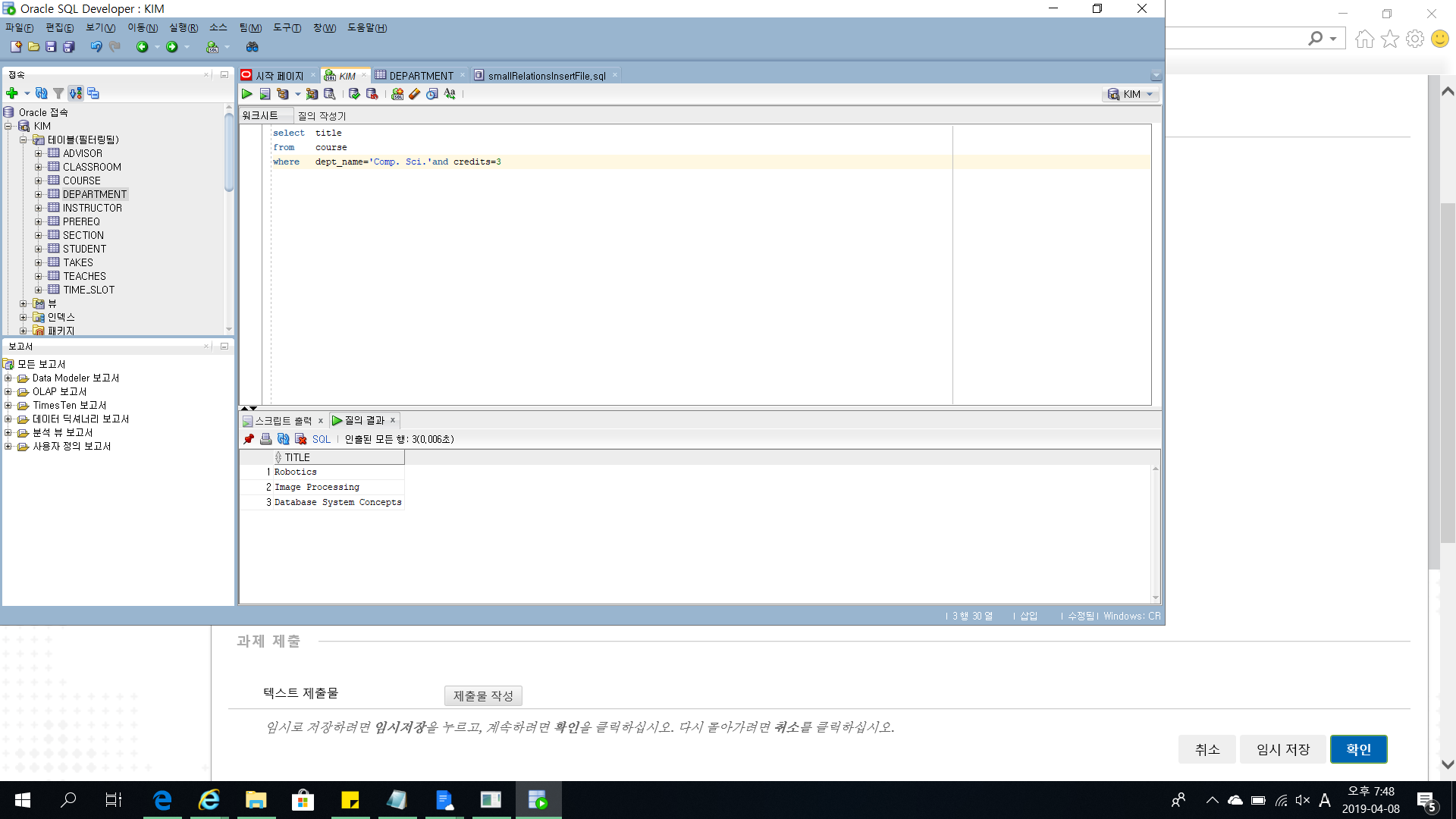
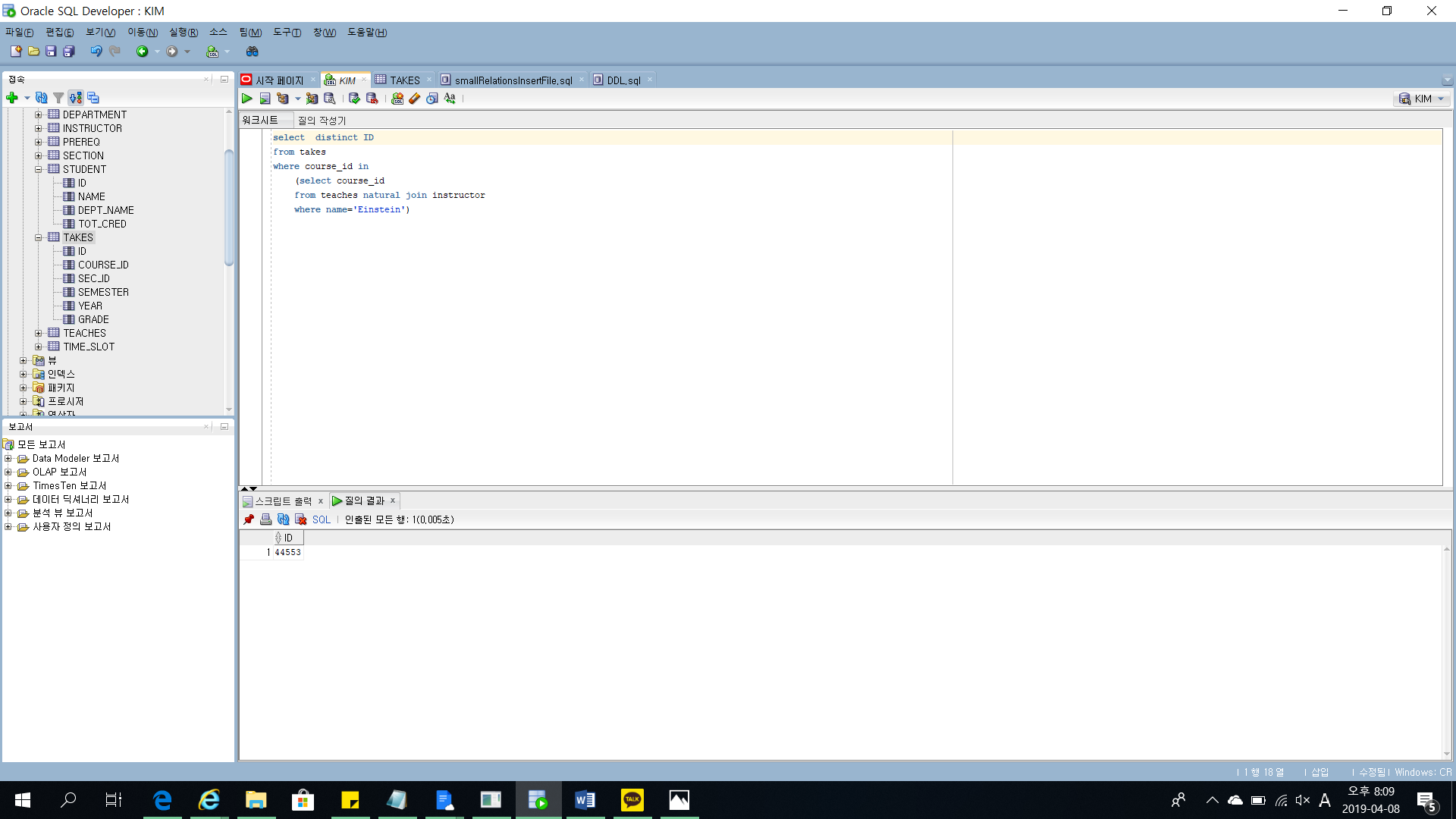
3.1

