

1.3 데이터베이스 스키마

Amenities							
PK	PK acode						
	aname						

Hotel						
PK	PK hcode					
	hname					
FK	acode					
FK	rcode					

Reservation						
PK renum						
	recheckin					
recheckout						
FK	hcode					
FK	cid					

Customer						
PK	cid					
	cname					
	cheadcount					

Room							
PK	rcode						
	rtype						
	rnumber						

1.4 테이블 생성

(1) Amenities 테이블

(2) Room 테이블

```
MariaDB [project]> create table room(
    -> rcode int,
   -> rtype varchar(32).
   -> rnumber int,
   -> primary key(rcode));
Query OK, O rows affected (0.017 sec)
MariaDB [project]> desc room;
                        | Null | Key | Default | Extra |
 Field
          | Туре
           int(11)
                         NO
                                 PRI I NULL
  rcode
           varchar(32)
                         YES
                                      NULL
  rtype
                         YES
                                      NULL
 rnumber | int(11)
 rows in set (0.013 sec)
```

(3) Hotel 테이블

```
MariaDB [project]> create table hotel(
    -> hcode int,
   -> hname varchar(32),
   -> acode int,
   -> rcode int.
   -> primary key(hcode),
   -> foreign key(acode) references amenities(acode),
   -> foreign key(rcode) references room(rcode));
Query OK, O rows affected (0.019 sec)
MariaDB [project]> desc hotel;
                       Null | Key | Default | Extra
 Field | Type
         int(11)
                               PRI I
                                    NULL
  hcode |
                        NO
                       YES
         varchar(32)
                                     NULL
  hname l
                        YES
                              MUL
          int(11)
                                    NULL
  acode
         int(11)
                       YES
                              MUL | NULL
  rcode |
4 rows in set (0.013 sec)
MariaDB [project]>
```

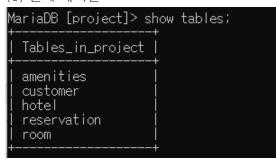
(4) Customer 테이블

```
MariaDB [project]> create table customer(
   -> cid int,
   -> cname varchar(32),
   -> cheadcount int,
   -> primary key(cid));
Query OK, O rows affected (0.016 sec)
MariaDB [project]> desc customer;
 Field
              Туре
                            Null | Key | Default | Extra
              int(11)
                                   PRI I
                            NO
                                         NULL
 cid
              varchar(32)
                            YES
                                         NULL
 cname
                            YES
                                         NULL
 cheadcount | int(11)
 rows in set (0.012 sec)
```

(5) Reservation 테이블

```
MariaDB [project]> create table reservation(
    -> renum int,
   -> recheckin varchar(32),
    -> recheckout varchar(32),
   -> hcode int.
    -> cid int,
   -> primary key(renum),
   -> foreign key(hcode) references hotel(hcode),
   -> foreign key(cid) references customer(cid));
Query OK, O rows affected (0.018 sec)
MariaDB [project]> desc reservation;
 Field
                            | Null | Key | Default | Extra
              Туре
               int(11)
                                    PRI
                                         NULL
                             NO
  renum
 recheckin
               varchar(32)
                            YES
                                          NULL
  recheckout
               varchar(32)
                             YES
                                          NULL
  hcode
               int(11)
                             YES
                                    MUL
                                        I NULL
                            YES
                                   MUL | NULL
  cid
               int(11)
 rows in set (0.016 sec)
```

(6) 전체 테이블



2. 질의

2.1 관심질문(3개)

- (1) 전체 호텔 중 Superior 등급의 객실을 이용한 고객은 누구인가?
- (2) 신라호텔을 이용한 고객은 어떤 편의시설을 총 몇 명이 이용하였는가?
- (3) 전체 호텔 중 5월 1일에 체크인 한 고객은 누구인가?

