HW6 Report

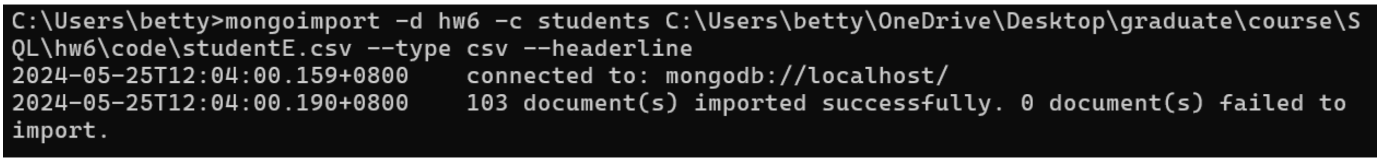
R12921059 電機所碩一 鄧雅文

MongoDB

Task1

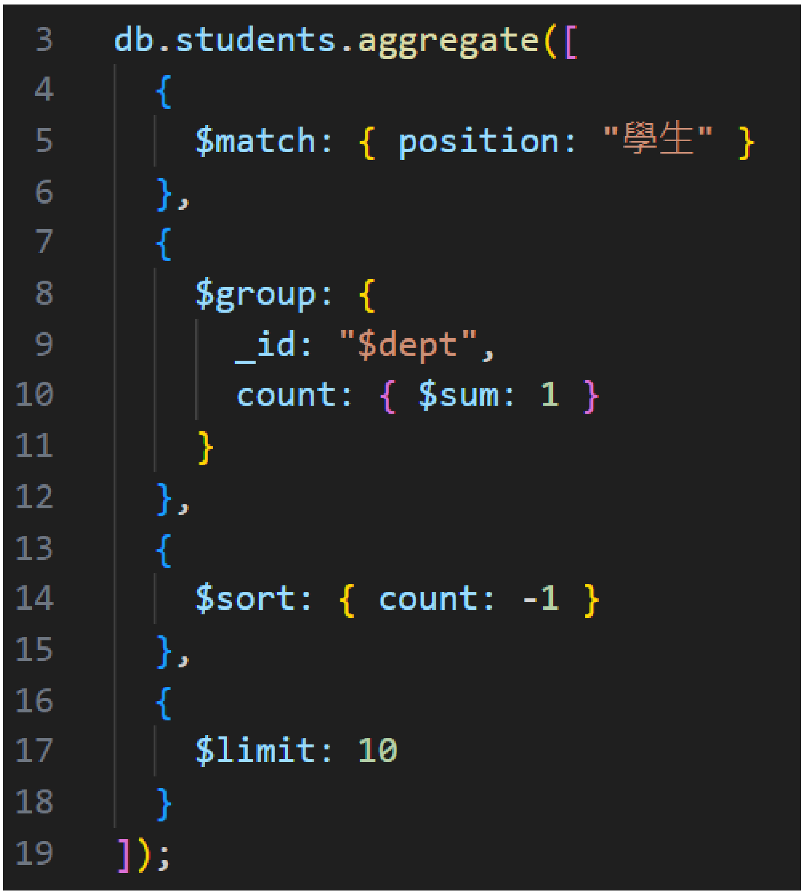
```
mongoimport -d hw6 -c students path_to_file\studentE.csv --type csv --headerline
```

Result:



```
C:\Users\betty>mongoimport -d hw6 -c students C:\Users\betty\OneDrive\Desktop\graduate\course\S
QL\hw6\code\studentE.csv --type csv --headerline
2024-05-25T12:04:00.159+0800    connected to: mongodb://localhost/
2024-05-25T12:04:00.190+0800    103 document(s) imported successfully. 0 document(s) failed to
import.
```

Task2



```
db.students.aggregate([
  {
    $match: { position: "學生" }
  },
  {
    $group: {
      _id: "$dept",
      count: { $sum: 1 }
    }
  },
  {
    $sort: { count: -1 }
  },
  {
    $limit: 10
  }
]);
```

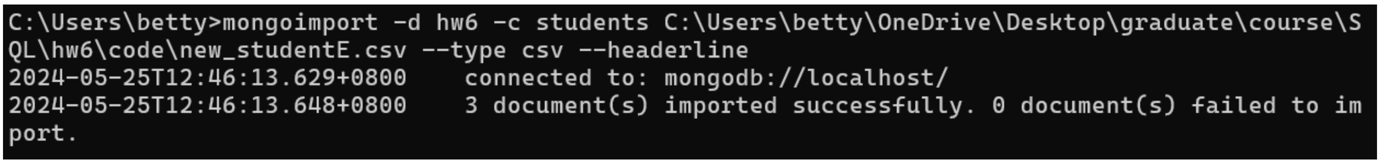
Result:

```
[
  {
    "_id": "資工所",
    "count": 14
  },
  {
    "_id": "電機所",
    "count": 11
  },
  {
    "_id": "生物機電所",
    "count": 8
  },
  {
    "_id": "經濟系",
    "count": 6
  },
  {
    "_id": "電機系",
    "count": 6
  },
  {
    "_id": "資訊管理所",
    "count": 5
  },
  {
    "_id": "電信所",
    "count": 5
  },
  {
    "_id": "資工系",
    "count": 4
  },
  {
    "_id": "生物機電系",
    "count": 4
  },
  {
    "_id": "工科海洋所",
    "count": 3
  }
]
```

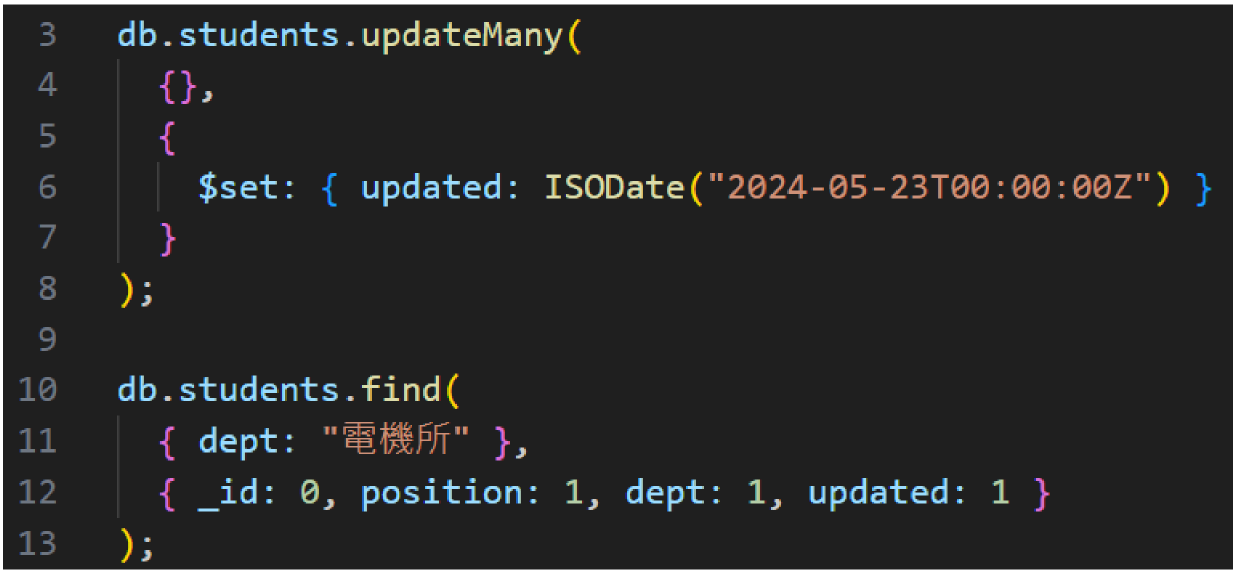
Task3

```
mongoimport -d hw6 -c students path_to_file\new_studentE.csv --type csv --headerline
```

Result:



```
C:\Users\betty>mongoimport -d hw6 -c students C:\Users\betty\OneDrive\Desktop\graduate\course\S
QL\hw6\code\new_studentE.csv --type csv --headerline
2024-05-25T12:46:13.629+0800    connected to: mongodb://localhost/
2024-05-25T12:46:13.648+0800    3 document(s) imported successfully. 0 document(s) failed to im
port.
```

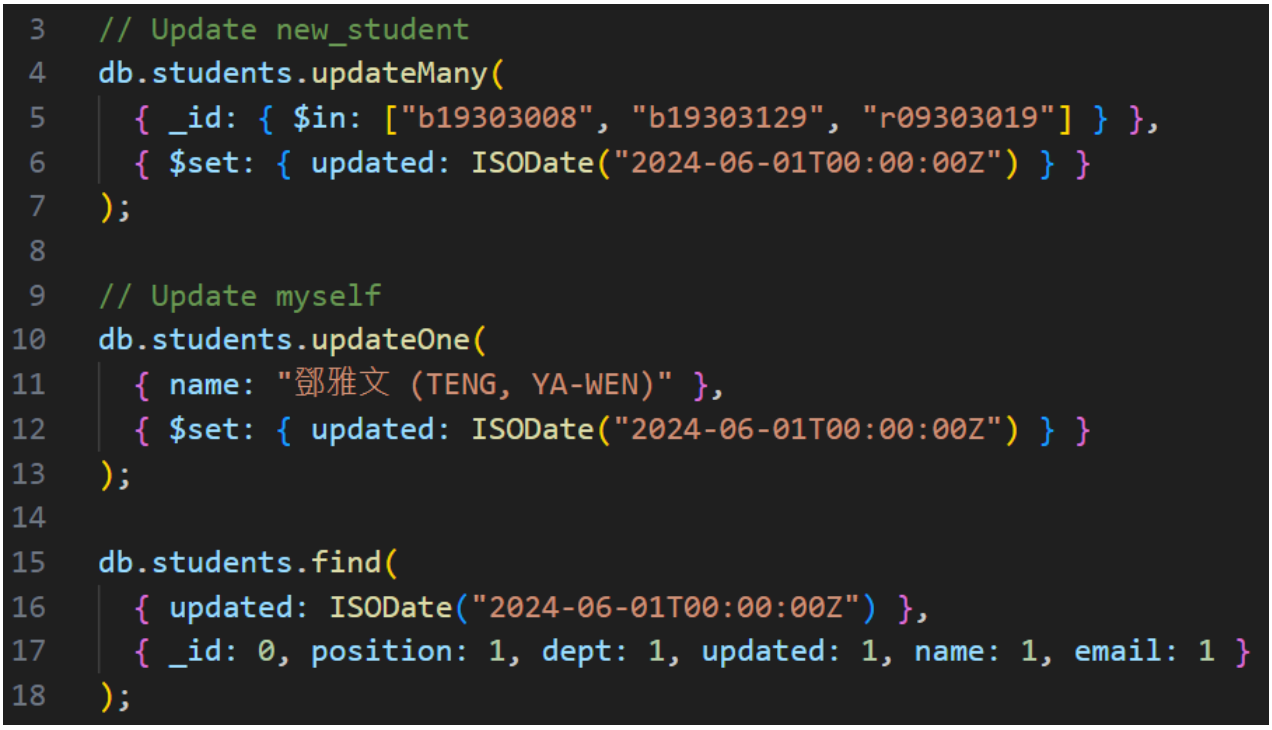


```
db.students.updateMany(
  {},
  {
    $set: { updated: ISODate("2024-05-23T00:00:00Z") }
  }
);

db.students.find(
  { dept: "電機所" },
  { _id: 0, position: 1, dept: 1, updated: 1 }
);
```