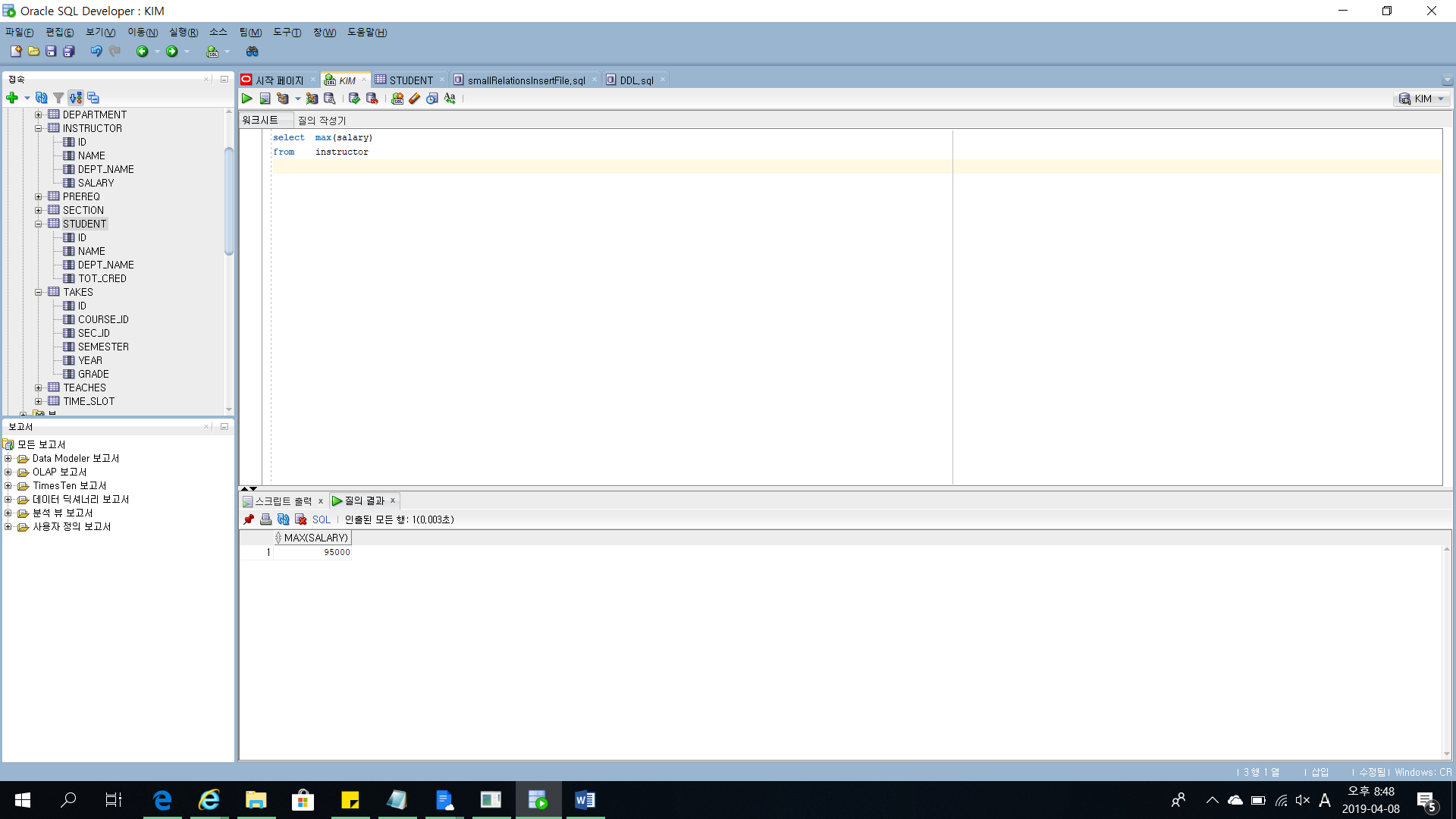
(a)



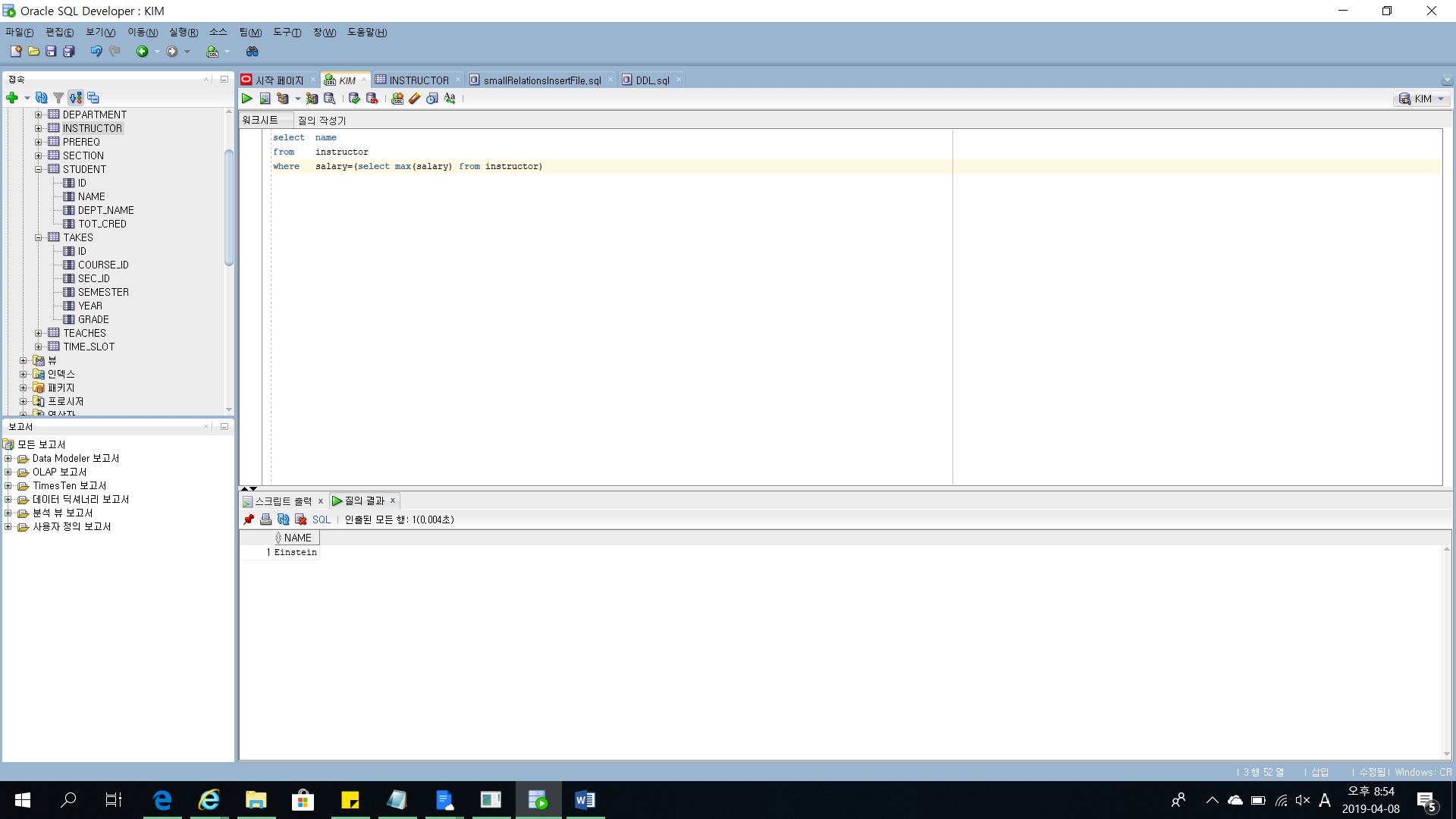