2.2 자료입력

(1)Amenities 테이블 자료입력

```
MariaDB [project]> insert into amenities values(001, "수영장");
Query OK, 1 row affected (0.006 sec)
MariaDB [project]> insert into amenities values(002, "영화관");
Query OK, 1 row affected (0.003 sec)
MariaDB [project]> insert into amenities values(003, "레스토랑")
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into amenities values(004, "루프탑");
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into amenities values(005, "와인바");
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> select * from amenities;
 acode | aname
         레스토랑
루프탑
     4
        화한판
5 rows in set (0.002 sec)
```

(2) Room 테이블 자료입력

```
MariaDB [project] > insert into room values(1001, "Standard", 1);
Query OK, 1 row affected (0.003 sec)

MariaDB [project] > insert into room values(1002, "Standard", 2);
Query OK, 1 row affected (0.003 sec)

MariaDB [project] > insert into room values(1003, "Standard", 3);
Query OK, 1 row affected (0.002 sec)

MariaDB [project] > insert into room values(1004, "Standard", 4);
Query OK, 1 row affected (0.002 sec)

MariaDB [project] > insert into room values(2001, "Superior", 1);
Query OK, 1 row affected (0.002 sec)

MariaDB [project] > insert into room values(2002, "Superior", 2);
Query OK, 1 row affected (0.002 sec)

MariaDB [project] > insert into room values(2003, "Superior", 3);
Query OK, 1 row affected (0.002 sec)
```

```
MariaDB [project]> insert into room values(2004, "Superior", 4);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into room values(3001, "Deluxe", 1);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into room values(3002, "Deluxe", 2);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into room values(3003, "Deluxe", 3);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into room values(3004, "Deluxe", 4);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> select * from room;
 rcode | rtype
                     rnumber
   1001
         Standard
         Standard
                           2
3
4
1
   1002
   1003
         Standard
   1004
         Standard
   2001
         Superior
                           2
3
4
1
   2002
          Superior
   2003
         Superior
   2004
         Superior
   3001
         Deluxe
                           2
3
4
   3002
         Deluxe
         Deluxe
   3003
  3004 | Deluxe
12 rows in set (0.000 sec)
```

(3) Hotel 테이블 자료입력

```
MariaDB [project]> insert into hotel values(123001, "롯데", 003, 1003);
Query OK, 1 row affected (0.005 sec)
MariaDB [project]> insert into hotel values(123008, "롯데", 001, 3004);
Querv OK. 1 row affected (0.002 sec)
MariaDB [project]> insert into hotel values(115003, "시그니엘", 005, 2002);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into hotel values(115009, "시그니엘", 005, 2003);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into hotel values(999004, "신라", 003, 2002);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into hotel values(999048, "신라", 004, 3001);
Querv OK. 1 row affected (0.002 sec)
MariaDB [project]> insert into hotel values(999007, "신라", 004, 1003);
Querv OK. 1 row affected (0.002 sec)
MariaDB [project]> insert into hotel values(234008, "포시즌스", 002, 1004);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> select * from hotel;
 hcode | hname
                      acode | rcode |
 115003 | 시그니엘
115009 | 시그니엘
                              2002
                              2003
          (왕대
롯데
롯데
포시즌스
                              1003
  123001
  123008
                              3004
                          2344
  234008
                               1004
  999004
           진라
                               2002
          친급
신라
  999007
                               1003
  999048
                               3001
 rows in set (0.002 sec)
```

(4)Customer 테이블 자료입력

```
MariaDB [project]> insert into customer values(13548, "Kang", 1);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into customer values(16386, "Kim", 3);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into customer values(86132, "Na", 2);
Query OK, 1 row affected (0.001 sec)
MariaDB [project]> insert into customer values(16584, "Lee", 2);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into customer values(15648, "Park", 4);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into customer values(96216, "Jo", 1);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into customer values(31686, "Jung", 2);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into customer values(48631, "Choi", 3);
Query OK, 1 row affected (0.001 sec)
MariaDB [project]> select * from customer;
        | cname | cheadcount
 cid
  13548 | Kang
  15648
                           4322321
         Park
  16386
         Kim
  16584
         Lee
  31686
         Jung
  48631
         Choi
  86132
         Na
 96216 | Jo
8 rows in set (0.001 sec)
```