Result

```
[
  {
    "position": "學生",
    "dept": "電機所",
    "updated": {
      "$date": "2024-05-23T00:00:00Z"
    }
  },
  {
    "position": "學生",
    "dept": "電機所",
    "updated": {
      "$date": "2024-05-23T00:00:00Z"
    }
  },
  {
    "position": "學生",
    "dept": "電機所",
    "updated": {
      "$date": "2024-05-23T00:00:00Z"
    }
  },
  {
    "position": "學生",
    "dept": "電機所",
    "updated": {
      "$date": "2024-05-23T00:00:00Z"
    }
  },
  {
    "position": "學生",
    "dept": "電機所",
    "updated": {
      "$date": "2024-05-23T00:00:00Z"
    }
  },
  {
    "position": "學生",
    "dept": "電機所",
    "updated": {
      "$date": "2024-05-23T00:00:00Z"
    }
  },
  {
    "position": "學生",
    "dept": "電機所",
    "updated": {
      "$date": "2024-05-23T00:00:00Z"
    }
  },
  {
    "position": "學生",
    "dept": "電機所",
    "updated": {
      "$date": "2024-05-23T00:00:00Z"
    }
  },
  {
    "position": "學生",
    "dept": "電機所",
    "updated": {
      "$date": "2024-05-23T00:00:00Z"
    }
  },
  {
    "position": "學生",
    "dept": "電機所",
    "updated": {
      "$date": "2024-05-23T00:00:00Z"
    }
  },
  {
    "position": "學生",
    "dept": "電機所",
    "updated": {
      "$date": "2024-05-23T00:00:00Z"
    }
  },
  {
    "position": "旁聽生",
    "dept": "電機所",
    "updated": {
      "$date": "2024-05-23T00:00:00Z"
    }
  }
]
```

Task4



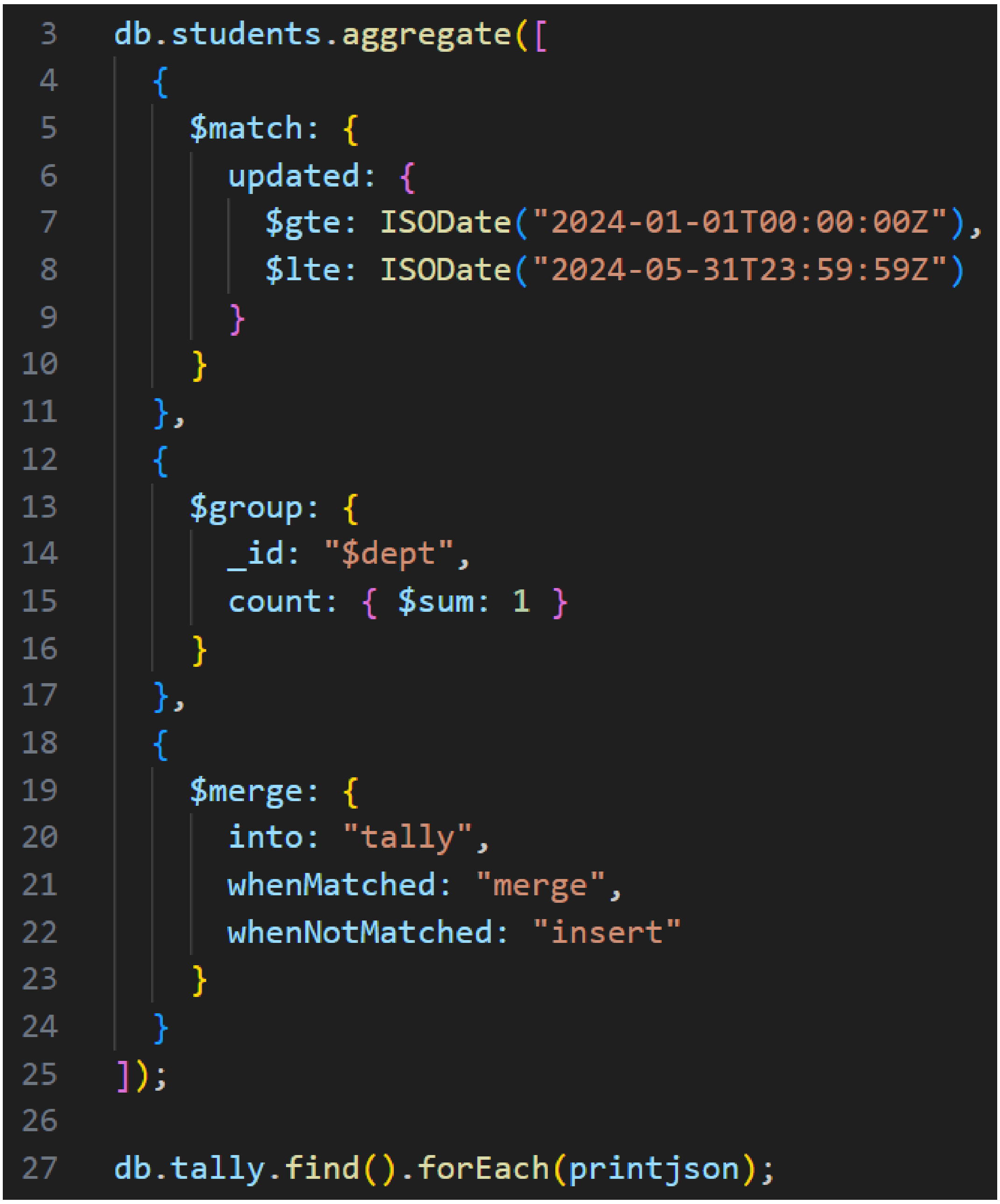
```
// Update new_student
db.students.updateMany(
  { _id: { $in: ["b19303008", "b19303129", "r09303019"] } },
  { $set: { updated: ISODate("2024-06-01T00:00:00Z") } }
);

// Update myself
db.students.updateOne(
  { name: "鄧雅文 (TENG, YA-WEN)" },
  { $set: { updated: ISODate("2024-06-01T00:00:00Z") } }
);

db.students.find(
  { updated: ISODate("2024-06-01T00:00:00Z") },
  { _id: 0, position: 1, dept: 1, updated: 1, name: 1, email: 1 }
);
```

Result:

```
[
  {
    "position": "學生",
    "dept": "電機所",
    "name": "鄧雅文 (TENG, YA-WEN)",
    "email": "r12921059@ntu.edu.tw",
    "updated": {
      "$date": "2024-06-01T00:00:00Z"
    }
  },
  {
    "position": "學生",
    "dept": "太空系",
    "name": "劉海王 (LIU, NEPTUNE)",
    "email": "b19303008@ntu.edu.tw",
    "updated": {
      "$date": "2024-06-01T00:00:00Z"
    }
  },
  {
    "position": "學生",
    "dept": "太空所",
    "name": "吳火箭 (WU, ROCKET)",
    "email": "r19303129@ntu.edu.tw",
    "updated": {
      "$date": "2024-06-01T00:00:00Z"
    }
  },
  {
    "position": "學生",
    "dept": "太空所",
    "name": "黃人馬 (HUANG, CENTAURUS)",
    "email": "r09303019@ntu.edu.tw",
    "updated": {
      "$date": "2024-06-01T00:00:00Z"
    }
  }
]
```

Task5

5-1

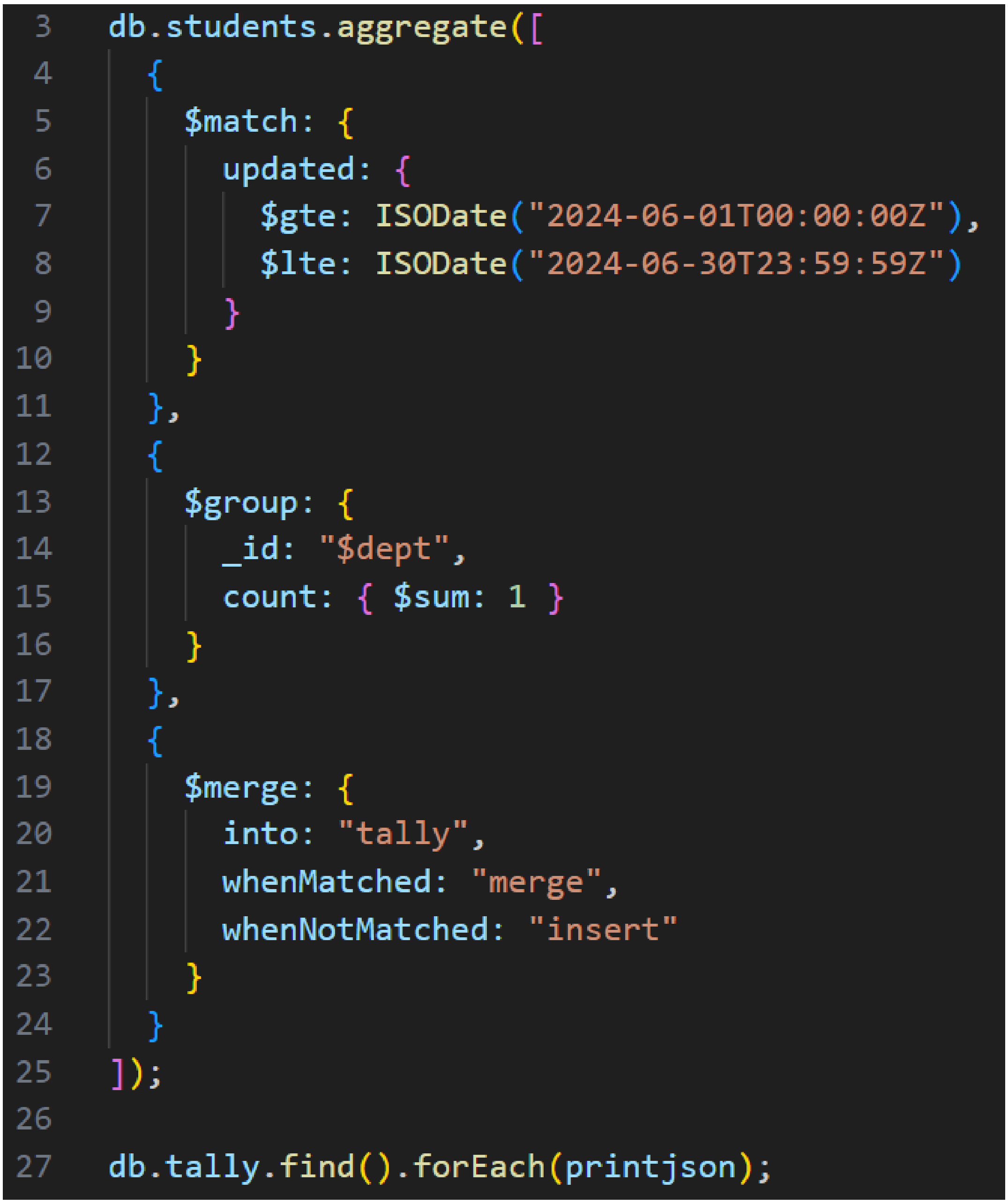


```
db.students.aggregate([
  {
    $match: {
      updated: {
        $gte: ISODate("2024-01-01T00:00:00Z"),
        $lte: ISODate("2024-05-31T23:59:59Z")
      }
    }
  },
  {
    $group: {
      _id: "$dept",
      count: { $sum: 1 }
    }
  },
  {
    $merge: {
      into: "tally",
      whenMatched: "merge",
      whenNotMatched: "insert"
    }
  }
]);

db.tally.find().forEach(printjson);
```

