**데이터 쿼리문(ANSI-SQL)  
4조**

**C: 관리자  
D: 교사  
E: 교육생  
F: 추가 요구 분석**

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| 요구사항번호 | C-01 | 작성일 | 2022-05-17 |
| 요구사항명 | 관리자 계정 로그인 | 작성자 | 백서영 |
| DML | | | |
| select \* from tblManager;  select count(\*) as cnt from tblManager where id = '입력id' and password = '입력password'; -- 0이면 실패 1이면 성공 | | | |

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| 요구사항번호 | C-02 | 작성일 | 2022-05-17 |
| 요구사항명 | 기초 정보 등록 및 관리 | 작성자 | 백서영 |
| DML | | | |
| ----(1) 입력  --과정  insert into tblSubject(seq, subjectName) values (seq\_Subject.nextVal, '추가 과정명');  --과목  insert into tblCourse(seq, courseName) values (seq\_Course.nextVal, '추가 과목명');  --과정-과목  insert into tblSubjectCourse(seq, sseq, cseq) values (seq\_SubjectCourse.nextVal, (select seq from tblSubject where subjectname = '과목명'), (select seq from tblCourse where coursename = '과정명'));  --강의실  insert into tblClassroom(seq, classroomName, max) values (seq\_Classroom.nextVal, '추가 강의실명', '정원');  --교재  insert into tblBook(seq, booktitle, publisher, author) values (seq\_tblBook.nextVal, '추가 교재명', '출판사', '저자');  --자격증  insert into tblCertificate(seq,CertificateName) values (seq\_certificate.nextVal, '자격증명');  --직무  insert into tblJob(seq,CertificateName) values (seq\_certificate.nextVal, '자격증명');  --기업  insert into tblCompany(seq,CertificateName) values (seq\_certificate.nextVal, '자격증명');  ----(2) 출력  --과목  select \* from tblSubject;  --과정  select \* from tblCourse; -  --과정-과목  select sc.seq, c.coursename, s.subjectname from tblSubjectCourse sc  inner join tblSubject s on sc.sseq = s.seq  inner join tblCourse c on sc.cseq = c.seq order by sc.seq;  --강의실  select \* from tblClassroom;  --교재  select \* from tblBook;  ----(3) 수정  --과목  update tblSubject set subjectname = '과목명' where seq = '수정할 과목 번호';  --과정  update tblCourse set coursename = '과정명' where seq = '수정할 과정 번호';  --과정-과목  pdate tblSubjectCourse set sseq = (select seq from tblSubject where subjectname = '과목명'), cseq = (select seq from tblCourse where coursename = '과정명') where seq = '수정할 과정-과목 번호';  --강의실  update tblClassroom set classroomname = '강의실명', max = '정원' where seq = '수정할 강의실 번호';  --교재  update tblBook set booktitle = '교재명', publisher = '출판사', author = '작가' where seq = '수정할 교재 번호';  ----(4) 삭제  delete from tblSubject where seq = '삭제할 과목 번호';  delete from tblCourse where seq = '삭제할 과정 번호';  delete from tblSubjectCourse where seq = '삭제할 과정-과목 번호';  delete from tblClassroom where seq = '삭제할 강의실 번호';  delete from tblBook where seq = '삭제할 교재 번호'; | | | |

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| 요구사항번호 | C-03 | 작성일 | 2022-05-17 |
| 요구사항명 | 교사 정보 등록 및 관리 | 작성자 | 백서영 |
| DML | | | |
| ----(1) 입력  insert into tblTeacher(seq, name, jumin, tel) values(seq\_Teacher.nextVal, '등록할 교사 이름', '주민번호 뒷7자리 ', '핸드폰번호');  --강의가능 과목 추가  insert into tblAvailable(seq, tseq, sseq) values(seq\_available.nextVal, (select seq from tblTeacher where name = '교사명'), (select seq from tblSubject where lower(subjectName) = '과목명'))  ----(2) 출력  select \* from tblTeacher;  ---\*\*교사 정보 출력  --전체출력  select  t.seq as "교사번호",  t.name as "교사이름",  t.jumin as "주민번호 뒷자리",  t.tel as "전화번호",  s.subjectname as "강의 가능한 과목"  from tblTeacher t  inner join tblAvailable a on t.seq = a.tseq  inner join tblSubject s on s.seq = a.sseq  order by t.seq asc, s.subjectname asc;  --특정 교사 출력  select distinct  s.subjectname as "개설 과목명",  os.startdate as "과목 시작일",  os.enddate as "과목 종료일",  c.coursename as "개설 과정명",  oc.startdate as "과정 시작일",  oc.enddate as "과정 종료일",  b.booktitle as "교재명",  cr.classroomname as "강의실명",  os.isprogress as "강의 진행 여부"  from tblOpenedSubject os  inner join tblTeacher t on t.seq = os.tseq  inner join tblOpenedcourse oc on oc.seq = os.ocseq  inner join tblBookSubject bs on os.seq = bs.osseq  inner join tblBook b on b.seq = bs.bseq  inner join tblSubjectCourse sc on sc.seq = os.scseq  inner join tblCourse c on c.seq = sc.cseq  inner join tblSubject s on s.seq =sc.sseq  inner join tblClassroom cr on cr.seq = oc.rseq  where t.seq = '교사번호'  order by os.startdate asc;  ----(3) 수정  update tblTeacher set name = '이름' where seq = '수정할 교사 번호';  update tblTeacher set jumin = '주민번호 뒷 7자리' where seq = '수정할 교사 번호';  update tblTeacher set tel = '핸드폰 번호' where tel = '수정할 핸드폰 번호';  ----(4) 삭제  delete from tblTeacher where seq = '삭제할 교사 번호'; | | | |