(5) Reservation 테이블 자료입력

```
MariaDB [project]> insert into reservation values(20050001, "2020-05-01", "2020-05-02", 123001, 13548);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into reservation values(20050002, "2020-05-01", "2020-05-05", 123008, 16386);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into reservation values(20050013, "2020-05-03", "2020-05-13", 115003, 86132);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into reservation values(20050018, "2020-05-03", "2020-05-08", 115009, 16584);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into reservation values(20050095, "2020-05-14", "2020-05-16", 999004, 15648);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into reservation values(20060008, "2020-06-03", "2020-06-05", 999048, 96216);
Query OK, 1 row affected (0.002 sec)
MariaDB [project]> insert into reservation values(20060032, "2020-06-11", "2020-06-15", 999007, 31686);
Query OK. 1 row affected (0.002 sec)
MariaDB [project]> insert into reservation values(20060013, "2020-06-20", "2020-06-25", 234008, 48631);
Query OK, 1 row affected (0.002 sec)
MariaDB [project] > select * from reservation;
            recheckin | recheckout | hcode |
                                               cid
 renum
            2020-05-01
                         2020-05-02
                                       123001
                                                13548
 20050001
            2020-05-01
2020-05-03
                         2020-05-05
2020-05-13
                                       123008
                                                16386
  20050002
                                      115003
                                                86132
  20050013
  20050018
            2020-05-03
                         2020-05-08
                                      115009
                                                16584
                                       999004
            2020-05-14
  20050095
                          2020-05-16
                                                15648
                                                96216
  20060008
            2020-06-03
                          2020-06-05
                                       999048
            2020-06-20
                         2020-06-25
  20060013
                                      234008
                                                48631
 20060032 | 2020-06-11 | 2020-06-15 |
                                      999007
                                               31686
8 rows in set (0.000 sec)
```

2.2 SELECT문과 결과화면

(1) 전체 호텔 중 Superior 등급의 객실을 이용한 고객은 누구인가?

select a.rtype, a.rnumber, b.hname, c.cid, c.cname from (room a join hotel b on (a.rcode = b.rcode) join reservation d on (b.hcode = d.hcode)) join customer c on (d.cid = c.cid) where a.rtype = "Superior";

```
MariaDB [project]> select a.rtype, a.rnumber, b.hname, c.cid, c.cname from (
    -> room a join hotel b on (a.rcode = b.rcode)
    -> join reservation d on (b.hcode = d.hcode))
-> join customer c on (d.cid = c.cid) where a.rtype = "Superior";
             | rnumber | hname
                                     cid
  rtype
                                            cname
                   2 3
                         시그나엘
시그나엘
                                     86132 |
                                              Na
  Superior
                                      16584 Í
  Superior
                                              Lee
                        신라
                                      15648 | Park
  Superior
 rows in set (0.001 sec)
```

(2) 신라호텔을 이용한 고객은 어떤 편의시설을 총 몇 명이 이용하였는가?

select a.hname, b.aname, sum(c.cheadcount) from (hotel a join amenities b on (a.acode = b.acode) join reservation d on (a.hcode = d.hcode)) join customer c on (c.cid = d.cid) where a.hname = "신라" group by b.aname;

(3) 전체 호텔 중 5월 1일에 체크인 한 고객은 누구인가?

select a.hname, b.recheckin, c.cid, c.cname from (
hotel a left join reservation b on (b.hcode = a.hcode and (b.recheckin = "2020-05-01"))
left join customer c on (b.cid = c.cid));

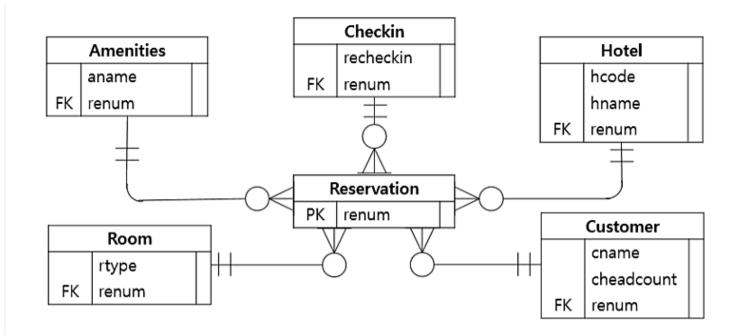
```
MariaDB [project]> select a.hname, b.recheckin, c.cid, c.cname from (
-> hotel a left join reservation b on (b.hcode = a.hcode and (b.recheckin = "2020-05-01"))
-> left join customer c on (b.cid = c.cid));
                recheckin | cid | cname
  hname
                                    NULL | NULL
                 NULL
                 NULL
                                    NULL I
                                             NULL
                 2020-05-01
                                   13548 | Kang
  홍네
롯데
포시즌스
                 2020-05-01
                                   16386 I
                                             Kim
                                    NULL I NULL
                 NULL
  진감
신라
신라
                                    NULL | NULL
                 NULL
                 NULL
                                    NULL
                                             NULL
                 NULL
                                    NULL | NULL
  rows in set (0.001 sec)
```