(b)



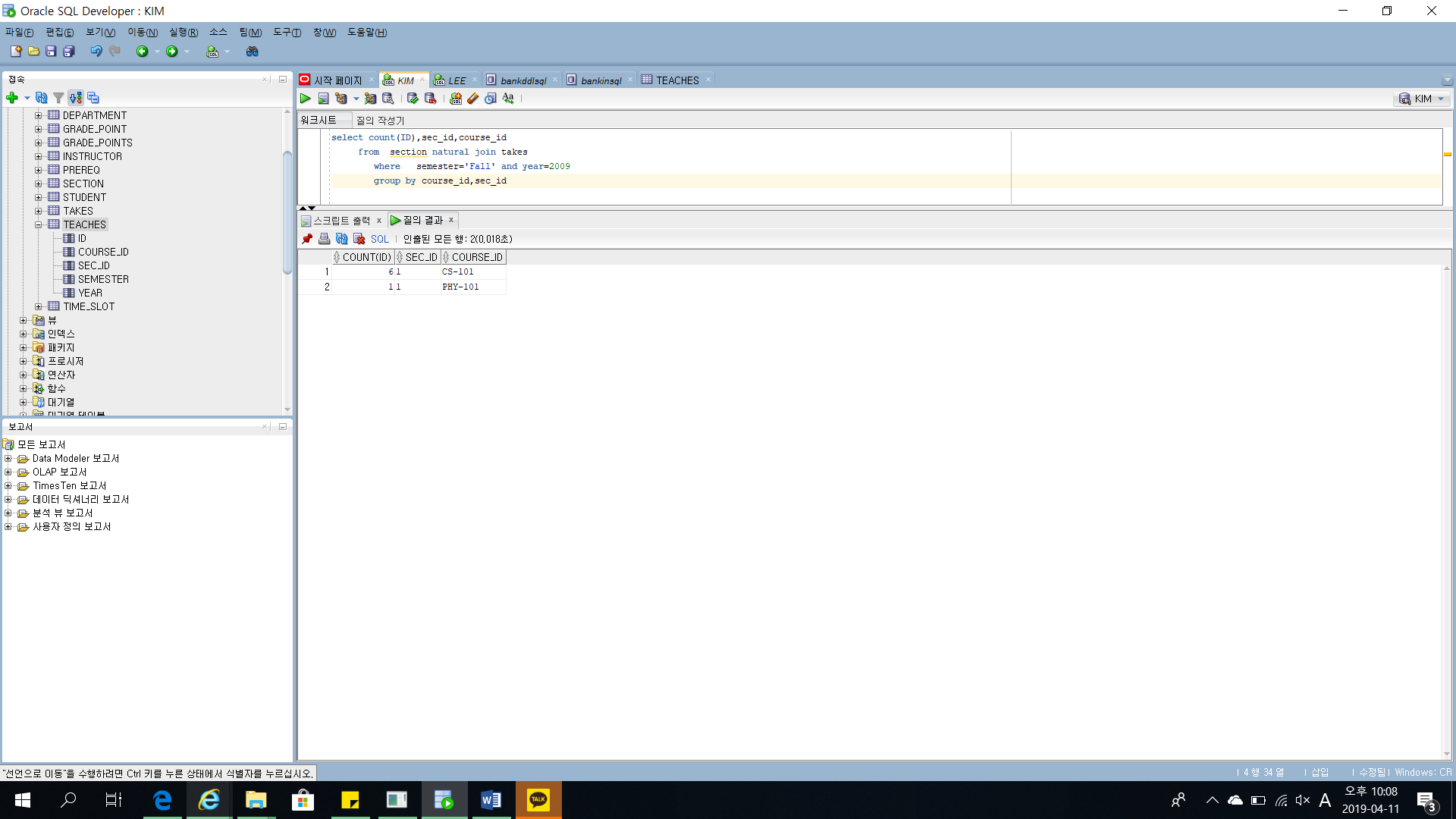
©



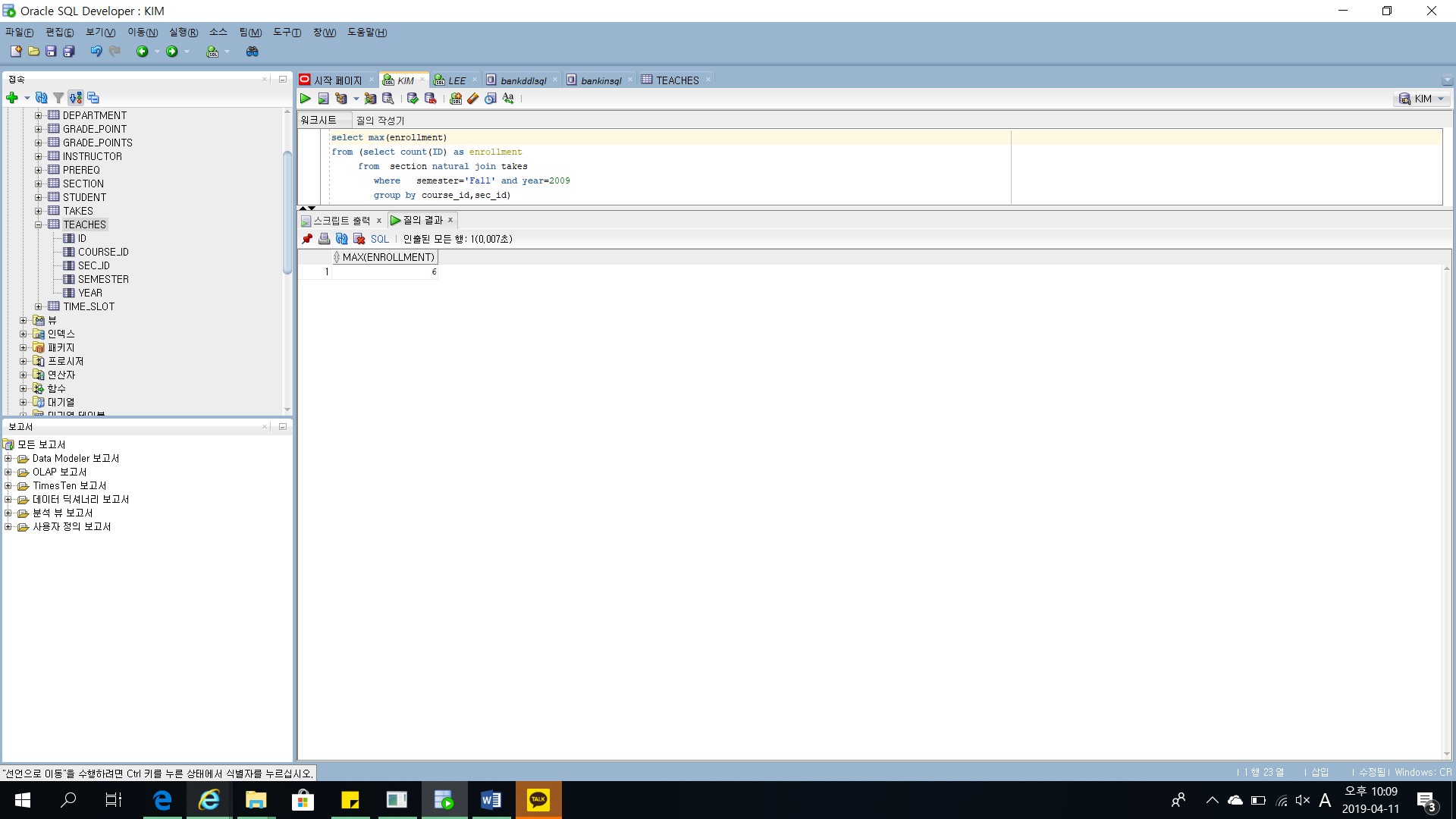