Result:

```
{ _id: '政治所', count: 3 }
{ _id: '醫工系', count: 2 }
{ _id: '基因學位學程', count: 1 }
{ _id: '動科系', count: 2 }
{ _id: '網媒所', count: 3 }
{ _id: '工管系科管組', count: 1 }
{ _id: '生物機電所', count: 8 }
{ _id: '資工所', count: 15 }
{ _id: '機械所固力組', count: 2 }
{ _id: '電信所', count: 6 }
{ _id: '工科海洋所', count: 3 }
{ _id: '經濟系', count: 6 }
{ _id: '電機系', count: 8 }
{ _id: '生醫電資所', count: 1 }
{ _id: '資工系', count: 5 }
{ _id: '', count: 2 }
{ _id: '土木所水利組', count: 1 }
{ _id: '土木所營管組', count: 2 }
{ _id: '材料所應材班', count: 1 }
{ _id: '土木所CAE組', count: 1 }
{ _id: '生物機電系', count: 4 }
{ _id: '機械系', count: 1 }
{ _id: '森林環資所', count: 1 }
{ _id: '材料所', count: 1 }
{ _id: '機械所製造組', count: 2 }
{ _id: '財金系', count: 1 }
{ _id: '流預所', count: 1 }
{ _id: '工管系企管組', count: 1 }
{ _id: '資訊管理所', count: 5 }
{ _id: '材料系', count: 1 }
{ _id: '電機所', count: 11 }
```

5-2



```
db.students.aggregate([
  {
    $match: {
      updated: {
        $gte: ISODate("2024-06-01T00:00:00Z"),
        $lte: ISODate("2024-06-30T23:59:59Z")
      }
    }
  },
  {
    $group: {
      _id: "$dept",
      count: { $sum: 1 }
    }
  },
  {
    $merge: {
      into: "tally",
      whenMatched: "merge",
      whenNotMatched: "insert"
    }
  }
]);

db.tally.find().forEach(printjson);
```

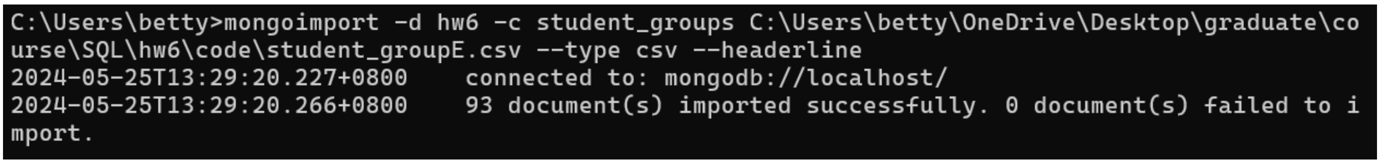
Result:

```
 _id: '政治所', count: 3 }
{ _id: '醫工系', count: 2 }
{ _id: '基因學位學程', count: 1 }
{ _id: '動科系', count: 2 }
{ _id: '網媒所', count: 3 }
{ _id: '工管系科管組', count: 1 }
{ _id: '生物機電所', count: 8 }
{ _id: '資工所', count: 15 }
{ _id: '機械所固力組', count: 2 }
{ _id: '電信所', count: 6 }
{ _id: '工科海洋所', count: 3 }
{ _id: '經濟系', count: 6 }
{ _id: '電機系', count: 8 }
{ _id: '生醫電資所', count: 1 }
{ _id: '資工系', count: 5 }
{ _id: '', count: 2 }
{ _id: '土木所水利組', count: 1 }
{ _id: '土木所營管組', count: 2 }
{ _id: '材料所應材班', count: 1 }
{ _id: '土木所CAE組', count: 1 }
{ _id: '生物機電系', count: 4 }
{ _id: '機械系', count: 1 }
{ _id: '森林環資所', count: 1 }
{ _id: '材料所', count: 1 }
{ _id: '機械所製造組', count: 2 }
{ _id: '財金系', count: 1 }
{ _id: '流預所', count: 1 }
{ _id: '工管系企管組', count: 1 }
{ _id: '資訊管理所', count: 5 }
{ _id: '材料系', count: 1 }
{ _id: '電機所', count: 1 }
{ _id: '太空系', count: 1 }
{ _id: '太空所', count: 2 }
```

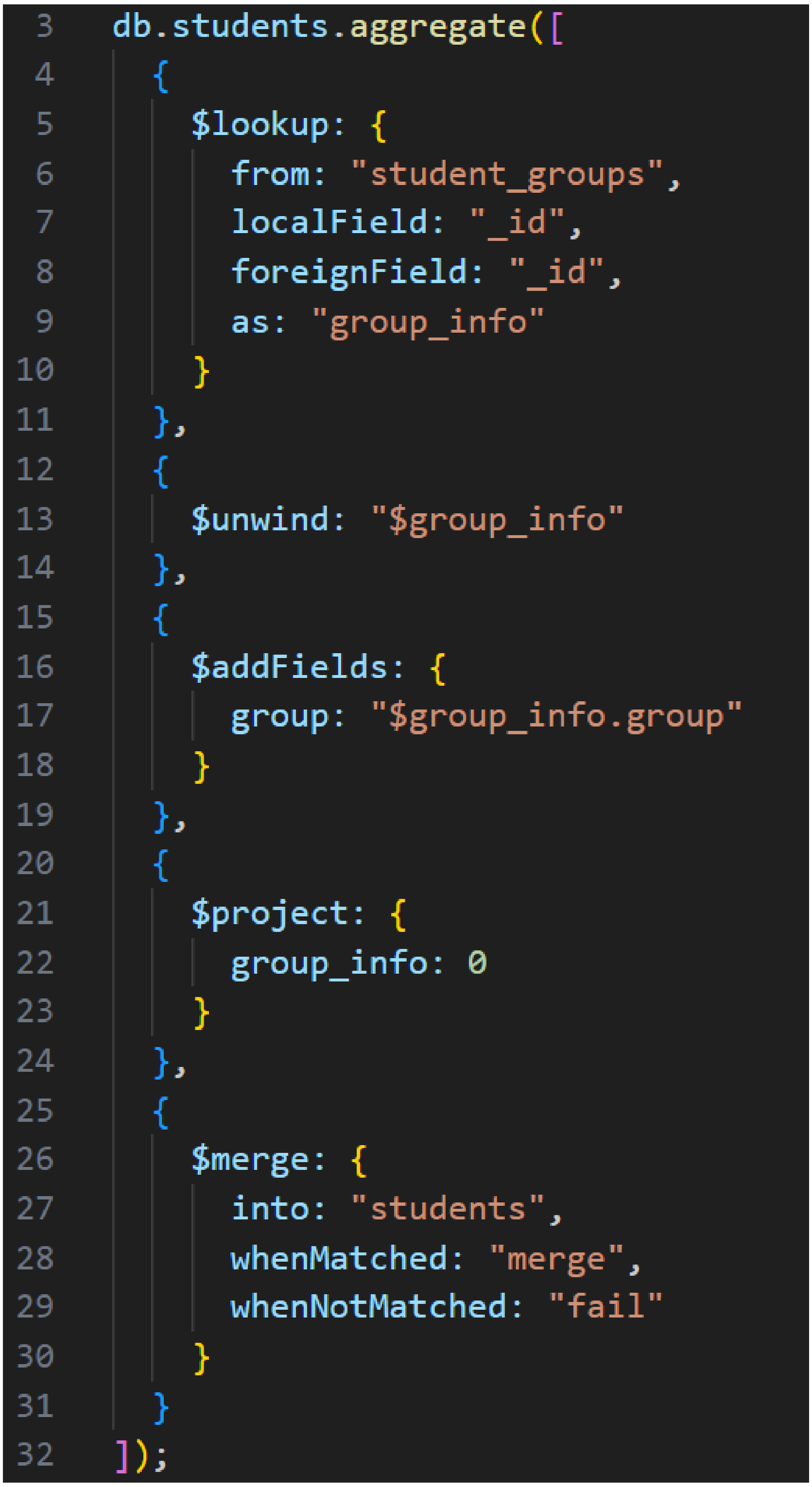
Task6

```
mongoimport -d hw6 -c student_groups path_to_file\student_groupE.csv --type csv --headerline
```

Result:



```
C:\Users\betty>mongoimport -d hw6 -c student_groups C:\Users\betty\OneDrive\Desktop\graduate\co
urse\SQL\hw6\code\student_groupE.csv --type csv --headerline
2024-05-25T13:29:20.227+0800    connected to: mongodb://localhost/
2024-05-25T13:29:20.266+0800    93 document(s) imported successfully. 0 document(s) failed to i
mport.
```