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| 요구사항번호 | C-04 | 작성일 | 2022-05-17 |
| 요구사항명 | 개설 과정 등록 및 관리 | 작성자 | 백서영 |
| DML | | | |
| ---\*\*입력, 출력, 수정, 삭제  ----(1) 입력  --기초 과정  insert into tblCourse(seq, courseName) values(seq\_Course.nextVal, '등록할 과정이름');  --동적 과정  insert into tblOpenedCourse(seq, cseq, rseq, startdate, enddate)  values(seq\_openedCourse.nextVal, (select seq from tblCourse where courseName = '등록한 과정이름'), (select seq from tblClassroom where classroomName = '강의실명') , '과정 시작일', '과정 종료일');  ----(2) 출력  --모든 개설 과정 정보  select  oc.seq as "과정 번호",  c.coursename as "개설 과정명",  oc.startdate as "과정 시작일",  oc.enddate as "과정 종료일",  cl.classroomname as "강의실명",  nvl2(vsc.cnt, '등록', '미등록') as "개설 과목 등록 여부",  nvl(vhc.cnt, 0) as "등록 인원수"  from tblOpenedCourse oc  left join tblCourse c on oc.cseq = c.seq  left join tblclassroom cl on oc.rseq = cl.seq  left join vwHeadCount vhc on vhc.ocseq = oc.seq  left join vwSubjcetCount vsc on vsc.ocseq = oc.seq;  -- 수강 인원 view  create or replace view vwHeadCount  as  select  ocseq,  count(\*) as cnt  from tblSignup  group by ocseq  order by ocseq;  -- 과정당 과목 view  create or replace view vwSubjcetCount  as  select  os.ocseq,  count(\*) as cnt  from tblopenedcourse oc  inner join tblopenedsubject os on oc.seq = os.ocseq  group by os.ocseq  order by os.ocseq;  --특정 개설 과정 정보  select distinct  s.seq as "과목번호",  s.subjectName as "과목명",  os.startdate as "과목 시작일",  os.enddate as "과목 종료일",  b.bookTitle as "교재명",  t.name as "교사명"  from tblOpenedSubject os  inner join tblOpenedCourse oc on oc.seq = os.ocseq  inner join tblBookSubject bs on os.seq = bs.osseq  inner join tblBook b on b.seq = bs.bseq  inner join tblSubjectCourse sc on sc.seq = os.scseq  inner join tblSubject s on s.seq = sc.sseq  inner join tblCourse c on c.seq = sc.cseq  inner join tblOpenedCourse oc on c.seq = oc.cseq  inner join tblTeacher t on t.seq = os.tseq  where oc.seq = '개설 과정번호'  order by os.startdate;  --등록된 교육생  select distinct  stu.seq as "학생번호",  stu.name as "학생이름",  stu.jumin as "주민번호 뒷7자리",  stu.tel as "전화번호",  stu.regdate as "등록일",  vs."수료",  vs."중도탈락"  from tblOpenedCourse oc  inner join tblSignUp su on oc.seq = su.ocseq  inner join tblStudent stu on stu.seq = su.stuseq  inner join tblCourse c on c.seq = oc.cseq  inner join vwsignup vs on vs.seq = su.seq  where oc.seq = '1'  order by stu.seq;  --수료, 중도탈락 여부 view  create or replace view vwSignUp  as  select  seq,  case  when completiondate is not null then '수료'  end as "수료",  case  when dropoutdate is not null then '중도탈락'  end as "중도탈락"  from tblSignUp;  ----(3) 수정  update tblOpenedCourse set seq ='수정할 과정번호' where cseq = '과정번호'and startdate = '과정 시작일'; --과정번호 수정  update tblOpenedCourse set rseq ='수정할 강의실 번호' where cseq = '과정번호'and startdate = '과정 시작일'; --강의실 수정  update tblOpenedCourse set startdate ='수정할 과정시작일' where cseq = '과정번호'and startdate = '과정시작일'; -- 과정시작일 수정  update tblOpenedCourse set enddate ='수정할 과정종료일' where cseq = '과정번호'and enddate = '과정종료일'; --과정종료일 수정  ----(4) 삭제  delete from tblOpenedCourse where seq = ‘개설과정번호’; | | | |

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| 요구사항번호 | C-05 | 작성일 | 2022-05-17 |
| 요구사항명 | 개설 과목 등록 및 관리 | 작성자 | 백서영 |
| DML | | | |
| ----(1) 입력  --\*\*기초 과목  --과목  insert into tblSubject(seq, subjectName) values(seq\_subject.nextVal, '등록할 과목명');  --과정-과목  insert into tblSubjectCourse(seq, sseq, cseq) values(seq\_SubjectCourse.nextval, '과목번호', '과정번호');  --\*\*개설 과목 신규 등록  insert into tblOpenedSubject(seq, ocseq, tseq, scseq, isprogress, startdate, enddate)  values (seq\_OpenedSubject.nextVal, '개설과정번호', '교사번호',  (select seq from tblSubjectCourse where sseq = '과목번호' and cseq = '과정번호') ,'강의진행여부(강의 예정, 강의 중, 강의 종료)', '과목 시작일', '과목 종료일';  --\*\*교재-개설과목 등록  insert into tblBookSubject(seq, bseq, osseq) values (SEQ\_BOOKSUBJECT.nextVal, ‘교재번호’, '개설과목번호');  ----(2)출력  --\*\*특정 개설 과정 선택  select  seq as "개설과목번호",  ocseq as "개설과정번호",  tseq as "교사번호",  scseq as "과정과목번호",  isprogress as "강의진행여부",  startdate as "과목 시작일",  enddate as "과목 종료일"  from tblOpenedSubject  where ocseq = '개설과정번호';  --출력  select distinct  c.seq as "과정번호",  c.coursename as "개설 과정명",  oc.startdate as "과정 시작일",  oc.enddate as "과정 종료일",  cr.classroomname as "강의실명",  s.subjectname as "개설 과목명",  os.startdate as "과목 시작일",  os.enddate as "과목 종료일",  b.booktitle as "교재명",  t.name as "교사명"  from tblOpenedSubject os  inner join tblTeacher t on t.seq = os.tseq  inner join tblOpenedcourse oc on oc.seq = os.ocseq  inner join tblBookSubject bs on os.seq = bs.osseq  inner join tblBook b on b.seq = bs.bseq  inner join tblSubjectCourse sc on sc.seq = os.scseq  inner join tblCourse c on c.seq = sc.cseq  inner join tblSubject s on s.seq =sc.sseq  inner join tblClassroom cr on cr.seq = oc.rseq  order by oc.startdate asc;  ----(3)수정  --개설과목 수정  update tblOpenedSubject set ocseq = '개설과정번호' where seq = '수정할 개설과목번호';  update tblOpenedSubject set tseq = '교사번호' where seq = '수정할 개설과목번호';  update tblOpenedSubject set csseq = '과정과목번호' where seq = '수정할 개설과목번호';  update tblOpenedSubject set isprogress = '강의 예정, 강의 중, 강의 종료 중 하나의 값' where seq = '수정할 개설과목번호';  update tblOpenedSubject set startdate = '과목 시작일' where seq = '수정할 개설과목번호';  update tblOpenedSubject set enddate = '과목 종료일' where seq = '수정할 개설과목번호';  ----(4)삭제  delete from tblOpenedSubject where seq = ‘수정할 개설과목번호; | | | |