(d)



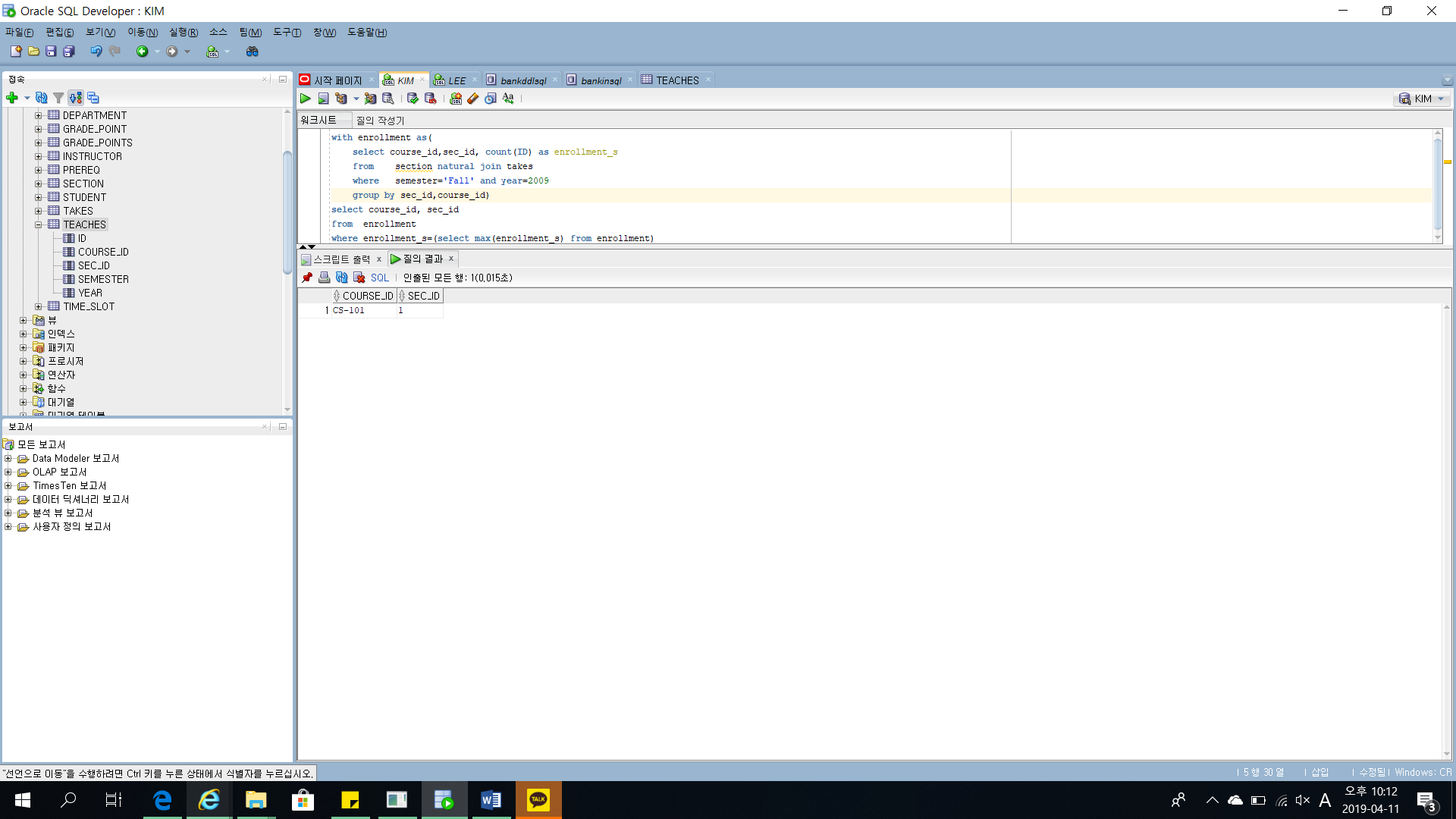
€



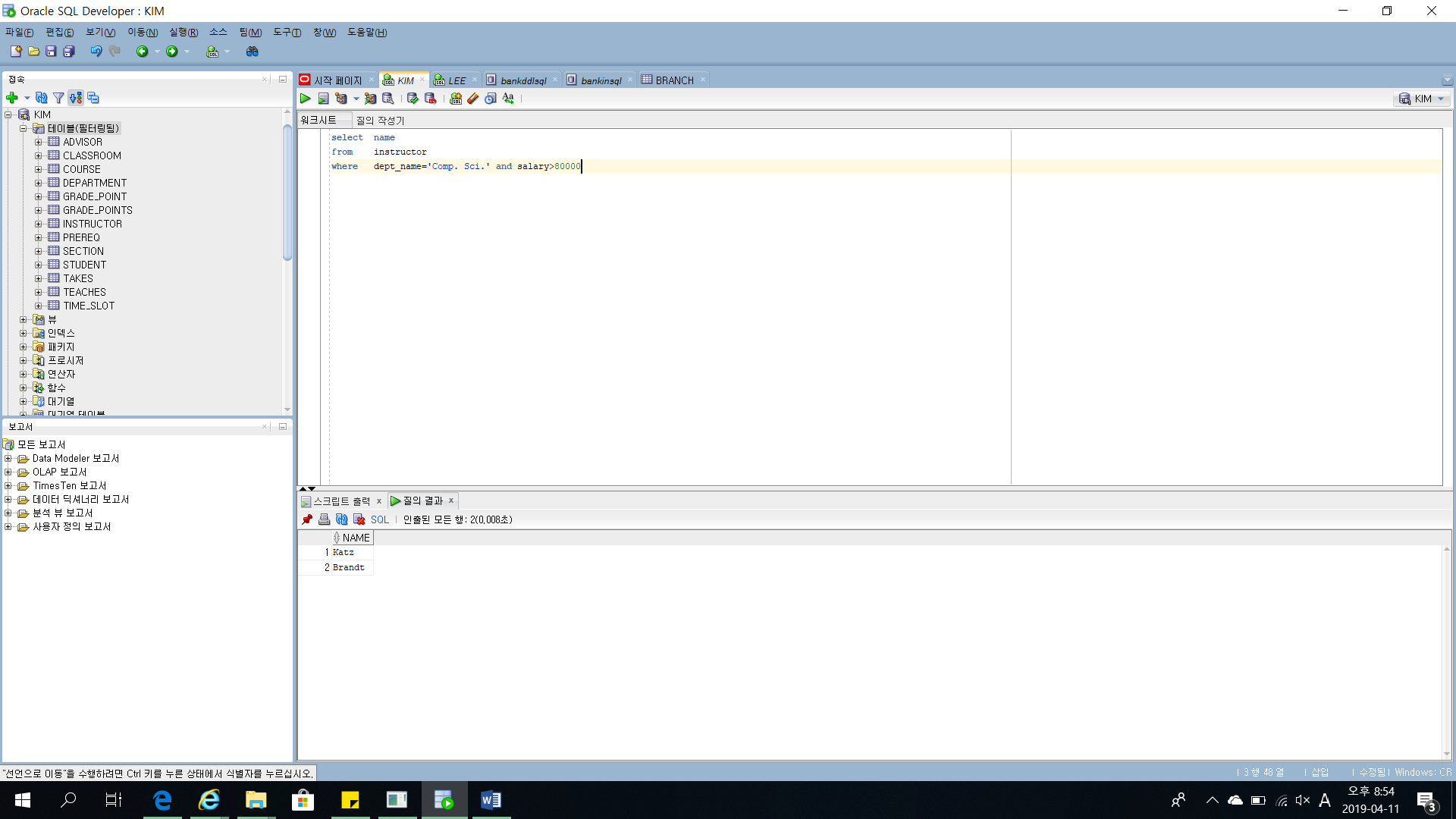