3. 다차원 자료 모델

3.1 질문(3개)

- (1) 특정 호텔의 어떤 타입의 객실이 어떤 날에 가장 많이 예약되었는가?
- (2) 특정 인원 수의 고객이 어떤 타입의 객실을 많이 예약했는가?
- (3) 특정 호텔에 예약한 고객들의 객실 타입에 따라 가장 많이 이용되는 시설은 무엇인가?

3.2 다차원 자료 모델(ERD)



*수정사항

-다차원 분석 간에 자료의 양이 부족하다고 판단하여 데이터를 추가하였습니다.

```
MariaDB [project]> insert into reservation values(20050024, "2020-05-05", "2020-05-06", 123002, 13549);
Query OK, 1 row affected (0,002 sec)
MariaDB [project]> insert into reservation values(20050025, "2020-05-05", "2020-05-07", 123003, 13550);
Query OK, 1 row affected (0.001 sec)
MariaDB [project]> insert into reservation values(20050036, "2020-05-05", "2020-05-07", 123004, 13551);
Query OK, 1 row affected (0.001 sec)
MariaDB [project]> insert into reservation values(20060048, "2020-06-11", "2020-06-13", 123005, 13552);
Query OK, 1 row affected (0.001 sec)
MariaDB [project]> insert into reservation values(20050038, "2020-05-14", "2020-05-15", 115002, 16388);
Query OK, 1 row affected (0,001 sec)
MariaDB [project]> insert into reservation values(20060049, "2020-06-06", "2020-06-07", 115004, 86133);
Query OK, 1 row affected (0,001 sec)
MariaDB [project]> insert into reservation values(20060050, "2020-06-06", "2020-06-09", 115005, 86134);
Query OK, 1 row affected (0,001 sec)
MariaDB [project]> insert into reservation values(20060084, "2020-06-06", "2020-06-11", 115006, 86135);
Query OK, 1 row affected (0.001 sec)
MariaDB [project]> insert into reservation values(20060086, "2020-06-20", "2020-06-21", 115008, 86137);
Query OK, 1 row affected (0.001 sec)
MariaDB [project]> insert into reservation values(20060082, "2020-06-03", "2020-06-05", 234009, 48632);
Query OK. 1 row affected (0.001 sec)
MariaDB [project]> insert into reservation values(20060087, "2020-06-03", "2020-06-05", 234010, 48633);
Query OK, 1 row affected (0,001 sec)
MariaDB [project]> insert into reservation values(20060091, "2020-06-06", "20<u>20-06-08", 234011, 48634);</u>
Query OK, 1 row affected (0.001 sec)
MariaDB [project] > insert into reservation values(20050099, "2020-05-14", "2020-05-15", 999008, 31687);
Query OK, 1 row affected (0,001 sec)
MariaDB [project]> insert into reservation values(20060045, "2020-06-06", "2020-06-07", 999009, 31688);
Query OK, 1 row affected (0.001 sec)
MariaDB [project]> insert into reservation values(20060090, "2020-06-06", "2020-06-09", 999010, 31689);
Query OK, 1 row affected (0.002 sec)
```