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| 요구사항번호 | C-06 | 작성일 | 2022-05-17 |
| 요구사항명 | 교육생 관리 | 작성자 | 남건희 |
| DML | | | |
| 1-1 교육생 정보 등록  insert into tblStudent(seq, name, jumin, tel, regdate) values(seq\_Student.nextVal, '이름', '주민번호뒷자리', '전화번호',default);  1-2 교육생 정보 삭제  delete from tblStudent where seq = 교육생seq;  1-3 교육생 수료  insert into tblGraduate (seq, jseq, suseq, place, salary, education, employment)  values (seq\_graduate.nextVal,직무번호, 수강정보번호, '희망근무지', '희망연봉', '학력', '취업여부 취업시 y 아닐시 n');  1-4 교육생 중도탈락시 업데이트  update tblSignUp  Set dropoutdate = to\_date('2022-05-17' ,'yyyy-mm-dd')  where stuseq = 21 ;  2. 교육생 번호 출력 시 교육생 이름, 주민번호 뒷자리 , 전화번호, 등록일, 수강(신청) 횟수를 출력한다.  select  name as "교육생 이름",  jumin as "주민번호 뒷자리",  tel as "전화번호",  regdate as "등록일",  (select count(\*) from tblsignUp where stuseq = a.seq) as "수강(신청) 횟수"  from tblStudent a  where a.seq = '교육생seq';  --3. 특정교육생 출력( [수강신청 or 수강중 or 수강했던] 개설과정 정보 > 과정명, 과정기간(시작 년월일, 끝 년월일), 강의실, 수료 및 중도탈락 여부, 수료 및 중도탈락 날짜)  select  a.name as "교육생 이름",  e.coursename as "과정명",  c.startdate as "과정시작 날짜",  c.enddate as "과정종료 날짜",  d.classroomname as "강의실",  (case when b.dropoutdate is not null then 'Y' else 'N' end) as "중도탈락여부",  b.dropoutdate as "중도탈락날짜"  from tblStudent a  inner join tblSignUp b on a.seq = b.stuseq  inner join tblOpenedCourse c on b.ocseq = c.seq  inner join tblClassroom d on d.seq = c.rseq  inner join tblCourse e on c.cseq = e.seq  where a.seq = 교육생seq; | | | |

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| 요구사항번호 | C-07 | 작성일 | 2022-05-17 |
| 요구사항명 | 시험 관리 및 성적 조회 | 작성자 | 남건희 |
| DML | | | |
| 1. 개설 과정 선택 시 개설 과목 정보 출력  -개설 과목별로 성적 등록 여부, 시험 문제 파일 등록 여부  select distinct  e.courseName as "과정명",  d.subjectName as "과목명",  a.startdate as "과정 시작일",  a.enddate as "과정 종료일",  (case when f.question is not null then 'Y' else 'N' end) as "시험문제등록여부" ,  (case when g.score is not null then 'Y' else 'N' end) as "성적등록여부"  from tblOpenedCourse a  inner join tblOpenedSubject b on b.ocseq = a.seq  inner join tblSubjectCourse c on b.scseq = c.seq  inner join tblSubject d on c.sseq = d.seq  inner join tblCourse e on e.seq = c.cseq  inner join tblTest f on f.osseq = b.seq  full outer join tblscore g on g.tseq = f.seq  where a.seq = 개설과정번호;  2. 개설 과목별: 개설과정명, 개설과정 기간, 강의실명, 개설과목명, 교사명, 교재명, 수강중인 모든 교육생들의 성적 정보(교육생 이름, 주민번호 뒷자리, 필기, 실기)  select distinct  e.courseName as "과정명",  d.subjectName as "과목명",  a.startdate as "과정 시작일",  a.enddate as "과정 종료일" ,  z.classroomname as "강의실명" ,  x.name as "교육생 이름" ,  x.jumin as "주민번호 뒷자리" ,  f.testtype as"유형" ,  g.score as "성적"  from tblOpenedCourse a  inner join tblOpenedSubject b on b.ocseq = a.seq  inner join tblSubjectCourse c on b.scseq = c.seq  inner join tblSubject d on c.sseq = d.seq  inner join tblCourse e on e.seq = c.cseq  inner join tblTest f on f.osseq = b.seq  inner join tblClassroom z on z.seq = a.rseq  inner join tblSignUp y on a.seq = y.ocseq  inner join tblStudent x on y.stuseq = x.seq  inner join tblscore g on g.suseq = y.seq and g.tseq = f.seq  where b.seq = '개설과목seq'  order by x.name asc, f.testtype desc;  3. 교육생 개인별: 교육생 이름, 주민번호 뒷자리, 개설과정명, 개설과정기간, 강의실명, 해당 교육생이 수강한 모든 개설과목에 대한 성적정보(개설과목명, 개설과목기간, 교사명, 필기, 실기)  select distinct e.courseName as "과정명", d.subjectName as "과목명", a.startdate as "과정 시작일", a.enddate as "과정 종료일" , z.classroomname as "강의실명" , x.name as "교육생 이름" , x.jumin as "주민번호 뒷자리" , f.testtype as"유형" , g.score as "성적", 출결점수  from tblOpenedCourse a  inner join tblOpenedSubject b on b.ocseq = a.seq  inner join tblSubjectCourse c on b.scseq = c.seq  inner join tblSubject d on c.sseq = d.seq  inner join tblCourse e on e.seq = c.cseq  inner join tblTest f on f.osseq = b.seq  inner join tblClassroom z on z.seq = a.rseq  inner join tblSignUp y on a.seq = y.ocseq  inner join tblStudent x on y.stuseq = x.seq  full outer join vwSubjectAdScore q on q.suseq = y.seq and q.osseq = b.seq  full outer join tblscore g on g.suseq = y.seq and g.tseq = f.seq  where x.seq = '학생seq'  order by d.subjectName, f.testtype desc;  --view  -- 출결 점수 (과목마다 100점) - (지각, 조퇴, 외출) 1점  create or replace view vwScoreAttendence  as  select at.suseq, os.seq as osseq, count(\*) as cnt from tblOpenedSubject os  inner join tblSignUp su on os.ocseq = su.ocseq  inner join tblAttendence at on at.suseq = su.seq  where os.startdate <= at.attdate and at.attdate <= os.enddate and at.state in ('지각', '조퇴', '외출')  group by at.suseq, os.seq order by at.suseq;      select \* from vwScoreAttendence;    -- 과목마다 출결 점수  create or replace view vwSubjectAdScore  as  select su.seq as suseq, os.seq as osseq, nvl(100 - vsa.cnt, 100) as "출결점수" from tblSignUp su  inner join tblopenedcourse oc on su.ocseq = oc.seq  inner join tblOpenedSubject os on os.ocseq = oc.seq  left join vwScoreAttendence vsa on vsa.suseq = su.seq and vsa.osseq = os.seq order by su.seq, os.seq;  select \* from vwSubjectAdScore; | | | |