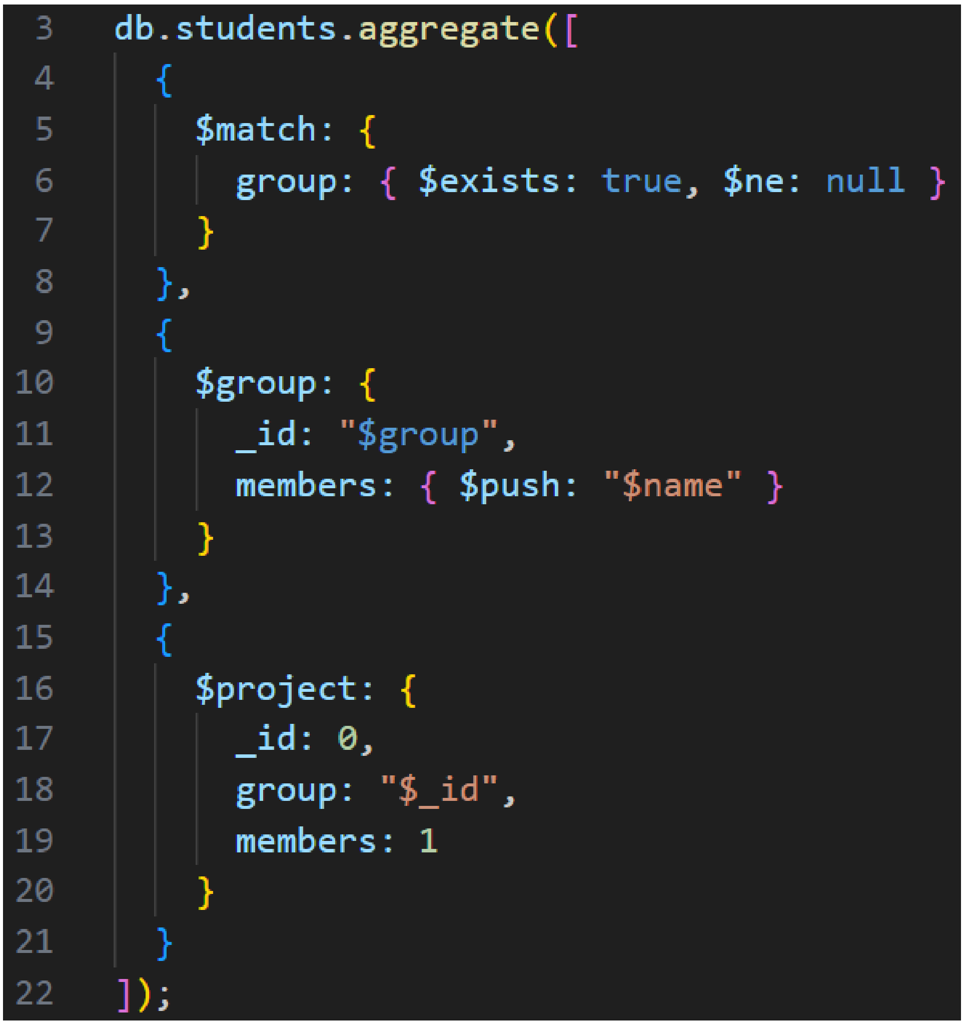


```
db.students.aggregate([
  {
    $lookup: {
      from: "student_groups",
      localField: "_id",
      foreignField: "_id",
      as: "group_info"
    }
  },
  {
    $unwind: "$group_info"
  },
  {
    $addFields: {
      group: "$group_info.group"
    }
  },
  {
    $project: {
      group_info: 0
    }
  },
  {
    $merge: {
      into: "students",
      whenMatched: "merge",
      whenNotMatched: "fail"
    }
  }
]);
```

隨便點入某個students document查看，成功加入group:

```
{
  "_id": "b10303008",
  "position": "學生",
  "dept": "經濟系",
  "year": 3,
  "name": "劉家妮 (CHIA-NIH LIU)",
  "email": "b10303008@ntu.edu.tw",
  "class": "資料庫系統-從SQL到NoSQL (EE5178)",
  "updated": {
    "$date": "2024-05-23T00:00:00Z"
  },
  "group": 12
}
```

Task7



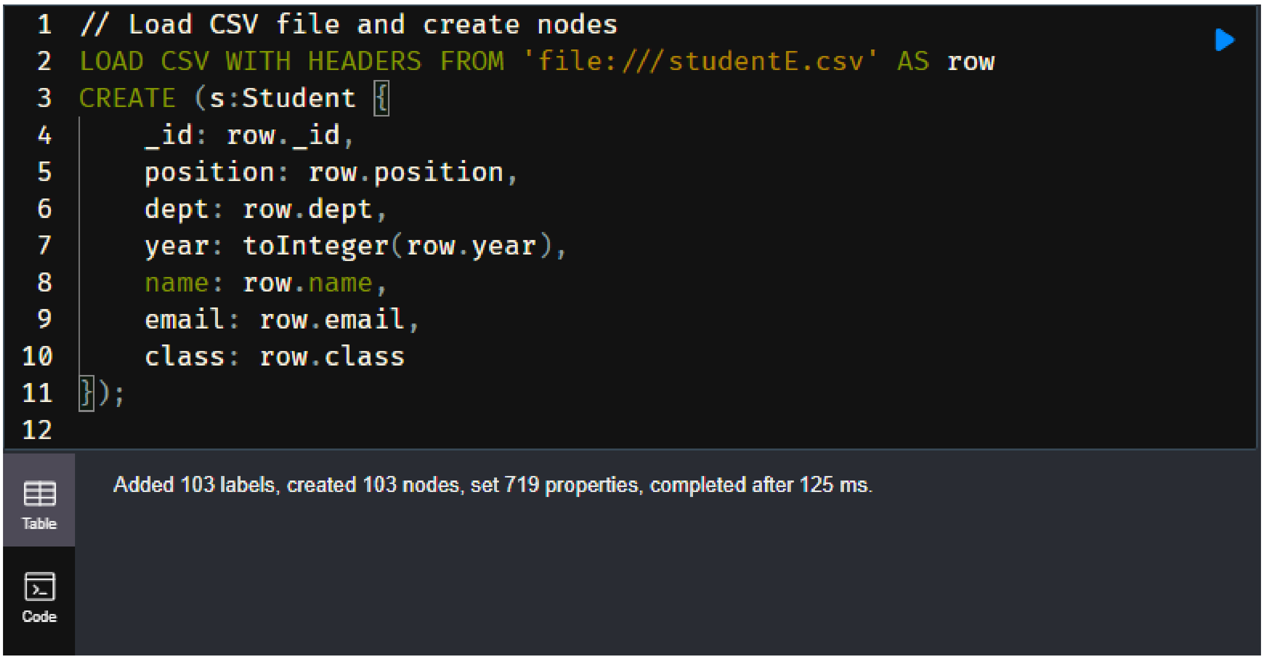
```
db.students.aggregate([
  {
    $match: {
      group: { $exists: true, $ne: null }
    }
  },
  {
    $group: {
      _id: "$group",
      members: { $push: "$name" }
    }
  },
  {
    $project: {
      _id: 0,
      group: "$_id",
      members: 1
    }
  }
]);
```

Result:

```
[
  {
    "members": [
      "廖宥弘 (YOU-HONG LIAO)",
      "許景淯 (HSU CHING YU)",
      "劉庭均 (Liu,ting-chun)",
      "吳承羲 (WU,CHENG-XI)"
    ],
    "group": 20
  },
  {
    "members": [
      "黃于軒 (HUANG,YU-hsUAN)",
      "侯貝霖 (PEI-LIN HOU)",
      "包杰修 (PAO, CHIEH-HSIU)",
      "劉瑄穎 (LIU,HSUAN-YING)"
    ],
    "group": 17
  },
  {
    "members": [
      "楊沛蓉 (PEI-RONG YANG)",
      "周昱宏 (CHOU, YU-HONG)",
      "林佳儀 (LIN, CHIA-YI)",
      "陳伶均 (CHEN, LING-CHUN)"
    ],
    "group": 8
  },
  {
    "members": [
      "林睿霖 (LIN,RUEI-LIN)",
      "李胤愷 (Lee, yin-kai)",
      "林翰莘 (LIN, HAN-HSIN)",
      "林峻佑 (LIN, CHUN-YU)"
    ],
    "group": 5
  },
  {
    "members": [
      "許致銓 (CHIH-CHUAN HSU)",
      "陳冠霖 (CHEN,GUAN-LIN)",
      "吳建翰 (WU, JIAN-HAN)",
      "林郁敏 (LIN, YU-MIN)"
    ],
    "group": 9
  },
  {
    "members": [
      "曾光良 (TSENG, KUANG-LIANG)",
      "陳映璇 (YING-HSUAN CHEN)",
      "郭承諺 (CHENG-YEN KUO)",
      "卓均而 (CHO, CHUN-ERH)"
    ],
    "group": 6
  },
  {
    "members": [
      "白騏瑞 (BAI, CI-RUEI)",
      "陳思齊 (CHEN, SSU-CHI)",
      "蔡知芸 (TSAI, CHIH-YUN)",
      "葉政翔 (ZHENG-XIANG YE)"
    ],
    "group": 14
  },
  {
    "members": [
      "黃　靖 (HUANG, JING)",
      "柯岱佑 (KO, DAI-YOU)",
      "楊士聖 (YANG, SHIH-SHENG)",
      "陳祈安 (CHEN, CHI-AN)"
    ],
    "group": 21
  },
  {
    "members": [
      "呂彥欣 (LU,YAN-XIN)",
      "李英碩 (LEE YING-SHUO)",
      "高子維 (KAO, TZU-WEI)",
      "郭沛孚 (GUO, PEI-FU)"
    ],
    "group": 13
  },
  {
    "members": [
      "吳柏賢 (WU PO-HSIEN)",
      "彭昱齊 (PENG YUCHI)",
      "楊冠柏 (YANG, GUAN-BO)"
    ],
    "group": 22
  },
  {
    "members": [
      "李語婕 (LEE, YU-CHIEH)",
      "陳沛妤 (PEI-YU CHEN)",
      "游景恩 (YU, JING-EN)",
      "張心瑜 (CHANG, HSIN-YU)"
    ],
    "group": 4
  },
  {
    "members": [
      "晏文芳 (YEN, WEN-FANG)",
      "張乃恩 (ZHANG,NAI-EN)",
      "洪旭初 (HONG, XU-CHU)",
      "陳冠甫 (GUAN-FU,CHEN)"
    ],
    "group": 18
  },
  {
    "members": [
      "鄭淳哲 (CHENG CHUN-TSE)",
      "薛　龍 (HSUEH, LUNG)",
      "曹宸睿 (Chen Jui Tsao)",
      "毛翊蓁 (MAO YI CHEN)"
    ],
    "group": 15
  },
  {
    "members": [
      "李哲維 (LEE, ZER-WEI)",
      "費俊昱 (CHUN-YU FEI)",
      "沈信宏 (SHEN, XIN-HONG)"
    ],
    "group": 23
  },
  {
    "members": [
      "賴宇辰 (LAI,YU/CHEN)",
      "王奕翔 (Wang Yi-Hsiang)",
      "許國昌 (KUO-CHANG HSU)"
    ],
    "group": 24
  },
  {
    "members": [
      "劉姝豆 (SHU-DOU,LIU)",
      "李宇軒 (LEE, YU-HSUAN)",
      "鍾靖詮 (CHUNG, CHING-CHUAN)",
      "黃冠綸 (HUANG, GUAN-LUN)"
    ],
    "group": 2
  },
  {
    "members": [
      "賴翰霖 (HAN-LIN LAI)",
      "江浩辰 (JIANG, HAO-CHEN)",
      "丁柏豪 (PO-HAO TING)",
      "陳乙馨 (CHEN, I-HSIN)"
    ],
    "group": 3
  },
  {
    "members": [
      "張瀚文 (CHANG HAN-WEN)",
      "張容誠 (JUNG-CHENG CHANG)",
      "謝廷寬",
      "黃柏儒 (HUANG,BO-RU)"
    ],
    "group": 16
  },
  {
    "members": [
      "許喬淇 (HSU, CHIAO-CHI)",
      "謝欣妤 (HSIEH, HSIN-YU)",
      "連震宇 (LIAN, JEN-YU)",
      "鄭朝鴻 (CHAO HUNG, JENG)"
    ],
    "group": 1
  },
  {
    "members": [
      "周哲瑋 (CHOU,CHE-WEI)",
      "王偉力 (WANG, WEI-LI)",
      "吳吉加 (CHI-CHIA WU)",
      "鄧雅文 (TENG, YA-WEN)"
    ],
    "group": 7
  }
]
```