(f)

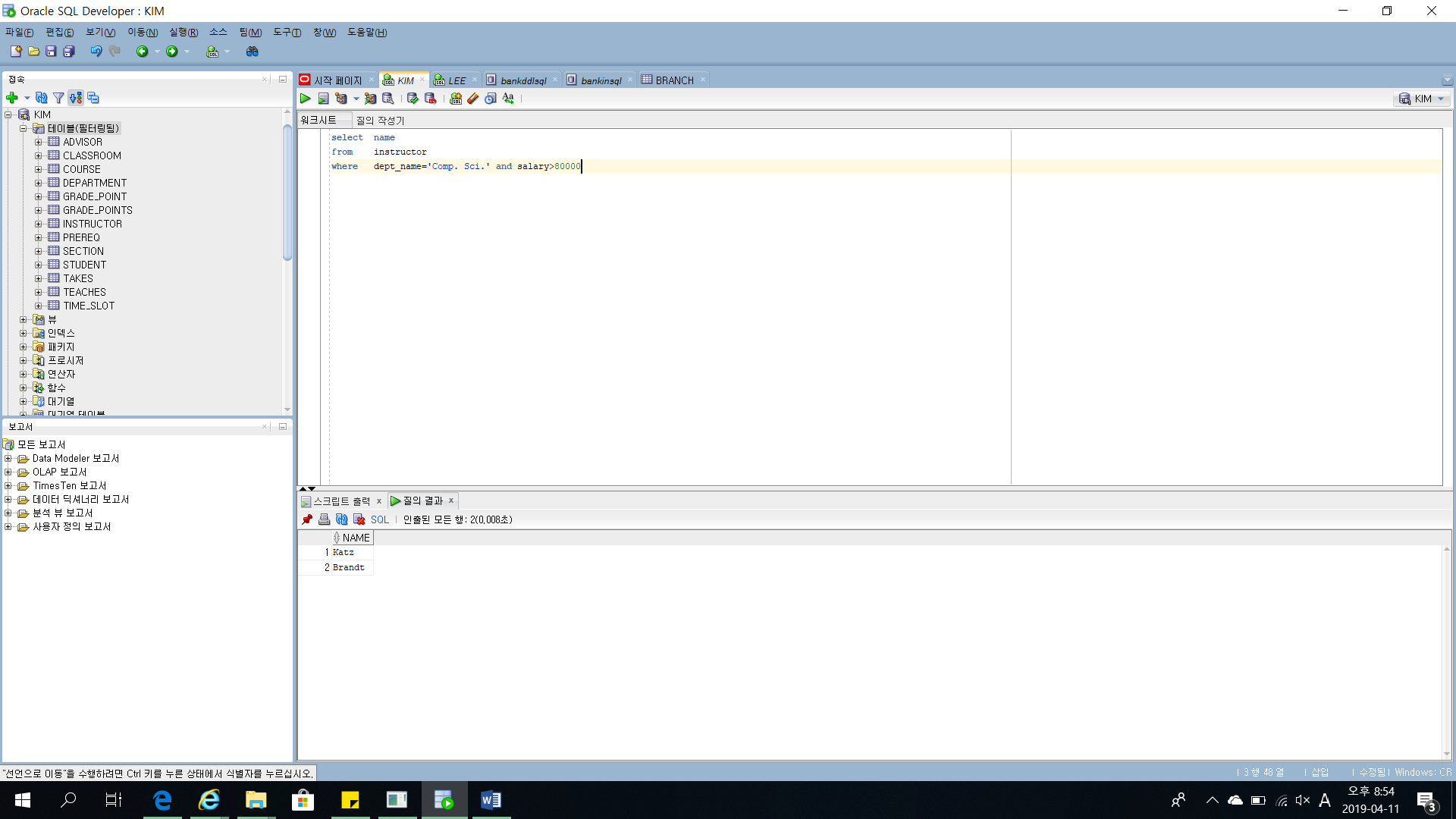


(g)

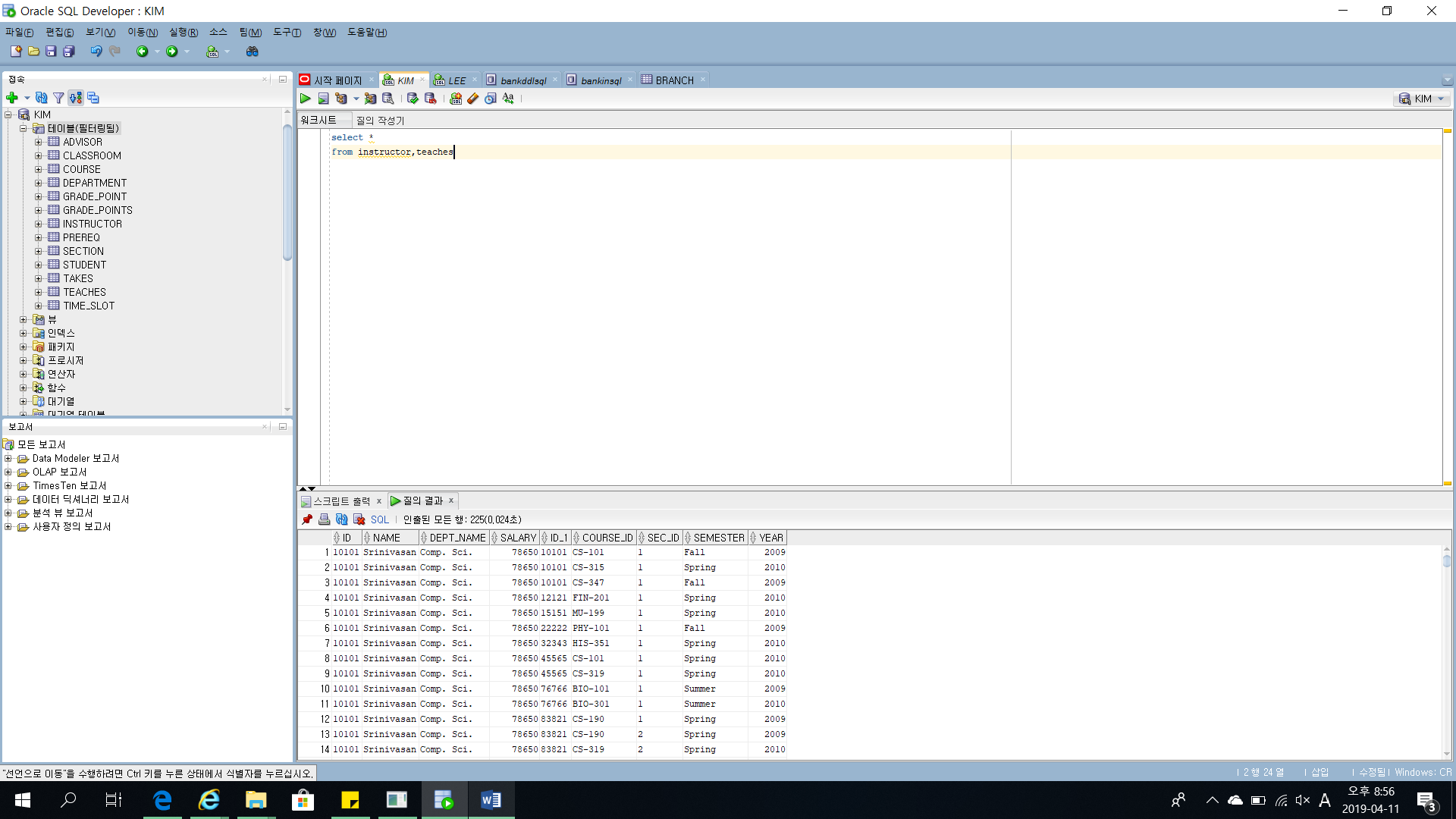