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| 요구사항번호 | C-08 | 작성일 | 2022-05-17 |
| 요구사항명 | 출결 관리 및 출결 조회 | 작성자 | 남건희 |
| DML | | | |
| -- 선택한 과정의 출결 상태  select  a.name "이름",  vd.a as "날짜",  nvl(at.state, '정상') as "출결상태"  from  (select st.name, su.seq from tblOpenedCourse os  inner join tblsignup su on os.seq = su.ocseq  inner join tblstudent st on su.stuseq = st.seq  where os.seq = '선택한 과정seq') a  cross join vwdate1 vd  left join tblattendence at on vd.a = at.attdate and at.suseq = a.seq order by vd.a;  -- 선택한 과정의 공휴일, 주말 제외한 날짜  create or replace view vwdate1  as  select  b.a  from(  select  ((select startdate from tblOpenedCourse where seq = ''선택한 과정seq'') + level - 1) as a,  to\_char((select startdate from tblOpenedCourse where seq = ''선택한 과정seq'') + level - 1, 'D') as d  from  dual connect by level <= (  select  case  when enddate <= sysdate then enddate  when enddate > sysdate then sysdate  end  from tblOpenedCourse where seq = ''선택한 과정seq'') - (  select  startdate  from tblOpenedCourse where seq = ''선택한 과정seq''  )) b left join tblholiday h on b.a = h.holiday  where b.d not in('1', '7') and h.holiday is null order by b.a;  -- 년도별 검색  select  a.name "이름",  vd.a as "날짜",  nvl(at.state, '정상') as "출결상태"  from  (select st.name, su.seq from tblopenedCourse os  inner join tblsignup su on os.seq = su.ocseq  inner join tblstudent st on su.stuseq = st.seq  where os.seq = '선택한 과정 번호') a  cross join vwdate1 vd  left join tblattendence at on vd.a = at.attdate and at.suseq = a.seq  where to\_char(vd.a, 'yyyy') like '선택한 년도' order by vd.a;  -- 월별  select  a.name "이름",  vd.a as "날짜",  nvl(at.state, '정상') as "출결상태"  from  (select st.name, su.seq from tblopenedCourse os  inner join tblsignup su on os.seq = su.ocseq  inner join tblstudent st on su.stuseq = st.seq  where os.seq = '선택한 과정 번호') a  cross join vwdate1 vd  left join tblattendence at on vd.a = at.attdate and at.suseq = a.seq  where to\_char(vd.a, 'yyyy-mm') like '선택한 년월' order by vd.a;  -- 일별  select  a.name "이름",  vd.a as "날짜",  nvl(at.state, '정상') as "출결상태"  from  (select st.name, su.seq from tblopenedCourse os  inner join tblsignup su on os.seq = su.ocseq  inner join tblstudent st on su.stuseq = st.seq  where os.seq = '선택한 과정 번호') a  cross join vwdate1 vd  left join tblattendence at on vd.a = at.attdate and at.suseq = a.seq  where to\_char(vd.a, 'yyyy-mm-dd') like '선택한 년월일' order by vd.a; | | | |

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| 요구사항번호 | D-01 | 작성일 | 2022-05-17 |
| 요구사항명 | 교사 계정 로그인 | 작성자 | 김승연 |
| DML | | | |
| select count(\*) from tblTeacher where jumin = '로그인할 교사 주민등록번호 뒷자리';  -- 결과값이 0이면 실패, 1이면 성공 | | | |

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| 요구사항번호 | D-02 | 작성일 | 2022-05-17 |
| 요구사항명 | 교사 강의 스케줄 조회 | 작성자 | 김승연 |
| DML | | | |
| -- 본인의 강의 스케줄 확인(강의예정/강의중/강의종료로 구분)  -- 개설과목번호, 과정명, 과정기간(시작, 끝), 강의실, 과목명, 과목기간(시작, 끝), 교재명, 교육생 등록 인원  select  os.seq as "개설과목번호",  c.courseName as "과정명",  oc.startdate as "과정시작일",  oc.enddate as "과정종료일",  cr.classroomname as "강의실명",  s.subjectname as "과목명",  os.startdate as "과목시작일",  os.enddate as "과목종료일",  os.isprogress as "강의진행여부",  b.booktitle as "교재명",  (select count(\*) from tblSignUp where ocseq = oc.seq and (dropoutdate is null or dropoutdate > os.enddate)) || ‘명’ as "교육생 등록 인원"    from tblOpenedSubject os  inner join tblSubjectCourse sc on os.scseq = sc.seq  inner join tblCourse c on sc.cseq = c.seq  inner join tblOpenedCourse oc on os.ocseq = oc.seq  inner join tblClassroom cr on oc.rseq = cr.seq  inner join tblSubject s on sc.sseq = s.seq  inner join tblBookSubject bs on os.seq = bs.osseq  inner join tblBook b on bs.bseq = b.seq  where os.tseq = (select seq from tblTeacher where jumin = '조회할 교사 주민등록번호 뒷자리')  order by oc.startdate, os.startdate asc;  -- 개설과목번호로 특정 과목 선택  -- 해당 개설과목이 포함된 과정에 등록된 교육생 정보 확인: 이름, 전화번호, 등록일, 현재 상태(수료or중도탈락)  select  stu.name as "이름",  stu.tel as "전화번호",  stu.regdate as "등록일",  case  when su.completiondate is not null then '수료'  when su.dropoutdate is not null then '중도탈락'  else '수강중'  end as "현재 상태"    from tblOpenedSubject os inner join tblOpenedCourse oc on os.ocseq = oc.seq  inner join tblSignUp su on oc.seq = su.ocseq  inner join tblStudent stu on su.stuseq = stu.seq  where os.seq = 개설과목번호; | | | |