4. 다차원 자료 분석

4.1 데이터 큐브를 위한 뷰

(1) 뷰 생성

MariaDB [project]> create view data_view as select a.renum, a.recheckin, b.hcode, b.hname, c.aname, d.rtype, e.cname, e.cheadcount
-> from ((reservation a join hotel b on (a.hcode=b.hcode)) join amenities c on (b.acode=c.acode))
-> join room d on (b.rcode = d.rcode) join customer e on (a.cid=e.cid);
Ouery OK, O rows affected (0.005 sec)

renum	recheckin	hcode	hname	aname	rtype	cname	cheadcount
20060049 20060050 20050002 20050009 20060084 20060082 20060082 20060091 20060048 20050001 20060048 20050095 20060045 20060045 20060086 20050013 20060086 20050018 20050024 20050025 20050036	2020-06-06 2020-06-06 2020-05-01 2020-05-14 2020-06-06 2020-06-03 2020-06-06 2020-05-14 2020-05-14 2020-05-14 2020-05-14 2020-06-01 2020-06-03 2020-06-06 2020-06-06 2020-06-06 2020-06-06 2020-06-06 2020-05-03 2020-05-03 2020-05-05	115004 115005 123008 999008 115006 234009 234009 234011 115002 123001 123005 999004 234010 999007 999009 999010 999010 999010 999010 115008 115008 115009 123002	엘엘 엘스스스엘 스 엘엘엘 엘스스스엘 스 스 엘엘엘	항항항항 정정정정화화화화소스스스시피브리피브리카하하하하 수수수수808080전건건건의미미미미리하하하하하	Superior Superior Deluxe Standard Superior Standard Standard Standard Standard Deluxe Superior Superior Superior Deluxe Deluxe Deluxe Deluxe Deluxe Superior Standard Standard Standard	Jo Choi Kimg Park Choi Park Jung Kang Jo Jung Na Jee Jo Jung Na Lee Kim Lee	3 3 1 2 3 1 3 1 2 4 2 2 4 2 4 2 1 1 1 1 1 1 1 1 1 1 1

23 rows in set (0.001 sec)

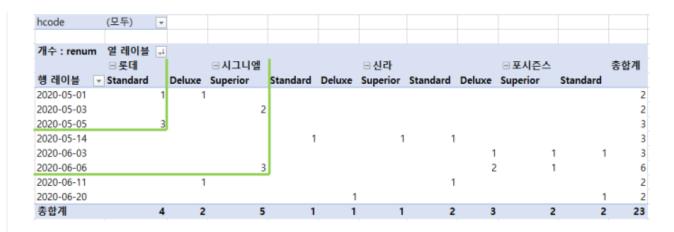
(2) 뷰 연결

(2) 11 [2]								
renum 🔽	recheckin 💌	hcode 🔽	hname 🔽	aname 🔻	rtype 🔻	cname 🔻	cheadcount	Ŧ
20060049	2020-06-06	115004	시그니엘	수영장	Superior	Jo		3
20060050	2020-06-06	115005	시그니엘	수영장	Superior	Choi		3
20050002	2020-05-01	123008	롯데	수영장	Deluxe	Kim		3
20050099	2020-05-14	999008	신라	수영장	Standard	Kang		1
20060084	2020-06-06	115006	시그니엘	영화관	Superior	Park		2
20060013	2020-06-20	234008	포시즌스	영화관	Standard	Choi		3
20060082	2020-06-03	234009	포시즌스	영화관	Standard	Park		1
20060091	2020-06-06	234011	포시즌스	영화관	Superior	Jung		3
20050038	2020-05-14	115002	시그니엘	레스토랑	Standard	Lee		2
20050001	2020-05-01	123001	롯데	레스토랑	Standard	Kang		1
20060048	2020-06-11	123005	롯데	레스토랑	Deluxe	Jo		2
20050095	2020-05-14	999004	신라	레스토랑	Superior	Park		4
20060087	2020-06-03	234010	포시즌스	루프탑	Superior	Jo		2
20060032	2020-06-11	999007	신라	루프탑	Standard	Jung		2
20060045	2020-06-06	999009	신라	루프탑	Deluxe	Na		4
20060090	2020-06-06	999010	신라	루프탑	Deluxe	Lee		3
20060008	2020-06-03	999048	신라	루프탑	Deluxe	Jo		1
20050013	2020-05-03	115003	시그니엘	와인바	Superior	Na		2
20060086	2020-06-20	115008	시그니엘	와인바	Deluxe	Kim		4
20050018	2020-05-03	115009	시그니엘	와인바	Superior	Lee		2
20050024	2020-05-05	123002	롯데	와인바	Standard	Kim		1
20050025	2020-05-05	123003	롯데	와인바	Standard	Na		1
20050036	2020-05-05	123004	롯데	와인바	Standard	Lee		1