Neo4j

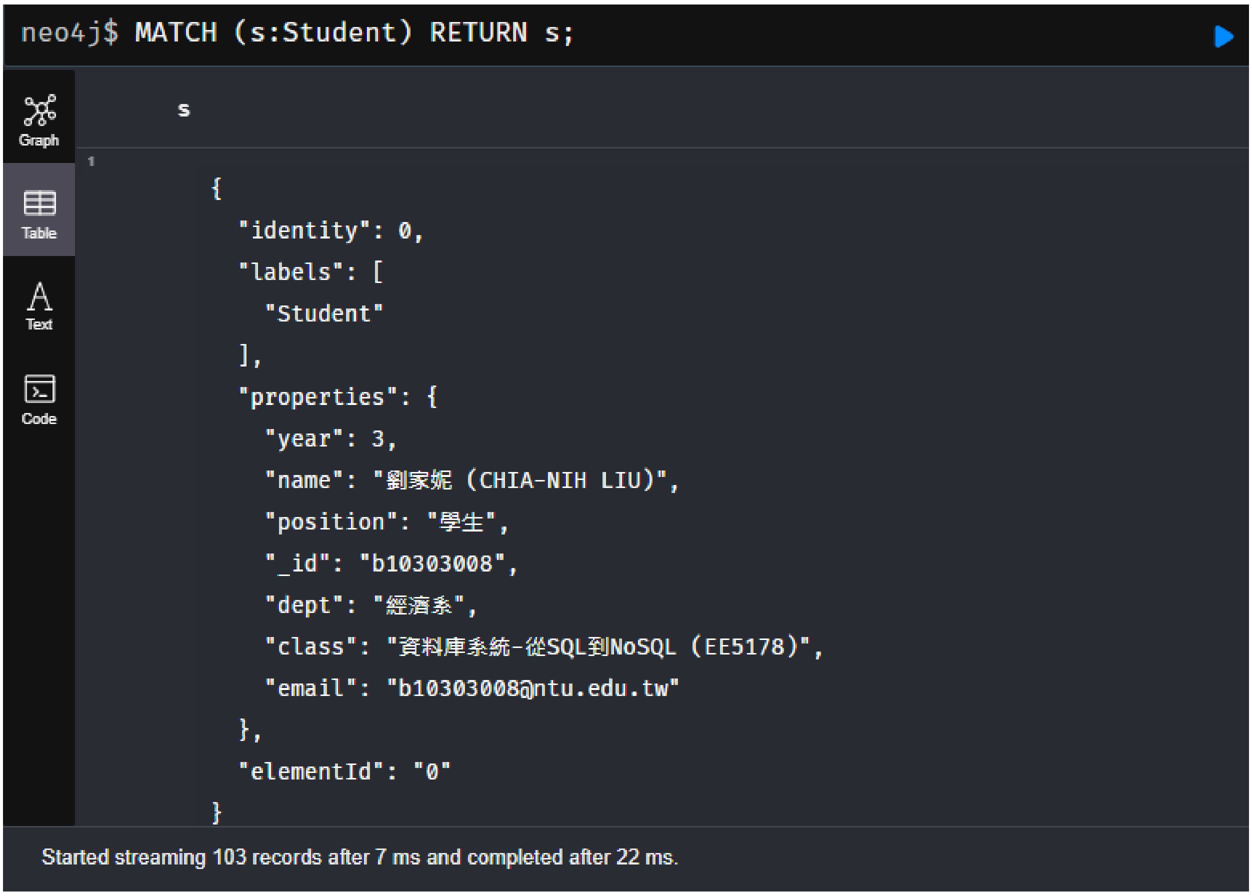
Task1



```
// Load CSV file and create nodes
LOAD CSV WITH HEADERS FROM 'file:///studentE.csv' AS row
CREATE (s:Student {
    _id: row._id,
    position: row.position,
    dept: row.dept,
    year: toInteger(row.year),
    name: row.name,
    email: row.email,
    class: row.class
});

```

Added 103 labels, created 103 nodes, set 719 properties, completed after 125 ms.

執行下圖即可列印student，並確認達成task1:

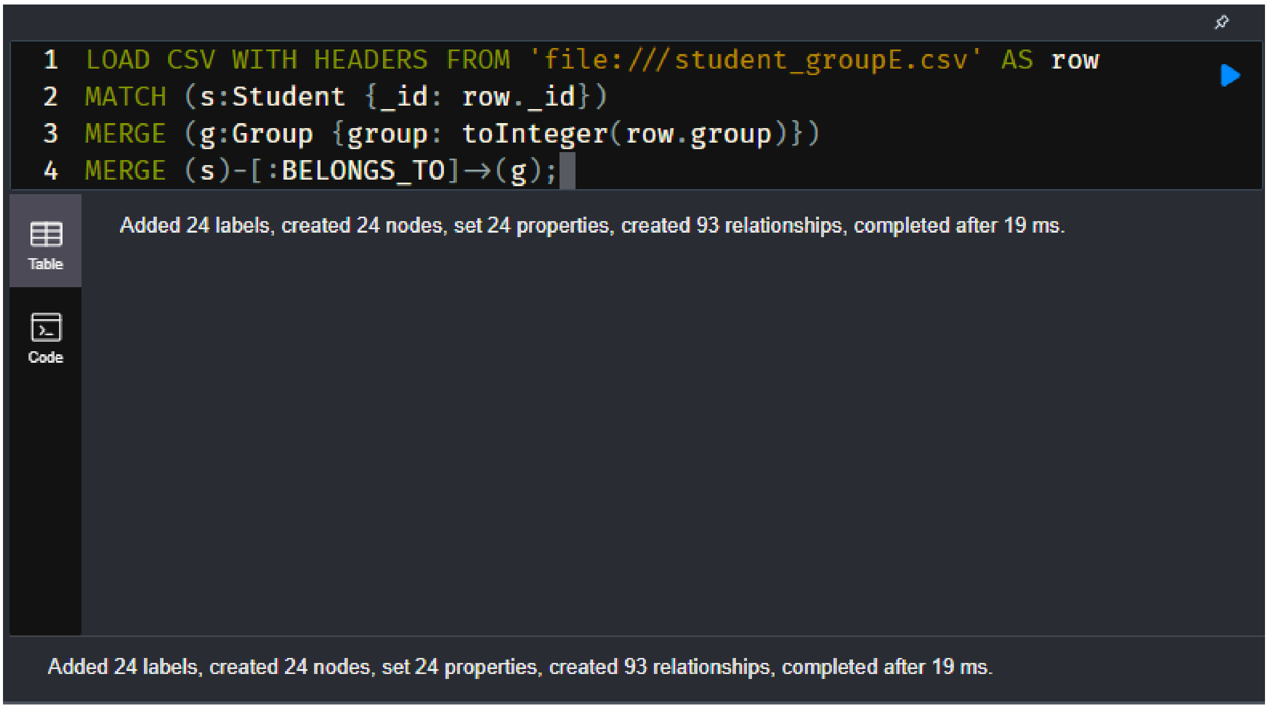


```
neo4j$ MATCH (s:Student) RETURN s;
```

```
s
1
{
  "identity": 0,
  "labels": [
    "Student"
  ],
  "properties": {
    "year": 3,
    "name": "劉家妮 (CHIA-NIH LIU)",
    "position": "學生",
    "_id": "b10303008",
    "dept": "經濟系",
    "class": "資料庫系統-從SQL到NoSQL (EE5178)",
    "email": "b10303008@ntu.edu.tw"
  },
  "elementId": "0"
}
```

Started streaming 103 records after 7 ms and completed after 22 ms.

Task2

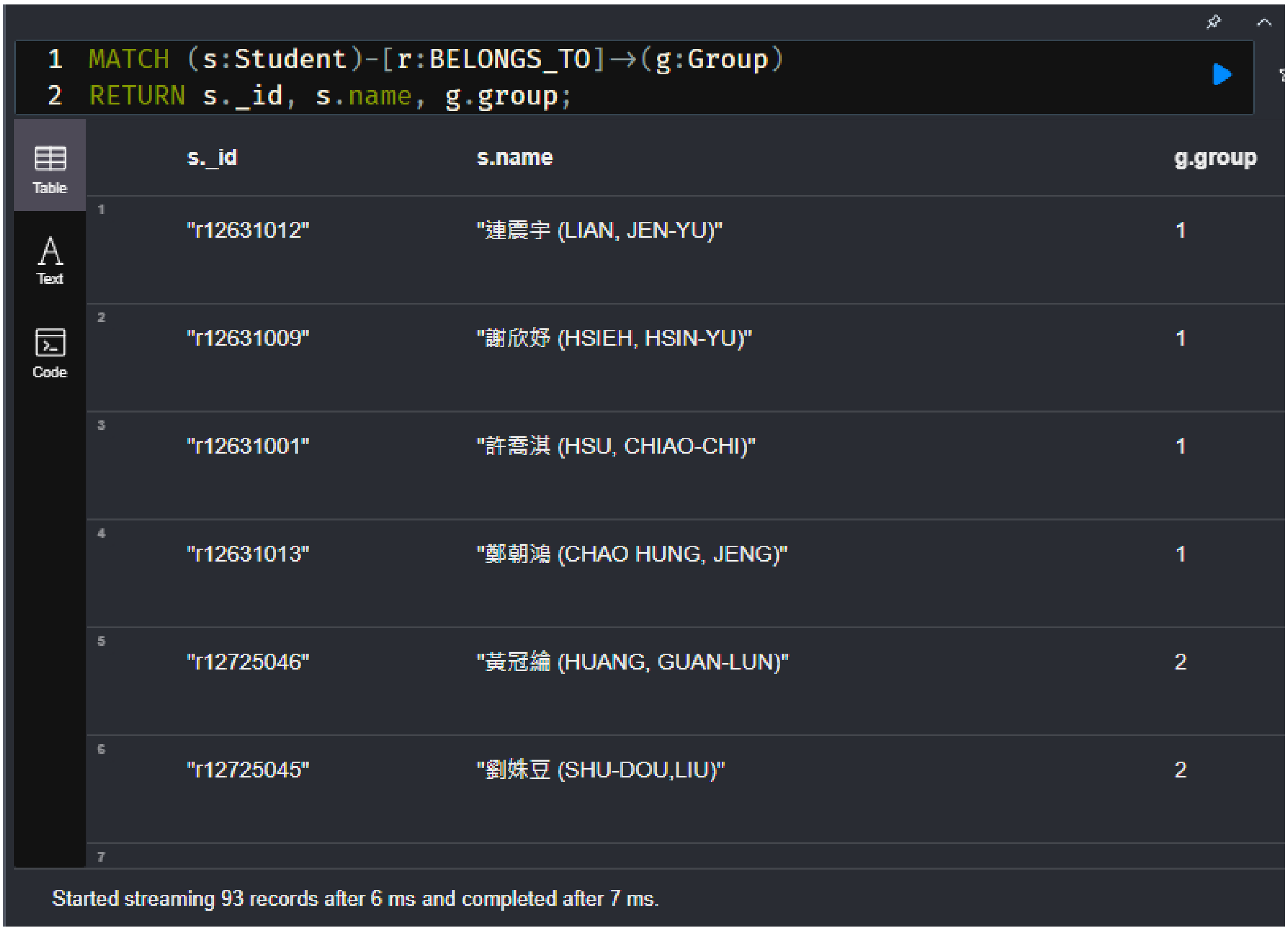


```
LOAD CSV WITH HEADERS FROM 'file:///student_groupE.csv' AS row
MATCH (s:Student {_id: row._id})
MERGE (g:Group {group: toInteger(row.group)})
MERGE (s)-[:BELONGS_TO]→(g);
```

Added 24 labels, created 24 nodes, set 24 properties, created 93 relationships, completed after 19 ms.