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| 요구사항번호 | D-03 | 작성일 | 2022-05-17 |
| 요구사항명 | 배점 입출력 | 작성자 | 김승연 |
| DML | | | |
| -- 강의를 마친 과목에 한해 개설과목번호로 특정 과목 선택, 배점 정보를 출결, 필기, 실기로 구분해 등록  insert into tblscoring(seq, osseq, attrate, wtestrate, ptestrate)  values(seq\_Scoring.nextVal, (select seq from tblOpenedSubject where isprogress = '강의종료' and seq = 개설과목번호), 출결배점, 필기배점, 실기배점);  -- 시험 날짜와 시험 문제 추가  insert into tblTest(seq, osseq, testdate, testtype, question)  values (seq\_Test.nextVal, '개설과목번호', '원하는 날짜', '필기/실기 중 하나의 값', '시험문제');  -- 과목 목록 전체 출력  -- (해당 교사가 맡은) 과목번호, 과정명, 과정기간(시작, 끝), 강의실, 과목명, 과목기간(시작, 끝), 교재명, 출결배점, 필기배점, 실기배점  -- 배점 미등록 시 null로 출력  select  os.seq as "개설과목번호",  c.courseName as "과정명",  oc.startdate as "과정시작일",  oc.enddate as "과정종료일",  cr.classroomname as "강의실명",  s.subjectname as "과목명",  os.startdate as "과목시작일",  os.enddate as "과목종료일",  os.isprogress as "강의진행여부",  b.booktitle as "교재명",  score.attrate as "출결배점",  score.wtestrate as "필기배점",  score.ptestrate as "실기배점"    from tblOpenedSubject os  inner join tblSubjectCourse sc on os.scseq = sc.seq  inner join tblCourse c on sc.cseq = c.seq  inner join tblOpenedCourse oc on os.ocseq = oc.seq  inner join tblClassroom cr on oc.rseq = cr.seq  inner join tblSubject s on sc.sseq = s.seq  inner join tblBookSubject bs on os.seq = bs.osseq  inner join tblBook b on bs.bseq = b.seq  left outer join tblScoring score on os.seq = score.osseq  where os.tseq = (select seq from tblTeacher where jumin = '1534921')  order by oc.startdate, os.startdate asc;  -- 특정 과목 선택 출력(개설과목번호로): 출결배점, 필기배점, 실기배점, 시험날짜, 시험문제  -- 배점, 시험문제 미등록 시 null로 출력  select  os.seq as "개설과목번호",  score.attrate as "출결배점",  score.wtestrate as "필기배점",  score.ptestrate as "실기배점",  t.testdate as "시험날짜",  t.testtype as "시험유형",  t.question as "시험문제"    from tblScoring score  right outer join tblOpenedSubject os on score.osseq = os.seq  inner join tblTest t on os.seq = t.osseq  where os.seq = 개설과목번호  order by t.testdate asc; | | | |

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| 요구사항번호 | D-04 | 작성일 | 2022-05-17 |
| 요구사항명 | 교사 성적 입출력 | 작성자 | 김찬진 |
| DML | | | |
| -- 성적 입출력  -- 성적이 등록된 학생의 카운트  create or replace view vwscoretest  as  select t.osseq, count(\*) as cnt from tblScore s inner join tbltest t on s.tseq = t.seq group by t.osseq order by t.osseq;  -- 중도탈락을 하지 않은 학생\*2 카운트 (필기,시험 2개라서)  create or replace view vwsignup  as  select ocseq, count(\*)\*2 as cnt from tblSignUp where dropoutdate is null group by ocseq order by ocseq;  -- 과목 목록 출력  select  os.seq as "과목번호",  c.coursename as "과정명",  oc.startdate as "과정 시작일",  oc.enddate as "과정 종료일",  r.classroomname as "강의실명",  s.subjectname as "과목명",  os.startdate as "과목 시작일",  os.enddate as "과목 종료일",  b.booktitle as "교재명",  sco.attrate as "출결 배점",  sco.wtestrate as "필기 배점",  sco.ptestrate as "실기 배점",  nvl(case  when test.cnt >= signup.cnt then '등록'  end, '미등록') as "성적등록여부" -- 성적이 등록된 학생과 중도탈락을 하지 않은 학생\*2 카운트가 같으면 성적이 등록된것이기에 '등록' 아니면 '미등록'  from tblteacher t  inner join tblopenedsubject os on t.seq = os.tseq  inner join tblsubjectcourse sc on os.scseq = sc.seq  inner join tblopenedcourse oc on os.ocseq = oc.seq  inner join tblcourse c on sc.cseq = c.seq  inner join tblsubject s on sc.sseq = s.seq  inner join tblclassroom r on r.seq = oc.rseq  inner join tblBookSubject bs on bs.osseq = os.seq  inner join tblbook b on b.seq = bs.bseq  left join tblScoring sco on sco.osseq = os.seq  left join vwscoretest test on test.osseq = os.seq  left join vwsignup signup on signup.ocseq = oc.seq  where t.seq = '로그인한 교사 번호'  order by os.seq;  -- 출결 점수 (과목마다 100점) - (지각, 조퇴, 외출) 1점  create or replace view vwScoreAttendence  as  select at.suseq, os.seq as osseq, count(\*) as cnt from tblOpenedSubject os  inner join tblSignUp su on os.ocseq = su.ocseq  inner join tblAttendence at on at.suseq = su.seq  where os.startdate <= at.attdate and at.attdate <= os.enddate and at.state in ('지각', '조퇴', '외출')  group by at.suseq, os.seq order by at.suseq;      -- 과목마다 출결 점수  create or replace view vwSubjectAdScore  as  select su.seq as suseq, os.seq as osseq, nvl(100 - vsa.cnt, 100) as "출결점수" from tblSignUp su  inner join tblopenedcourse oc on su.ocseq = oc.seq  inner join tblOpenedSubject os on os.ocseq = oc.seq  left join vwScoreAttendence vsa on vsa.suseq = su.seq and vsa.osseq = os.seq order by su.seq, os.seq;  -- 필기, 실기 점수  create or replace view vwScoreTestType  as  select score.suseq, test.osseq as osseq,  sum(case  when test.testtype = '필기' then score.score  end) as "필기점수",  sum(case  when test.testtype = '실기' then score.score  end) as "실기점수"  from tblscore score  inner join tbltest test on test.seq = score.tseq  group by test.osseq, score.suseq  order by score.suseq;  -- 특정 과목 선택 시 교육생 정보 출력  select  s.seq as "교육생 번호",  s.name as "이름",  s.jumin as "주민번호 뒷자리",  s.tel as "전화번호",  nvl(case  when su.completiondate is not null then to\_char(su.completiondate, 'yyyy-mm-dd')  when su.dropoutdate is not null then to\_char(su.dropoutdate, 'yyyy-mm-dd')  end, '진행중') as "수료여부",  (vsas."출결점수" \* sco.attrate) as "출결점수",  (vst."필기점수" \* sco.ptestrate) as "필기점수",  (vst."실기점수" \* sco.wtestrate) as "실기점수"  from tblOpenedSubject os  inner join tblopenedcourse oc on os.ocseq = oc.seq  inner join tblSignUp su on su.ocseq = oc.seq  inner join tblStudent s on su.stuseq = s.seq  left join vwSubjectAdScore vsas on vsas.suseq = su.seq and vsas.osseq = os.seq  left join tblScoring sco on sco.osseq = os.seq  left join vwScoreTestType vst on vst.suseq = su.seq and vst.osseq = os.seq  where os.seq = '선택한 과목 번호';  -- 교육생의 시험정보 입력  insert into tblScore(seq, tseq, suseq, socre) values (seq\_score.nextVal, (select seq from tblTest where osseq = '선택한 과목 번호' and testtype = '필기 or 실기'), '선택한 학생 번호', '점수'); | | | |