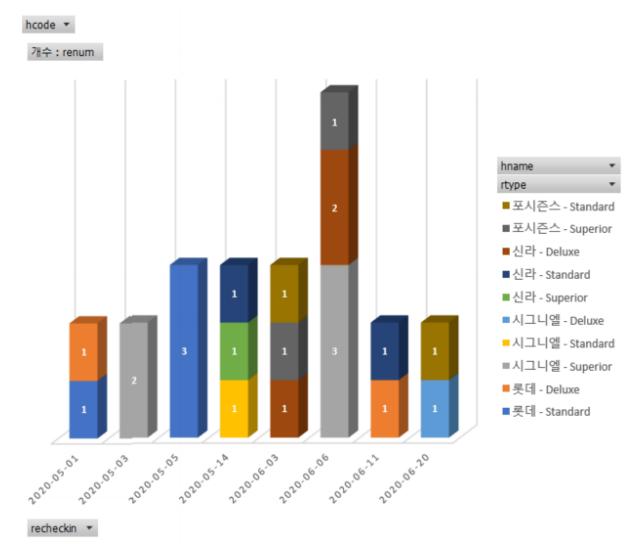
4.2 질문(3개)

(1) 특정 호텔의 어떤 타입의 객실이 어떤 날에 가장 많이 예약되었는가?

1-1) 피벗테이블 보고서



1-2) 피벗 차트

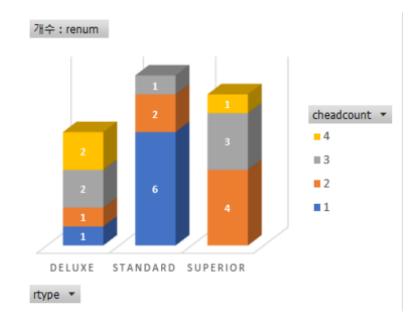


(2) 특정 인원수의 고객이 어떤 타입의 객실을 많이 예약했는가?

2-1) 피벗테이블 보고서

,								
개수:renum 열 레이블 ☑								
행 레이블 ▼	1명	2명	3명	4명 총	합계			
Deluxe	1	1	2	2	6			
Standard	6	2	1		9			
Superior		4	3	1	8			
총합계	7	7	6	3	23			

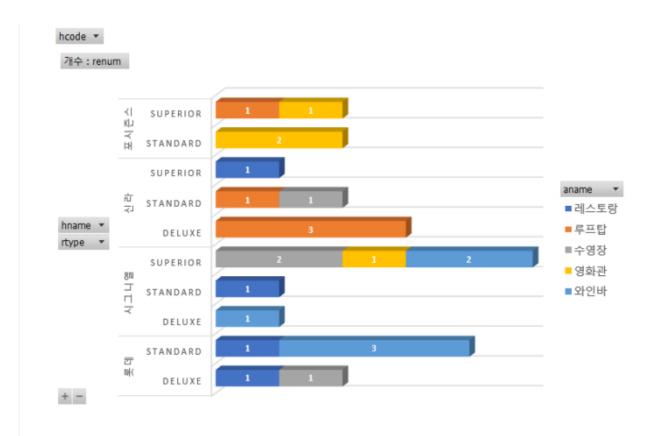
2-2) 피벗 차트



- (3) 특정 호텔에 예약한 고객들의 객실 타입에 따라 가장 많이 이용되는 시설은 무엇인가 ?
 - 3-1) 피벗테이블 보고서

hcode	(모두)	-					
개수 : renum	열 레이블	۳					
행 레이블	레스토랑		루프탑	수영장	영화관	와인바	총합계
⊟롯데		2		1		3	6
Deluxe		1		1			2
Standard		1				3	4
⊟시그니엘		1		2	1	3	7
Deluxe						1	1
Standard		1					1
Superior				2	1	2	5
⊟신라		1	4	1			6
Deluxe			3				3
Standard			1	1			2
Superior		1					1
8 포시즌스			1		3		4
Standard					2		2
Superior			1		1		2
총합계		4	5	4	4	6	23

3-2) 피벗 차트



댓글

김형경

댓글을 남겨보세요





등록