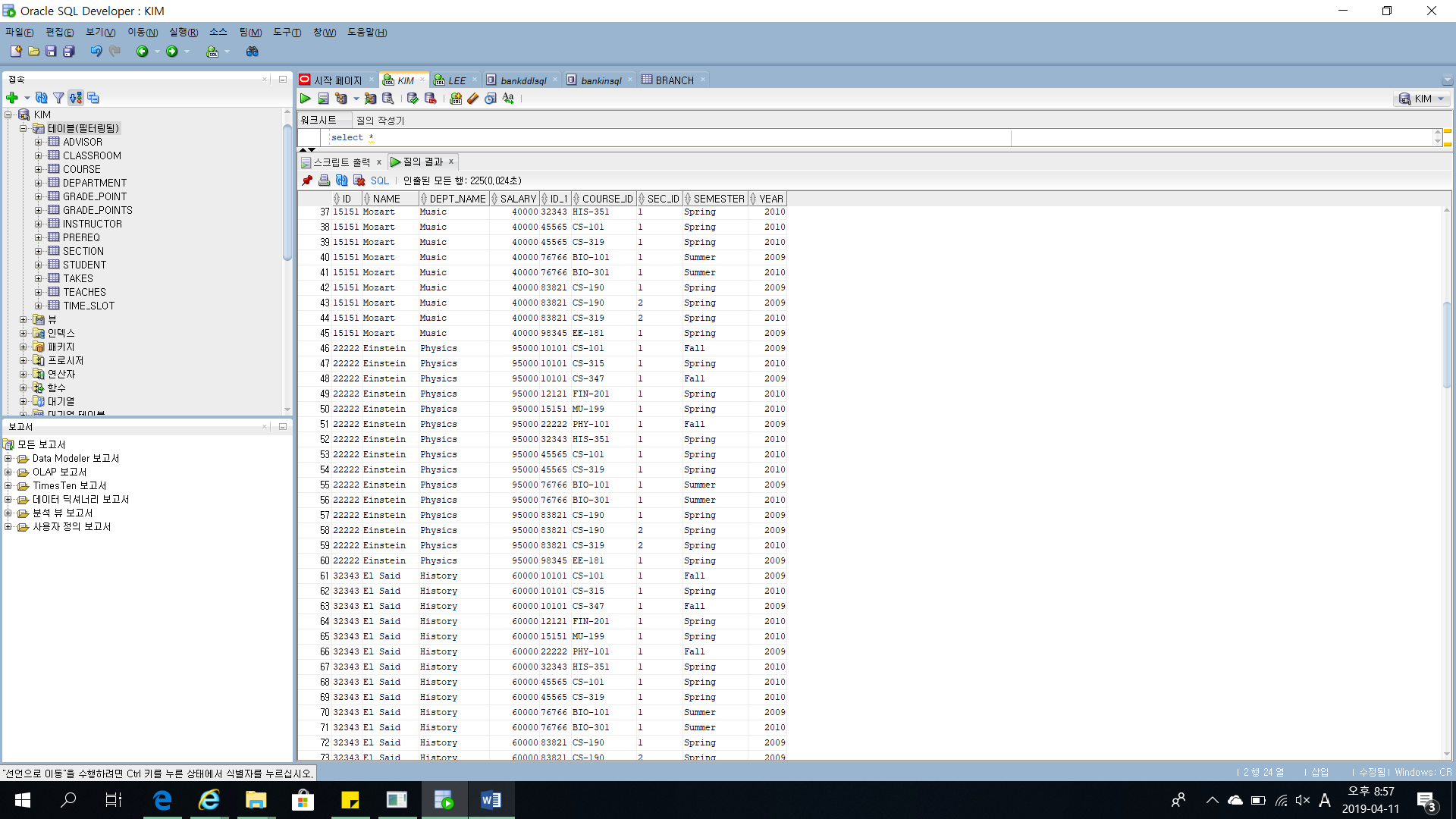
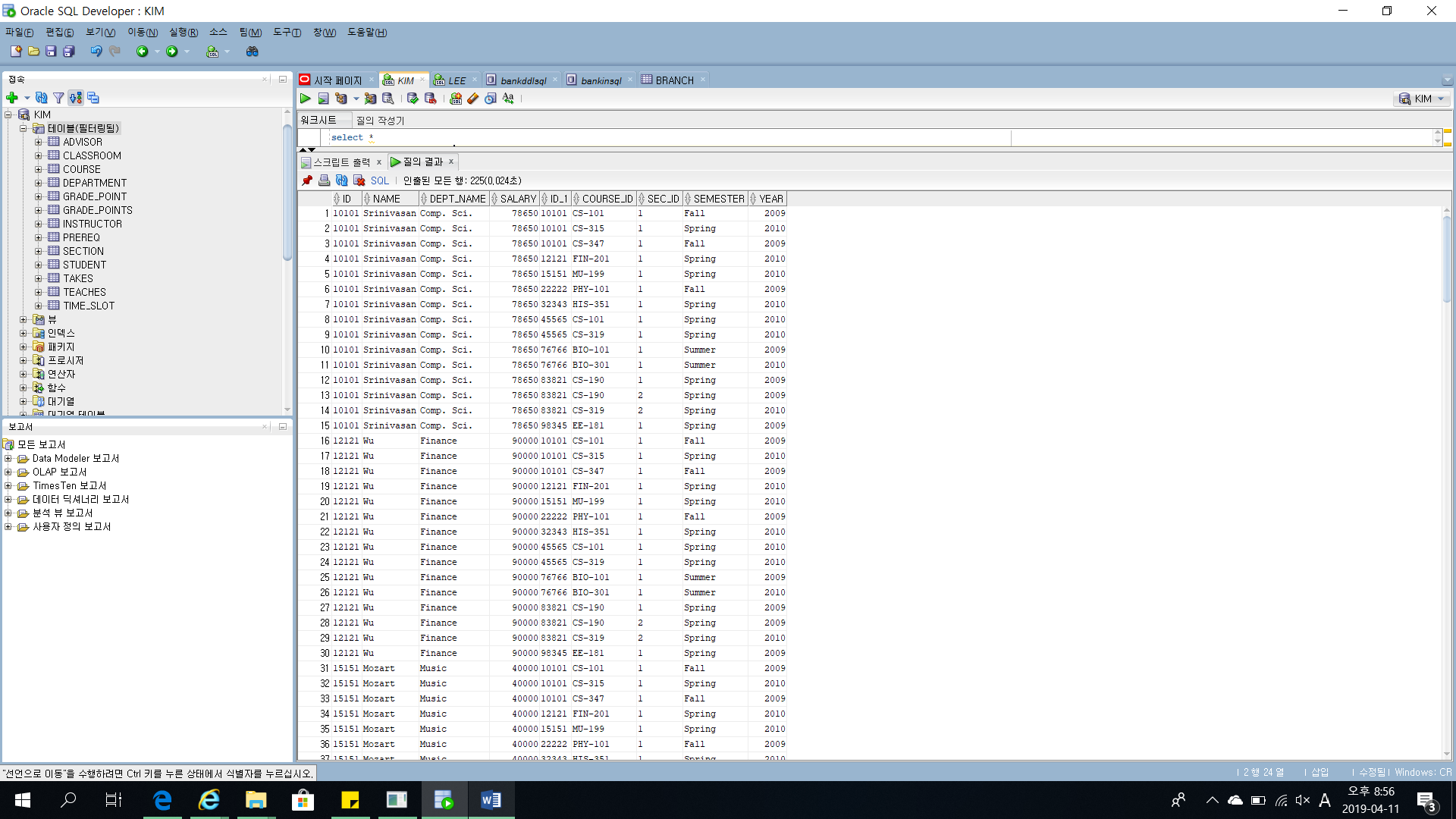