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| 요구사항번호 | D-05 | 작성일 | 2022-05-17 |
| 요구사항명 | 교사 출결 관리 및 출결 조회 | 작성자 | 김찬진 |
| DML | | | |
| -- 과목 목록 출력  select  os.seq as "과목번호",  c.coursename as "과정명",  oc.startdate as "과정 시작일",  oc.enddate as "과정 종료일",  r.classroomname as "강의실명",  s.subjectname as "과목명",  os.startdate as "과목 시작일",  os.enddate as "과목 종료일",  b.booktitle as "교재명"  from tblteacher t  inner join tblopenedsubject os on t.seq = os.tseq  inner join tblsubjectcourse sc on os.scseq = sc.seq  inner join tblopenedcourse oc on os.ocseq = oc.seq  inner join tblcourse c on sc.cseq = c.seq  inner join tblsubject s on sc.sseq = s.seq  inner join tblclassroom r on r.seq = oc.rseq  inner join tblBookSubject bs on bs.osseq = os.seq  inner join tblbook b on b.seq = bs.bseq  where t.seq = '로그인한 교사 번호'  order by os.seq;  -- 선택한 과목의 공휴일, 주말 제외한 날짜  create or replace view vwdate  as  select  b.a  from(  select  ((select startdate from tblopenedsubject where seq = '선택한 과목 번호') + level - 1) as a,  to\_char((select startdate from tblopenedsubject where seq = '선택한 과목 번호') + level - 1, 'D') as d  from  dual connect by level <= (  select  case  when enddate <= sysdate then enddate  when enddate > sysdate then sysdate  end  from tblopenedsubject where seq = '선택한 과목 번호') - (  select  startdate  from tblopenedsubject where seq = '선택한 과목 번호'  )) b left join tblholiday h on b.a = h.holiday  where b.d not in('1', '7') and h.holiday is null order by b.a;  -- 선택한 과목의 출결상태  select  a.name "이름",  vd.a as "날짜",  nvl(at.state, '정상') as "출결상태"  from  (select st.name, su.seq from tblopenedsubject os  inner join tblsignup su on os.ocseq = su.ocseq  inner join tblstudent st on su.stuseq = st.seq  where os.seq = 1) a  cross join vwdate vd  left join tblattendence at on vd.a = at.attdate and at.suseq = a.seq order by vd.a;  -- 년도  select  a.name "이름",  vd.a as "날짜",  nvl(at.state, '정상') as "출결상태"  from  (select st.name, su.seq from tblopenedsubject os  inner join tblsignup su on os.ocseq = su.ocseq  inner join tblstudent st on su.stuseq = st.seq  where os.seq = '선택한 과목 번호') a  cross join vwdate vd  left join tblattendence at on vd.a = at.attdate and at.suseq = a.seq  where to\_char(vd.a, 'yyyy') like '선택한 년도' order by vd.a;  -- 월별  select  a.name "이름",  vd.a as "날짜",  nvl(at.state, '정상') as "출결상태"  from  (select st.name, su.seq from tblopenedsubject os  inner join tblsignup su on os.ocseq = su.ocseq  inner join tblstudent st on su.stuseq = st.seq  where os.seq = '선택한 과목 번호') a  cross join vwdate vd  left join tblattendence at on vd.a = at.attdate and at.suseq = a.seq  where to\_char(vd.a, 'yyyy-mm') like '선택한 년월' order by vd.a;    -- 일별  select  a.name "이름",  vd.a as "날짜",  nvl(at.state, '정상') as "출결상태"  from  (select st.name, su.seq from tblopenedsubject os  inner join tblsignup su on os.ocseq = su.ocseq  inner join tblstudent st on su.stuseq = st.seq  where os.seq = '선택한 과목 번호') a  cross join vwdate vd  left join tblattendence at on vd.a = at.attdate and at.suseq = a.seq  where to\_char(vd.a, 'yyyy-mm-dd') like '선택한 년월일' order by vd.a; | | | |
| 요구사항번호 | E-01 | 작성일 | 2022-05-17 |
| 요구사항명 | 교육생 계정 로그인 | 작성자 | 안수아 |
| DML | | | |
| select count(\*) from tblStudent where tel = '입력 전화번호' and jumin = '입력 주민번호 뒷자리'; | | | |