Added 24 labels, created 24 nodes, set 24 properties, created 93 relationships, completed after 19 ms.

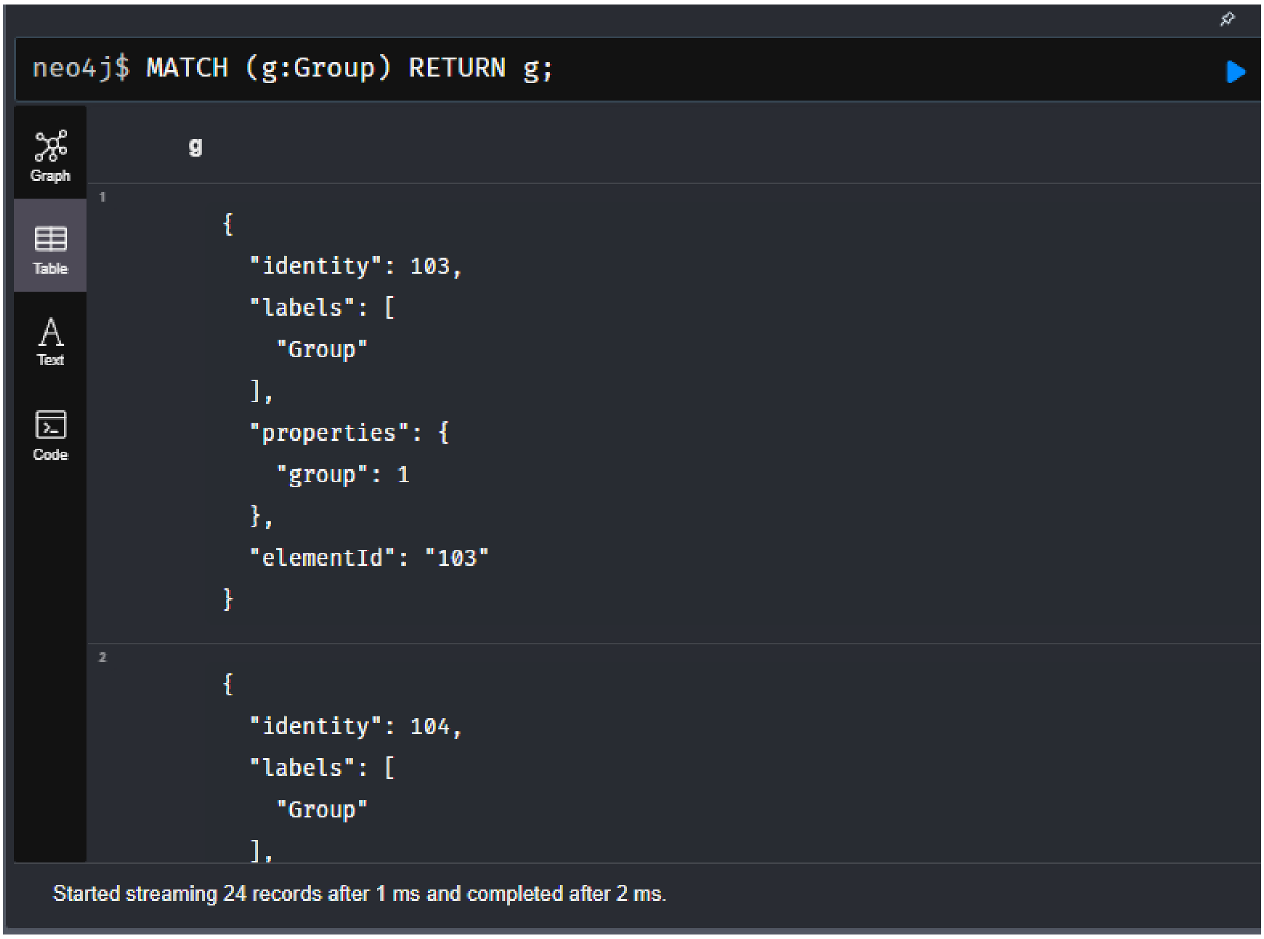
執行兩個下圖即可確認達成task2:



```
MATCH (s:Student)-[r:BELONGS_TO]→(g:Group)
RETURN s._id, s.name, g.group;
```

	s._id	s.name	g.group
1	"r12631012"	"連震宇 (LIAN, JEN-YU)"	1
2	"r12631009"	"謝欣妤 (HSIEH, HSIN-YU)"	1
3	"r12631001"	"許喬淇 (HSU, CHIAO-CHI)"	1
4	"r12631013"	"鄭朝鴻 (CHAO HUNG, JENG)"	1
5	"r12725046"	"黃冠綸 (HUANG, GUAN-LUN)"	2
6	"r12725045"	"劉姝豆 (SHU-DOU,LIU)"	2
7			

Started streaming 93 records after 6 ms and completed after 7 ms.

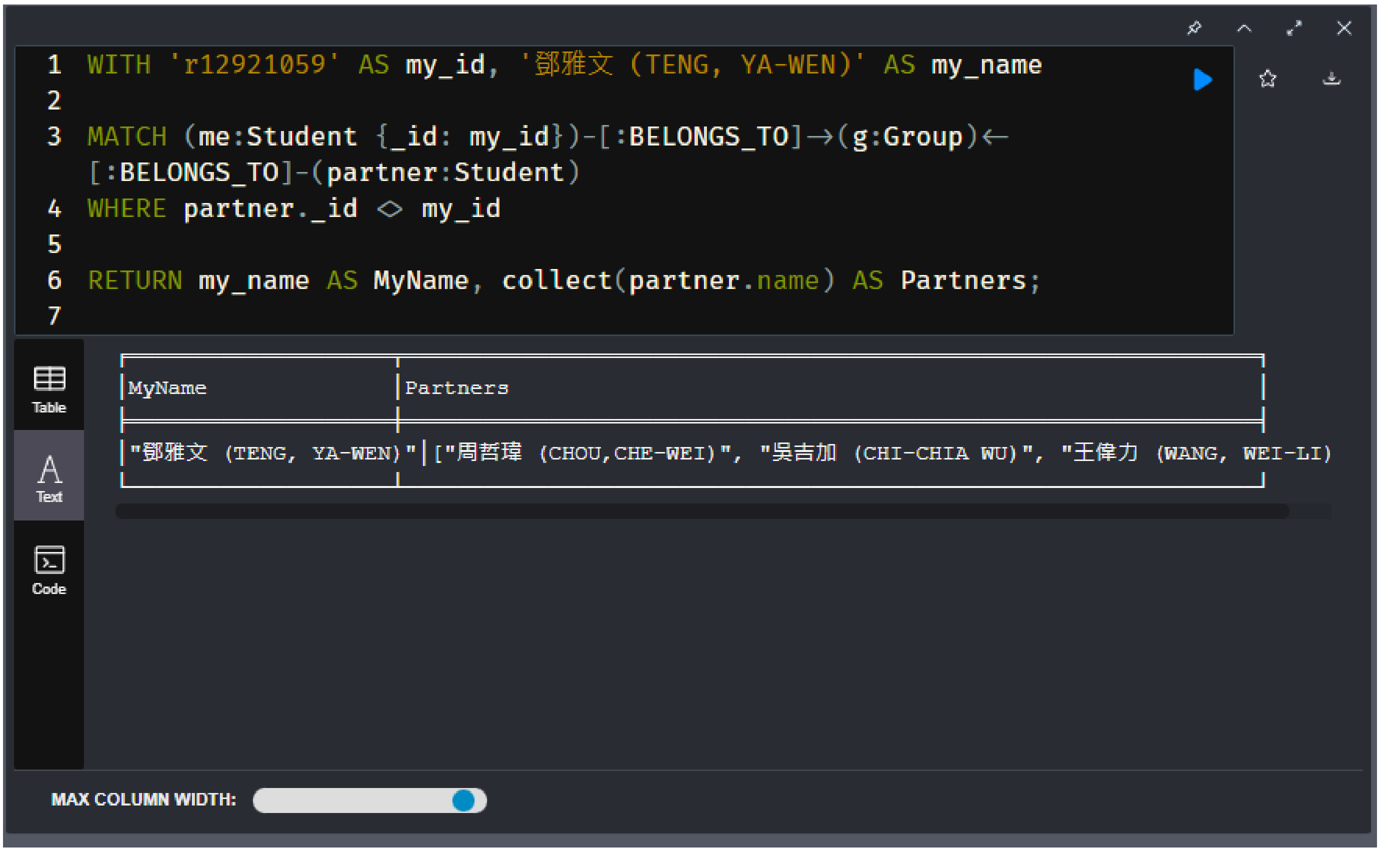


```
neo4j$ MATCH (g:Group) RETURN g;
```

```
g

1
    {
      "identity": 103,
      "labels": [
        "Group"
      ],
      "properties": {
        "group": 1
      },
      "elementId": "103"
    }

2
    {
      "identity": 104,
      "labels": [
        "Group"
      ],
```

Started streaming 24 records after 1 ms and completed after 2 ms.