3.14

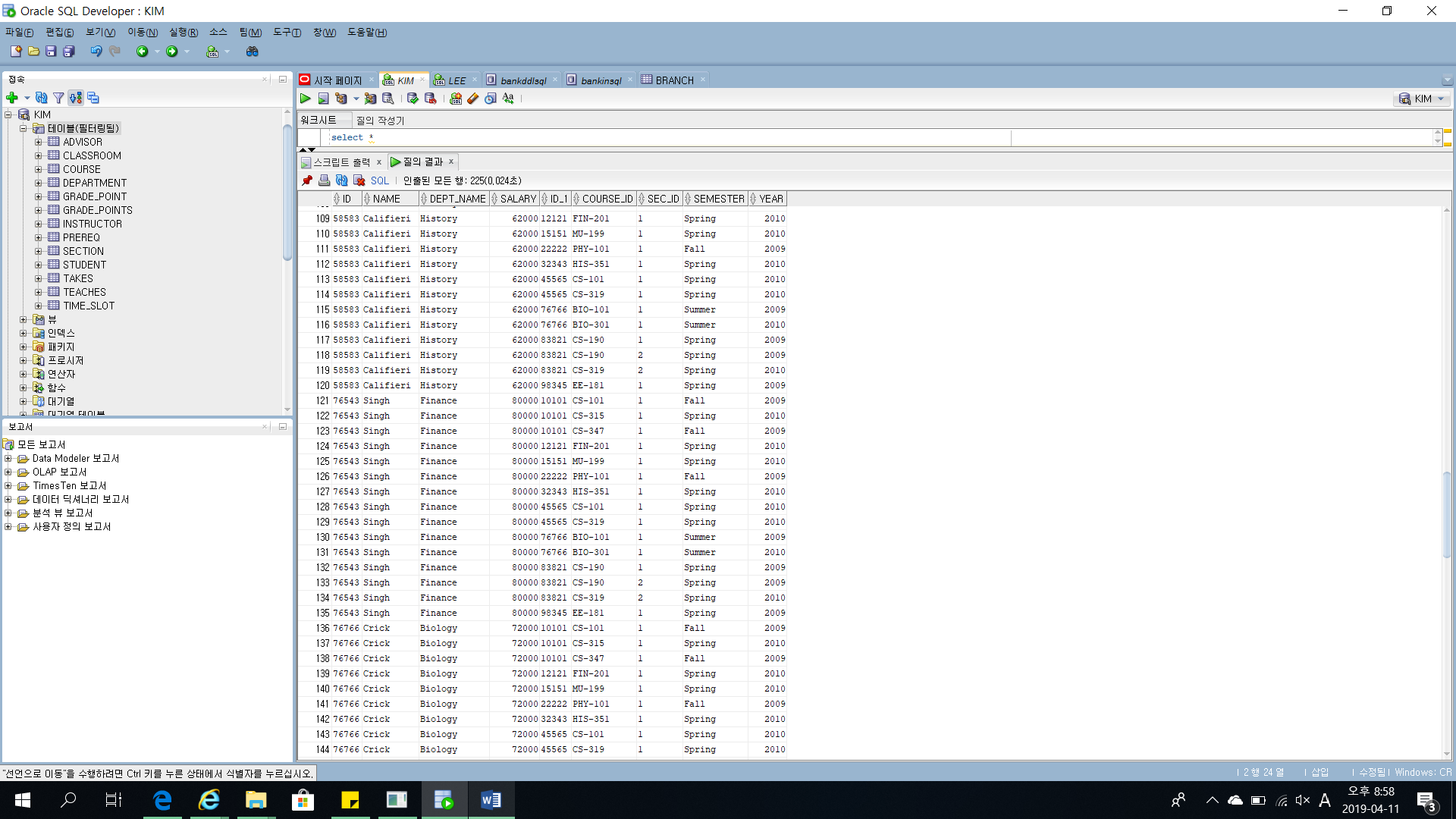
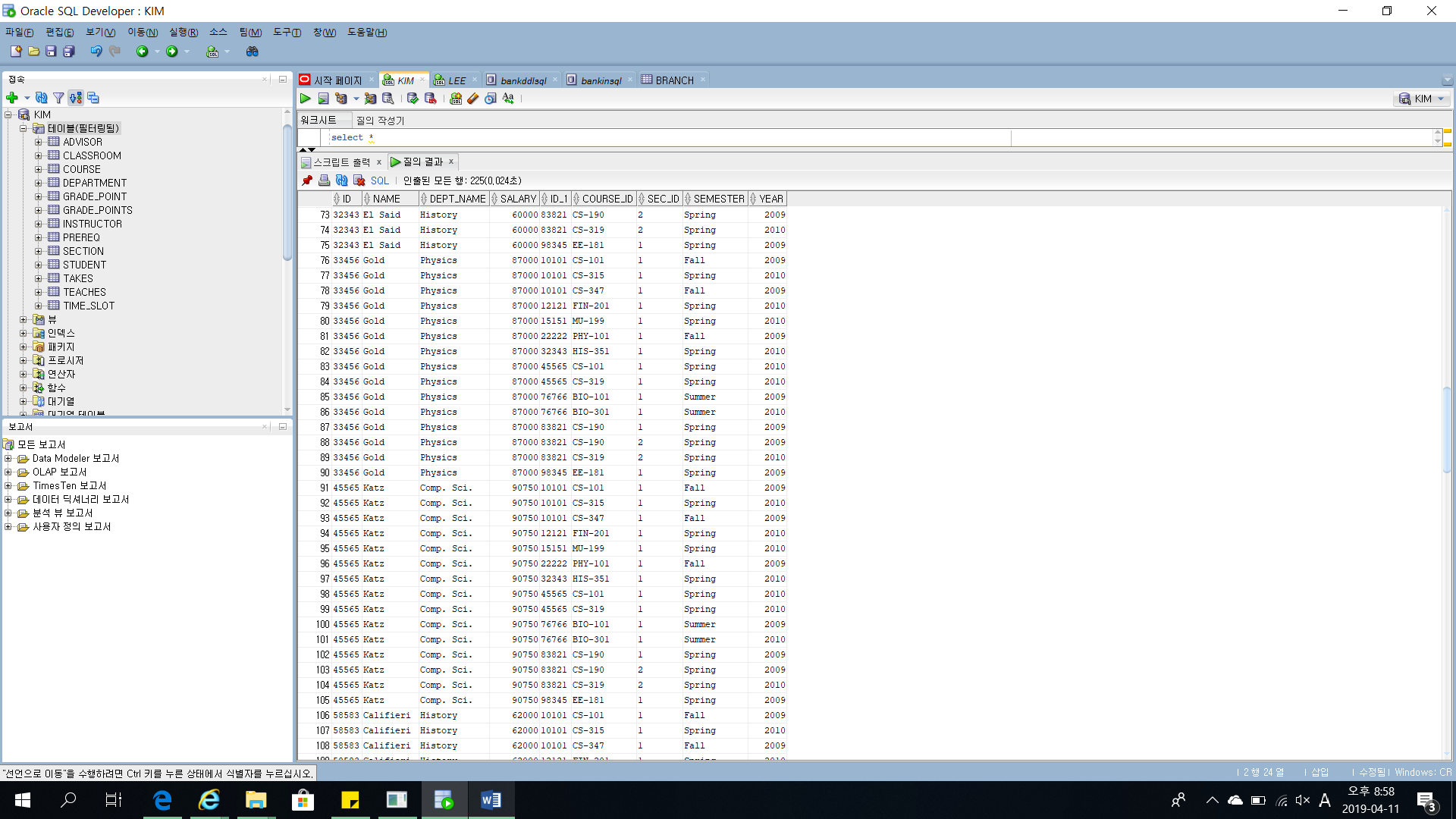