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| 요구사항번호 | E-02 | 작성일 | 2022-05-17 |
| 요구사항명 | 성적 조회 | 작성자 | 안수아 |
| DML | | | |
| -- 타이틀  select  s.name as "이름",  s.jumin as "주민번호 뒷자리",  s.tel as "전화번호",  c.courseName as "수강과정",  oc.startdate as "과정시작일",  oc.enddate as "과정종료일",  r.classroomname as "강의실"  from tblStudent s  inner join tblSignUp su  on s.seq = su.stuseq  inner join tblOpenedCourse oc  on su.ocseq = oc.seq  inner join tblClassRoom r  on oc.rseq = r.seq  inner join tblCourse c  on oc.cseq = c.seq  where s.seq = 1;  -- 과목별 성적 목록  -- 출결 점수 (과목마다 100점) - (지각, 조퇴, 외출) 1점  create or replace view vwScoreAttendence  as  select at.suseq, os.seq as osseq, count(\*) as cnt from tblOpenedSubject os  inner join tblSignUp su on os.ocseq = su.ocseq  inner join tblAttendence at on at.suseq = su.seq  where os.startdate <= at.attdate and at.attdate <= os.enddate and at.state in ('지각', '조퇴', '외출')  group by at.suseq, os.seq order by at.suseq;    -- 과목마다 출결 점수  create or replace view vwSubjectAdScore  as  select su.seq as suseq, os.seq as osseq, nvl(100 - vsa.cnt, 100) as "출결점수" from tblSignUp su  inner join tblopenedcourse oc on su.ocseq = oc.seq  inner join tblOpenedSubject os on os.ocseq = oc.seq  left join vwScoreAttendence vsa on vsa.suseq = su.seq and vsa.osseq = os.seq order by su.seq, os.seq;  -- 필기, 실기 점수  create or replace view vwScoreTestType  as  select score.suseq, test.osseq as osseq,  sum(case  when test.testtype = '필기' then score.score  end) as "필기점수",  sum(case  when test.testtype = '실기' then score.score  end) as "실기점수"  from tblscore score  inner join tbltest test on test.seq = score.tseq  group by test.osseq, score.suseq  order by score.suseq;  -- 시험 필기,실기 컬럼 합치기  create or replace view vwSumTest  as  select  osseq,  LISTAGG(testdate, '/') WITHIN GROUP (ORDER BY testdate) as "필기,실기 시험 날짜",  LISTAGG(question, '/') WITHIN GROUP (ORDER BY question) as "필기,실기 시험 문제"  from tbltest  group by osseq;  -- 과목 출력  select  os.seq as "과목번호",  sub.subjectname as "과목명",  os.startdate as "과목 시작일",  os.enddate as "과목 종료일",  b.booktitle as "교재명",  tea.name as "교사명",  sco.attrate as "출결배점",  sco.ptestrate as "필기배점",  sco.wtestrate as "실기배점",  vst."필기,실기 시험 날짜" as "필기, 실기 시험 날짜",  vst."필기,실기 시험 문제" as "필기,실기 시험 문제",  (vsas."출결점수" \* sco.attrate) as "출결 점수",  (vstt."필기점수" \* sco.ptestrate) as "필기 점수",  (vstt."실기점수" \* sco.wtestrate) as "실기 점수"  from tblSignUp su  inner join tblStudent st on su.stuseq = st.seq  left join tblopenedsubject os on su.ocseq = os.ocseq  left join tblsubjectcourse sc on sc.seq = os.scseq  left join tblsubject sub on sc.sseq = sub.seq  left join tblbooksubject bs on bs.osseq = os.seq  left join tblteacher tea on tea.seq = os.tseq  left join tblscoring sco on sco.osseq = os.seq  left join tblbook b on bs.bseq = b.seq  left join vwSumTest vst on vst.osseq = os.seq  left join vwScoreTestType vstt on vstt.suseq = su.seq and vstt.osseq = os.seq  left join vwSubjectAdScore vsas on vsas.suseq = su.seq and vsas.osseq = os.seq  where st.seq = 88; | | | |

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| 요구사항번호 | E-03 | 작성일 | 2022-05-17 |
| 요구사항명 | 출결 관리 및 출결 조회 | 작성자 | 안수아 |
| DML | | | |
| -- 출결 기록 (지각, 조퇴, 병가, 외출, 기타)  insert into tblAttendence values(SEQ\_ATTENDENCE.nextval, (select su.seq  from tblSignUp su  inner join tblStudent s  on su.stuseq = s.seq  where s.seq = 학생번호), sysdate, '출결');    -- 출결 현황 기간별 조회(전체, 월, 일)  -- 과정 시작일 ~ 종료일 뷰  create or replace view vwDate  as  select  startdate + (level - 1) as regdate  from  (select  enddate, startdate  from tblStudent s  inner join tblSignUp su  on s.seq = su.stuseq  inner join tblOpenedCourse oc  on su.ocseq = oc.seq  where s.seq = 1)  connect by level <= enddate - startdate + 1;  -- 출결 날짜 + 출결 상태  create or replace view vwAttendenceStatus  as  select  d.regdate as regdate,  state  from vwDate d  left outer join tblAttendence a  on d.regdate = a.attdate  where a.suseq = (select seq from tblSignUp where stuseq = 1);    -- 과정 시작 ~ 끝 출결 전체  create or replace view vwAttendence  as  select  d.regdate as "날짜",  case  when to\_char(d.regdate,'d') in (1,7) then '주말'  when a.state is null and h.name is not null then '공휴일'  when a.state is null and h.name is null then '정상'  when a.state is not null then a.state  end as "출결"  from vwDate d  left outer join vwAttendenceStatus a  on d.regdate = a.regdate  left outer join tblHoliday h  on d.regdate = h.holiday  order by d.regdate;    -- 전체 출결 조회  select  \*  from vwAttendence;    -- 월별 출결 조회  select  \*  from vwAttendence where to\_char("날짜", 'mm') = '월';  -- 일별 출결 조회  select  \*  from vwAttendence where to\_char("날짜", 'mm-dd') = '일(mm-dd)'; | | | |