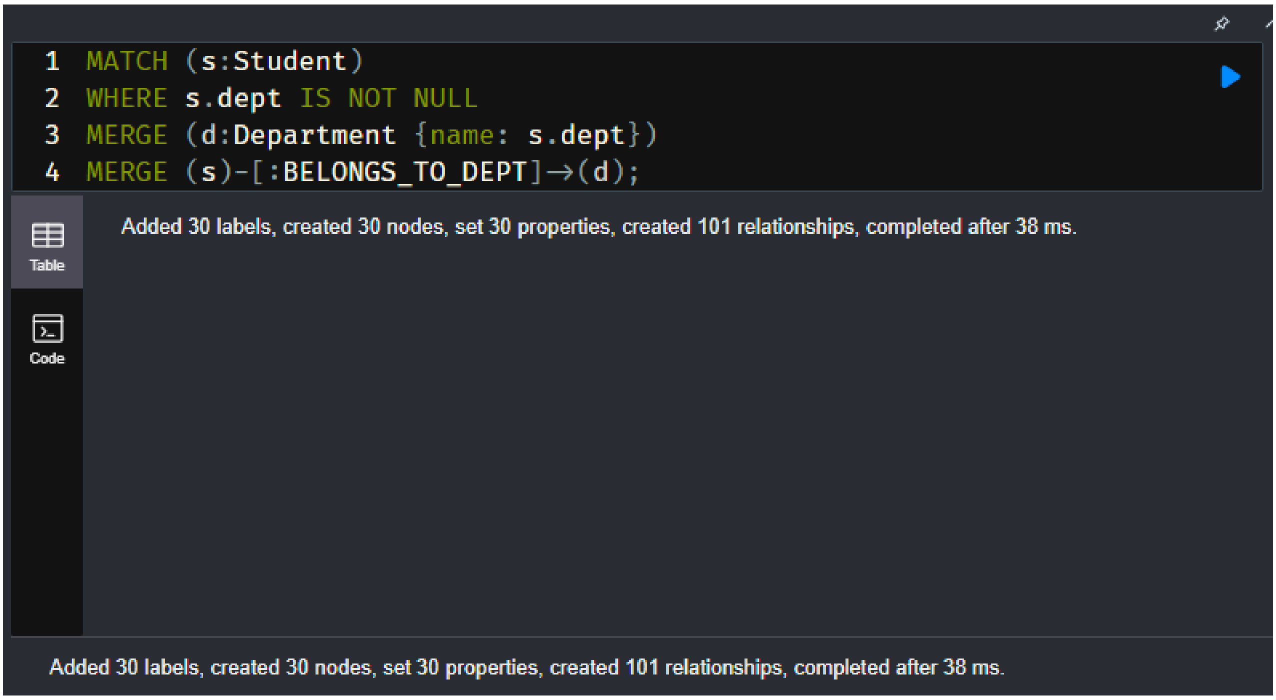
Task3



```
WITH 'r12921059' AS my_id, '鄧雅文 (TENG, YA-WEN)' AS my_name

MATCH (me:Student {_id: my_id})-[:BELONGS_TO]->(g:Group)<-
[:BELONGS_TO]-(partner:Student)
WHERE partner._id <> my_id

RETURN my_name AS MyName, collect(partner.name) AS Partners;
```

```
|MyName                 |Partners
|"鄧雅文 (TENG, YA-WEN)"|["周哲瑋 (CHOU,CHE-WEI)", "吳吉加 (CHI-CHIA WU)", "王偉力 (WANG, WEI-LI)
```

Task4

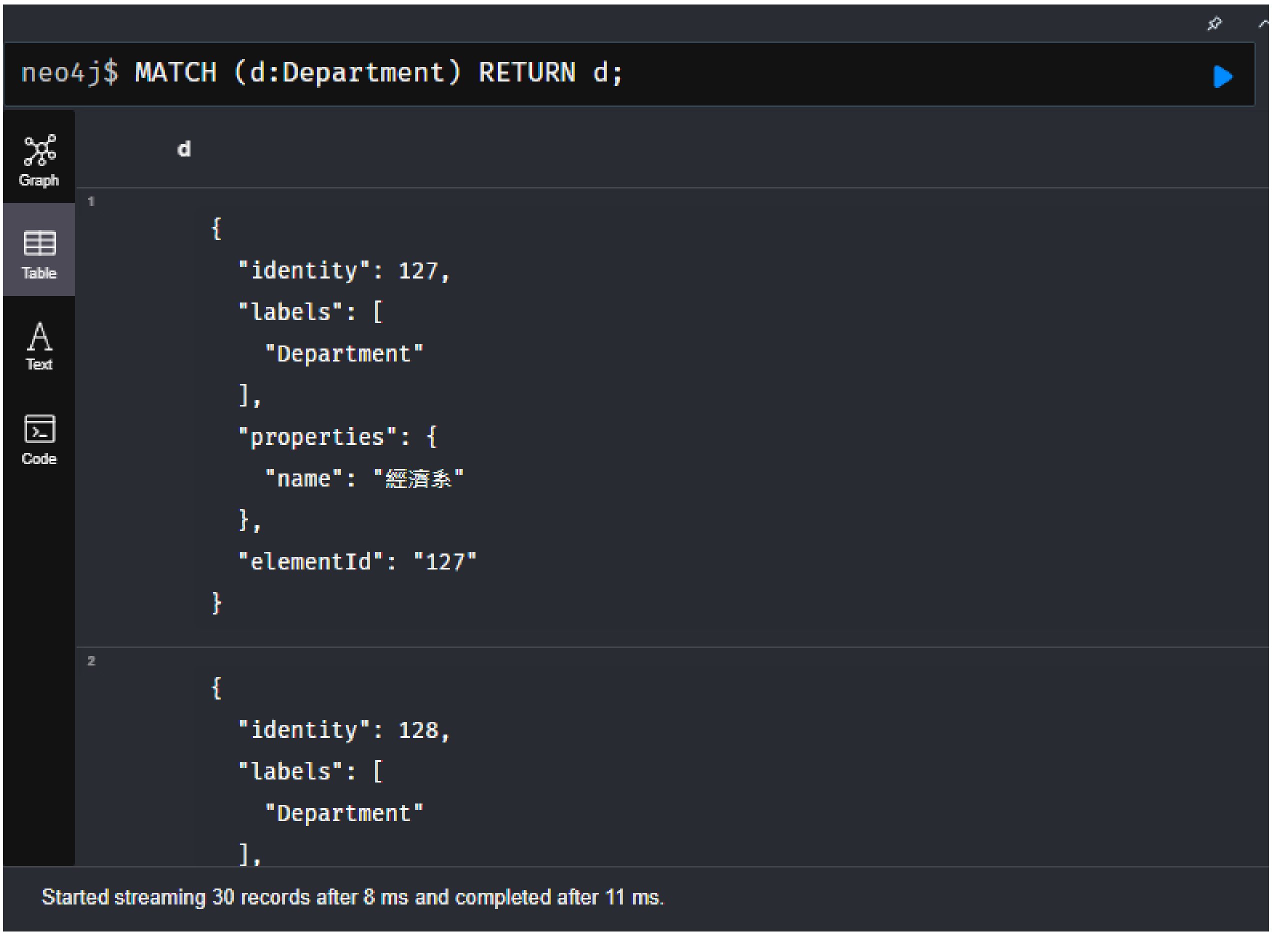


```
MATCH (s:Student)
WHERE s.dept IS NOT NULL
MERGE (d:Department {name: s.dept})
MERGE (s)-[:BELONGS_TO_DEPT]->(d);
```

Added 30 labels, created 30 nodes, set 30 properties, created 101 relationships, completed after 38 ms.

Added 30 labels, created 30 nodes, set 30 properties, created 101 relationships, completed after 38 ms.

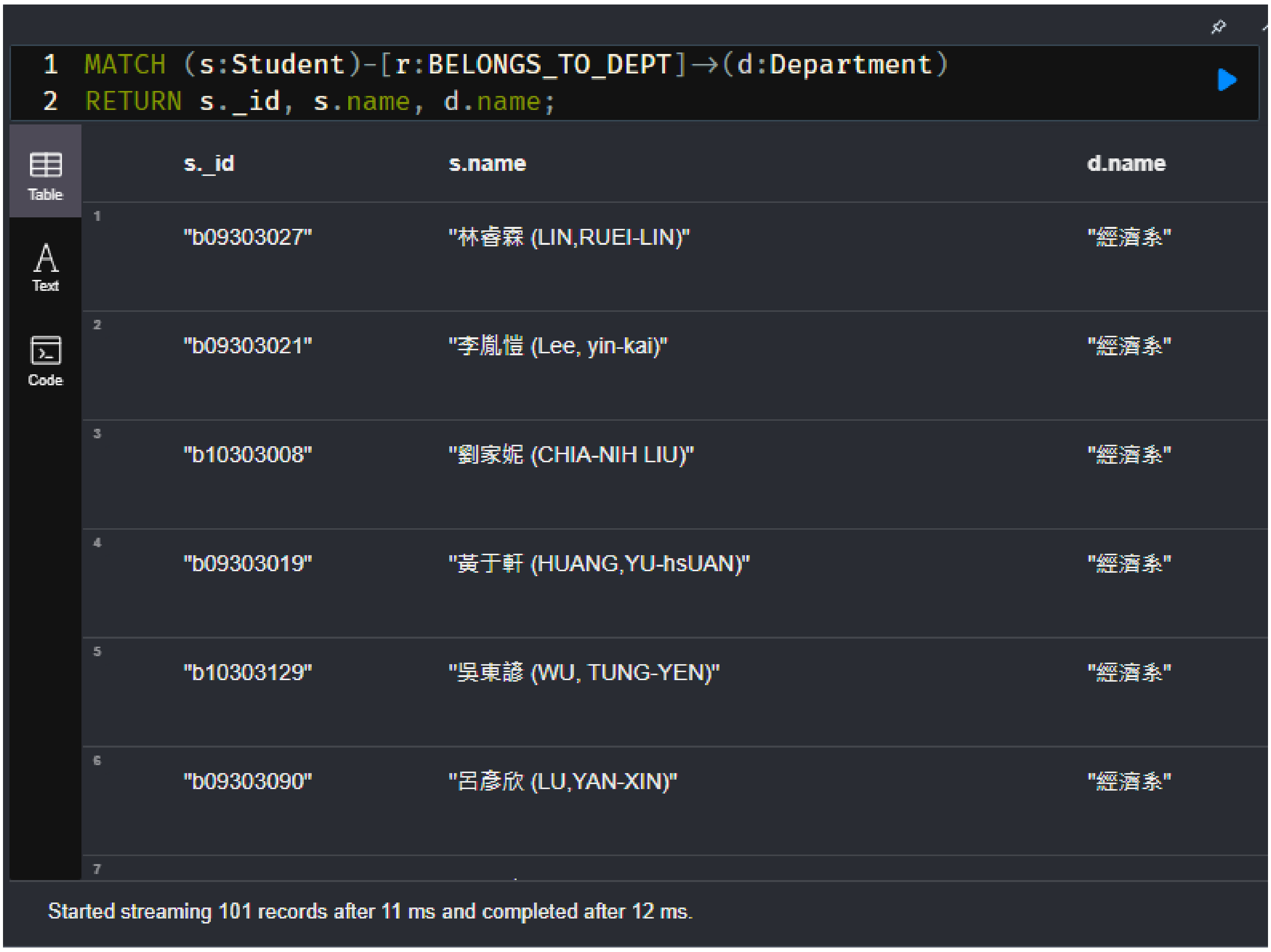
執行兩個下圖即可確認達成task4:



```
neo4j$ MATCH (d:Department) RETURN d;
```

```
d
1
  {
    "identity": 127,
    "labels": [
      "Department"
    ],
    "properties": {
      "name": "經濟系"
    },
    "elementId": "127"
  }
2
  {
    "identity": 128,
    "labels": [
      "Department"
    ],
```

Started streaming 30 records after 8 ms and completed after 11 ms.

