collections": [
  {
    "values": [
      {
        "empId": "E001",
        "firstName": "Max",
        "lastName": "Evans",
        "emp_phone": [ ],
        "dependant": [
          {
            "dependentId": "DP001",
            "dependentName": "Belle",
            "age": "16"
          },
          { }
        ],
        "department": "575f852a1db2b63b2c67d765",
        "tittle": "Mr"
      },

```

Many to many - Identification

```
215     "title": "Mr",
216     "firstName": "Augustus",
217     "lastName": "Waters",
218     "deptId": "D002"
219   }, {
220     "name": "project_emp",
221     "colCount": 6,
222     "primaryKey": "empId",
223     "columns": [
224       {
225         "colName": "empId",
226         "dataType": "varchar"
227       }, {
228         "colName": "projId",
229         "dataType": "int"
230       }
231     ],
232     "referencingFrom": [
233       {
234         "referencedCol": "empId",
235         "referencedTab": "employee",
236         "referencingCol": "empId",
237         "relationshipType": "ManyToMany"
238       }, {
239         "referencedCol": "projId",
240         "referencedTab": "projects",
241         "referencingCol": "projectId",
242         "relationshipType": "ManyToMany"
243       }
244     ],
245     "referencedBy": [
246       {
247         "data": [
248           {
249             "empId": "E001",
250             "projId": "501"
251           }, {
252             "empId": "E003",
253             "projId": "501"
254           }, {
255             "empId": "E001",
256             "projId": "502"
257           }
258         ]
259       }
260     ]
261   }
262 ]
```

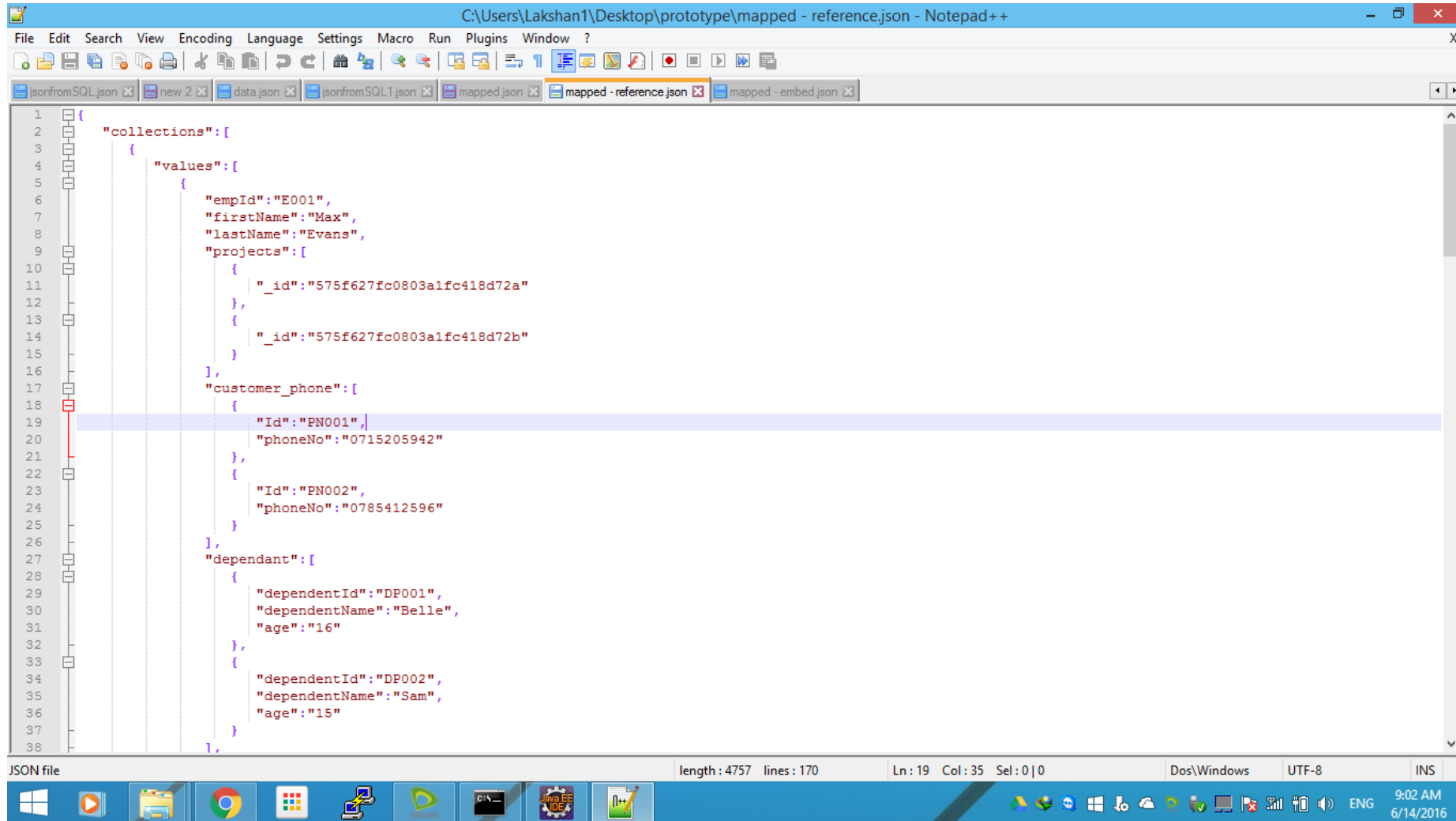
Many to many - Embedding



```
1 {
2   "collections": {
3     "values": [
4       {
5         "empId": "E001",
6         "firstName": "Max",
7         "lastName": "Evans",
8         "projects": [
9           {
10            "address": "dematagoda",
11            "projectName": "akura",
12            "projectId": "501"
13          },
14          {
15            "address": "borella",
16            "projectName": "polaris",
17            "projectId": "502"
18          }
19        ],
20        "customer_phone": [
21          {
22            "Id": "PN001",
23            "phoneNo": "0715205942"
24          },
25          {
26            "Id": "PN002",
27            "phoneNo": "0785412596"
28          }
29        ],
30        "dependant": [
31          {
32            "dependentId": "DP001",
33            "dependentName": "Belle",
34            "age": "16"
35          },
36          {
37            "dependentId": "DP002",
38            "dependentName": "Belle",
39            "age": "16"
40          }
41        ]
42      }
43    ]
44  }
45 }
```

JSON file length: 4454 lines: 157 Ln: 1 Col: 1 Sel: 0 | 0 Dos\Windows UTF-8 INS

Many to many - Referencing



```
1 {
2   "collections": {
3     "values": [
4       {
5         "empId": "E001",
6         "firstName": "Max",
7         "lastName": "Evans",
8         "projects": [
9           {
10            "_id": "575f627fc0803a1fc418d72a"
11          },
12          {
13            "_id": "575f627fc0803a1fc418d72b"
14          }
15        ]
16      },
17      "customer_phone": [
18        {
19          "Id": "PN001",
20          "phoneNo": "0715205942"
21        },
22        {
23          "Id": "PN002",
24          "phoneNo": "0785412596"
25        }
26      ],
27      "dependant": [
28        {
29          "dependentId": "DP001",
30          "dependentName": "Belle",
31          "age": "16"
32        },
33        {
34          "dependentId": "DP002",
35          "dependentName": "Sam",
36          "age": "15"
37        }
38      ]
39    }
40  }
```

Any Questions?

Q/A

Thank You

Thank You