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| 요구사항번호 | F-01 | 작성일 | 2022-05-17 |
| 요구사항명 | 대면/비대면 여부 등록 및 조회 | 작성자 | 박선미 |
| DML | | | |
| --대면/비대면(관리자) 교육생이 선택한 대면.비대면 출력  select  s.name as 이름,  st.classday as 날짜,  st.home as 대면비대면여부  from tblStudent s  inner join tblSignUp si  on s.seq = si.stuseq  inner join tblHomeStudent st  on si.seq = st.suseq  order by st.home asc;    --대면/비대면(교육생) 다음 주 대면/비대면 입력  insert into tblHomeStudent (seq, suseq, classday, home) values (seq\_HomeStudent.nextVal, 수강정보번호, '수업일', '대면'); | | | |

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| 요구사항번호 | F-02 | 작성일 | 2022-05-17 |
| 요구사항명 | 프로젝트 참여 모집 | 작성자 | 박선미 |
| DML | | | |
| --교육생이 교육생 번호, 프로젝트명, 프로젝트내용, 프로젝트 시작일, 프로젝트마감일, 인원수, 공고 마감기한 입력  insert into tblProjectRecruitment (seq, stuseq, projectname, projectcontents, projectstartdate, projectenddate, headcount, deadline)  values (seq\_ProjectRecruitment.nextVal, 교육생번호, '프로젝트명', '프로젝트내용', '프로젝트시작일', '프로젝트마감일', 인원수, '공고마감기한');  --특정 프로젝트 정보 출력  select  projectname as 프로젝트이름,  projectcontents as 프로젝트내용,  projectstartdate as 프로젝트시작일,  projectenddate as 프로젝트종료일,  headcount as 모집인원  from tblProjectRecruitment  where projectname like '파이%';  --교육생이 공고 번호, 교육생 번호 입력해 프로젝트 참여 신청  insert into tblProjectParticipant (seq, pseq, stuseq) values (seq\_ProjectParticipant.nextVal, 공고번호, 교육생번호); | | | |

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| 요구사항번호 | F-03 | 작성일 | 2022-05-17 |
| 요구사항명 | Q&A 게시판 | 작성자 | 박선미 |
| DML | | | |
| --전체 게시판의 정보 출력(제목, 등록일, 작성자)  select  q.seq as 글번호,  q.title as 제목,  q.regdate as 등록일,  s.name as 작성자  from tblStudent s  inner join tblQna q  on s.seq = q.stuseq  order by q.seq asc;  --특정 게시판의 정보 출력(제목, 내용, 등록일, 작성자, 댓글(작성자, 등록일, 내용))  select  q.title as 제목,  q.contents as 내용,  q.regdate as 등록일,  s.name as 작성자,  c.contents as 댓글내용,  c.regdate as 댓글등록일,  t.name as 댓글작성자  from tblStudent s  inner join tblQna q  on s.seq = q.stuseq  inner join tblComments c  on q.seq = c.qseq  inner join tblTeacher t  on t.seq = c.tseq  where q.seq = 1;    --교육생이 게시판 입력(제목, 내용)  insert into tblQna (seq, stuseq, title, contents, regdate) values (seq\_Qna.nextVal, 교육생번호, '제목', '내용', '등록일자');  --교사 댓글 입력(내용)  insert into tblComments (seq, qseq, tseq, contents, regdate) values (seq\_Comments.nextVal, 글번호, 교사번호, '내용', '등록일자'); | | | |

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| 요구사항번호 | F-04 | 작성일 | 2022-05-17 |
| 요구사항명 | 채용모집 | 작성자 | 박선미 |
| DML | | | |
| --관리자 기업 정보 입력(이름, 주소, 전화번호)  insert into tblCompany (seq, companyName, address, tel) values (seq\_Company.nextVal, '기업이름', '주소', '전화번호');  --관리자 채용 모집 입력(기업이름, 직무, 근무지, 연봉, 채용인원, 채용 시작,끝 날짜)  insert into tblRecruitment (seq, cseq, jseq, workingArea, annulIncome, recruitmentNum, startregdate, endregdate)  values (seq\_Recruitment.nextVal, 기업번호, 직무번호, '근무지', 연봉, 채용인원, '채용시작날짜', '채용종료날짜');  --관리자 취업 연계 입력(수료생, 채용모집)  insert into tblEmploymentLink (seq, gseq, rseq) values (seq\_EmploymentLink.nextVal, 수료생번호, 모집번호);  --수료생 일치하는 채용 모집 출력(기업이름, 직무, 근무지, 연봉, 채용인원, 채용 시작,끝 날짜)  select  g.seq as 수료생번호,  c.companyName as 기업이름,  j.jobName as 직무,  r.workingArea as 근무지,  r.annulIncome as 연봉,  r.recruitmentNum as 채용인원,  r.startregdate as 채용시작날짜,  r.endregdate as 채용종료날짜  from tblGraduate g  inner join tblJob j  on g.seq = j.seq  inner join tblRecruitment r  on j.seq = r.jseq  inner join tblCompany c  on c.seq = r.cseq  inner join tblEmploymentLink e  on e.seq = g.seq  where g.seq = 1; | | | |
| 요구사항번호 | F-05 | 작성일 | 2022-05-17 |
| 요구사항명 | 교재 수령 방법 선택 | 작성자 | 박선미 |
| DML | | | |
| --교육생이 개설과목번호, 수강정보번호, 방문/택배여부 입력  insert into tblDelivery (seq, suseq, delivery, receipt) values (seq\_Delivery\_next.Val, 수강정보번호, '방문'or'택배', '수령여부');  --관리자는 교육생별로 입력한 방문/택배여부 조회  select  s.stuseq as 교육생번호,  d.delivery as 수령방법  from tblSignUp s  inner join tblDelivery d  on s.seq = d.suseq  order by d.delivery asc;  --수령여부(y, n) 등록  update tblDelivery set seq = 1, receipt = 'y'; | | | |