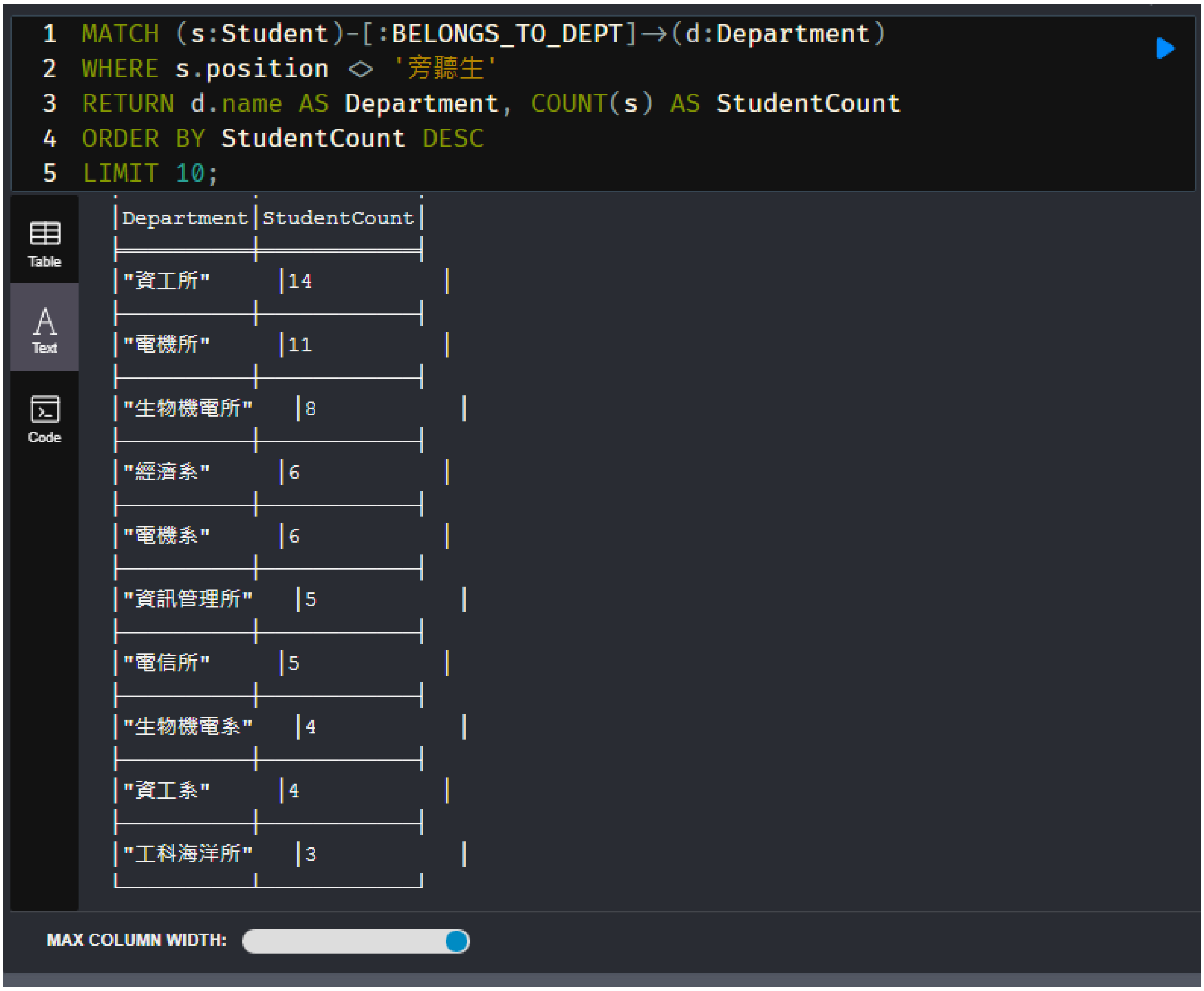


```
MATCH (s:Student)-[r:BELONGS_TO_DEPT]→(d:Department)
RETURN s._id, s.name, d.name;
```

	s._id	s.name	d.name
1	"b09303027"	"林睿霖 (LIN,RUEI-LIN)"	"經濟系"
2	"b09303021"	"李胤愷 (Lee, yin-kai)"	"經濟系"
3	"b10303008"	"劉家妮 (CHIA-NIH LIU)"	"經濟系"
4	"b09303019"	"黃于軒 (HUANG,YU-hsUAN)"	"經濟系"
5	"b10303129"	"吳東諺 (WU, TUNG-YEN)"	"經濟系"
6	"b09303090"	"呂彥欣 (LU,YAN-XIN)"	"經濟系"
7			

Started streaming 101 records after 11 ms and completed after 12 ms.

Task5



```
MATCH (s:Student)-[:BELONGS_TO_DEPT]->(d:Department)
WHERE s.position <> '旁聽生'
RETURN d.name AS Department, COUNT(s) AS StudentCount
ORDER BY StudentCount DESC
LIMIT 10;
```

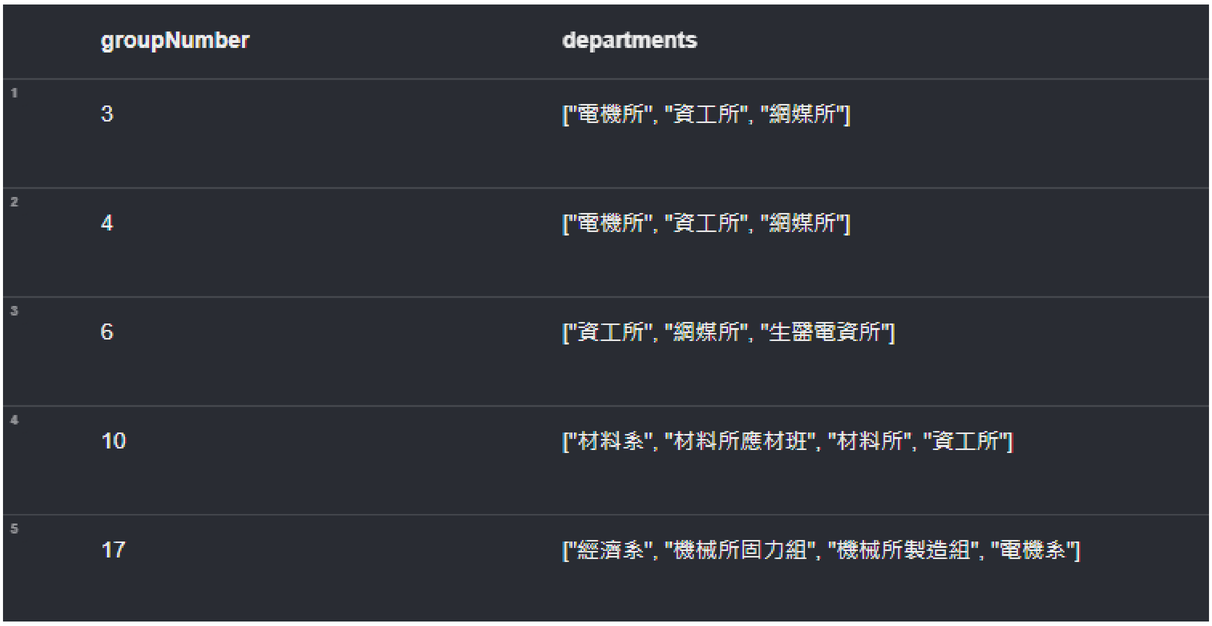
```
│Department│StudentCount│
╞══════════╪════════════╡
│"資工所"    │14          │
├──────────┼────────────┤
│"電機所"    │11          │
├──────────┼────────────┤
│"生物機電所"  │8           │
├──────────┼────────────┤
│"經濟系"    │6           │
├──────────┼────────────┤
│"電機系"    │6           │
├──────────┼────────────┤
│"資訊管理所"  │5           │
├──────────┼────────────┤
│"電信所"    │5           │
├──────────┼────────────┤
│"生物機電系"  │4           │
├──────────┼────────────┤
│"資工系"    │4           │
├──────────┼────────────┤
│"工科海洋所"  │3           │
└──────────┴────────────┘
```

Task6

(code 比較長沒辦法直接截，所以用打的)

```
MATCH (s:Student)-[:BELONGS_TO]->(g:Group)
MATCH (s)-[:BELONGS_TO_DEPT]->(d:Department)
WITH g, COUNT(DISTINCT d.name) AS deptCount
ORDER BY deptCount DESC
LIMIT 5

WITH collect(g) AS topGroups

MATCH (s:Student)-[:BELONGS_TO]->(g)
MATCH (s)-[:BELONGS_TO_DEPT]->(d:Department)
WHERE g IN topGroups
WITH g, collect(DISTINCT d.name) AS departments

ORDER BY g.group ASC
RETURN g.group AS groupNumber, departments;
```

Result:



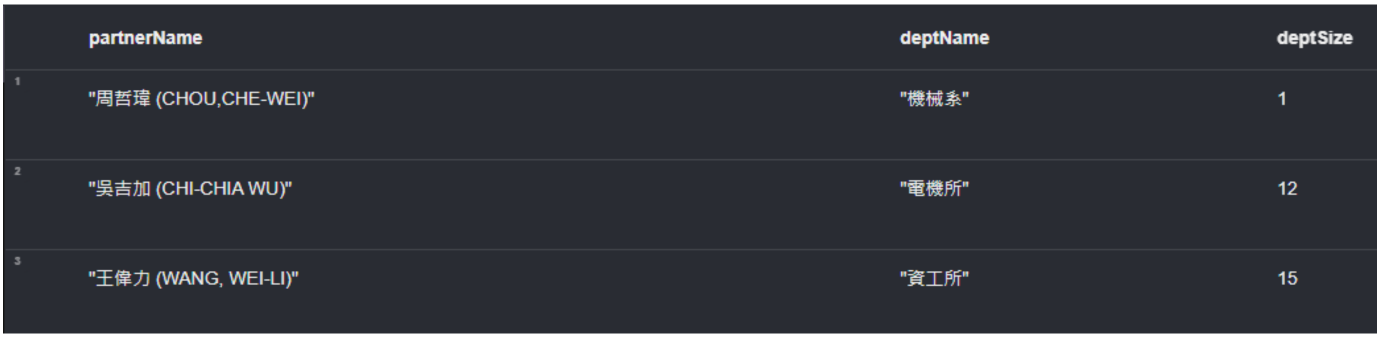
	groupNumber	departments
1	3	["電機所", "資工所", "網媒所"]
2	4	["電機所", "資工所", "網媒所"]
3	6	["資工所", "網媒所", "生醫電資所"]
4	10	["材料系", "材料所應材班", "材料所", "資工所"]
5	17	["經濟系", "機械所固力組", "機械所製造組", "電機系"]

Task7

(code 比較長沒辦法直接截，所以用打的)

```
WITH 'r12921059' AS my_id
MATCH (me:Student {_id: my_id})-[:BELONGS_TO]->(g:Group)<-[:BELONGS_TO]-(partner:Student)

MATCH (partner)-[:BELONGS_TO_DEPT]->(d:Department)

MATCH (s:Student)-[:BELONGS_TO_DEPT]->(d)
WITH partner.name AS partnerName, d.name AS deptName, COUNT(s) AS deptSize

RETURN partnerName, deptName, deptSize
ORDER BY deptSize ASC;
```

Result:



	partnerName	deptName	deptSize
1	"周哲瑋 (CHOU,CHE-WEI)"	"機械系"	1
2	"吳吉加 (CHI-CHIA WU)"	"電機所"	12
3	"王偉力 (WANG, WEI-LI)"	"資工所"	15