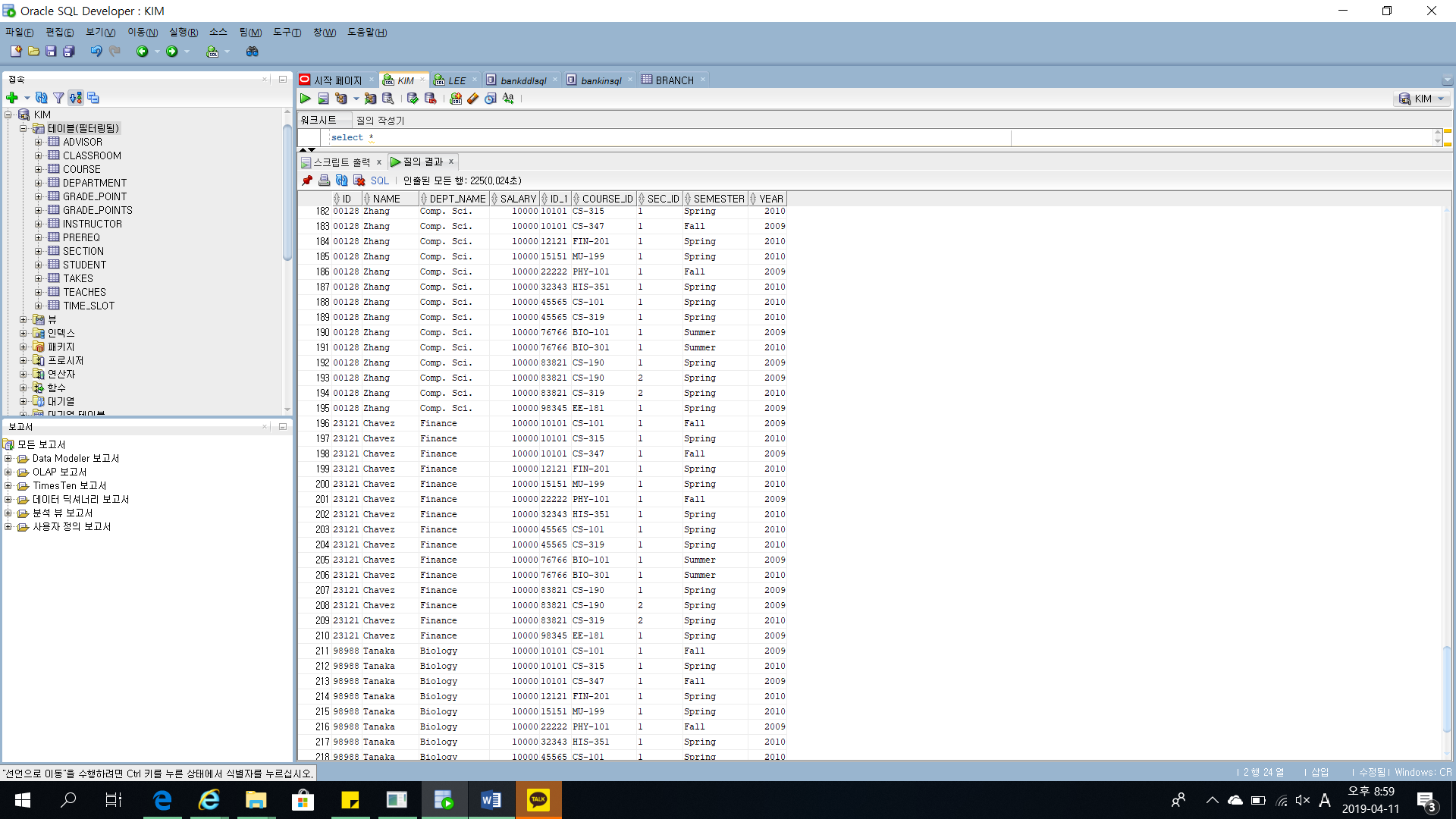
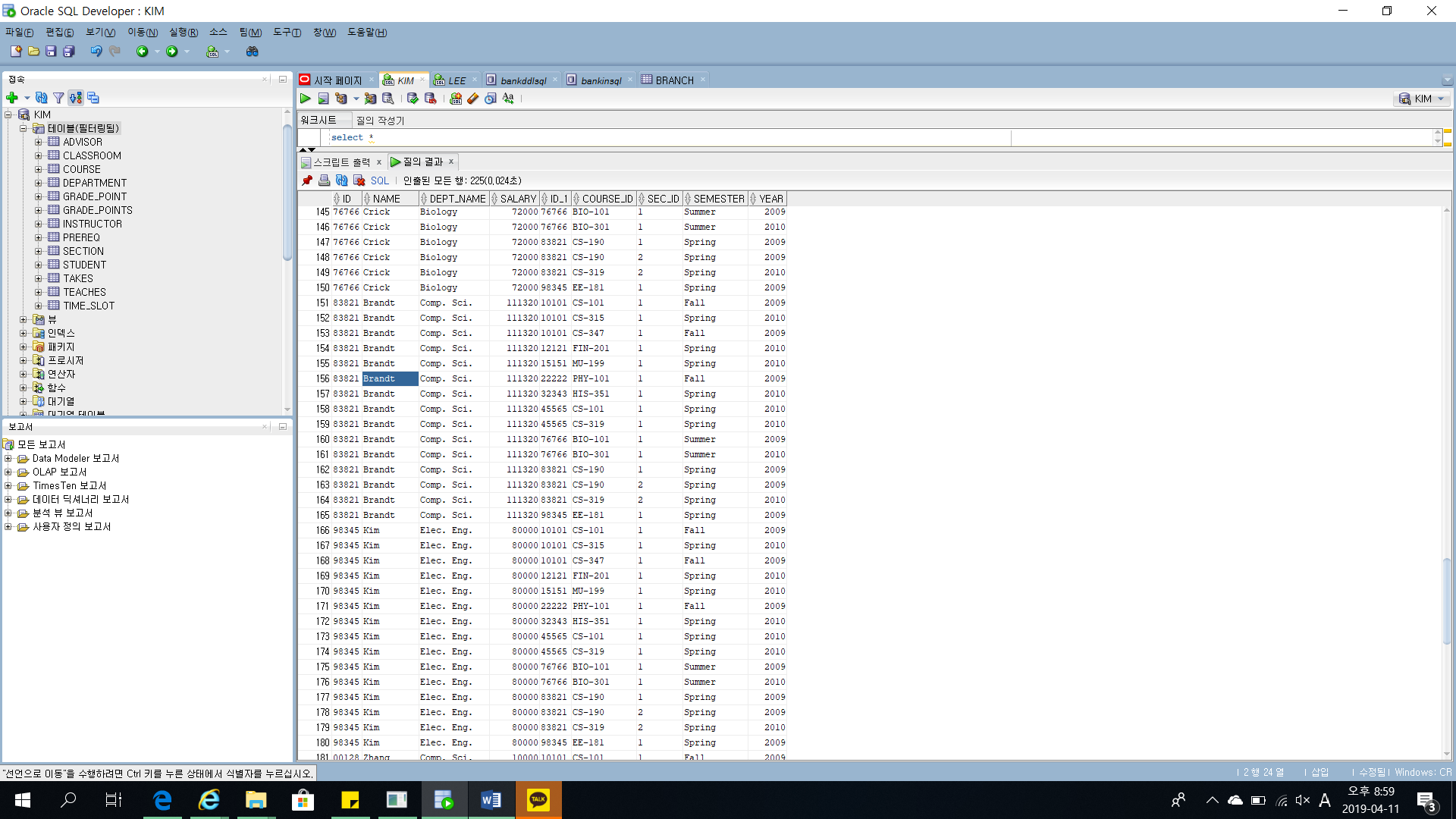


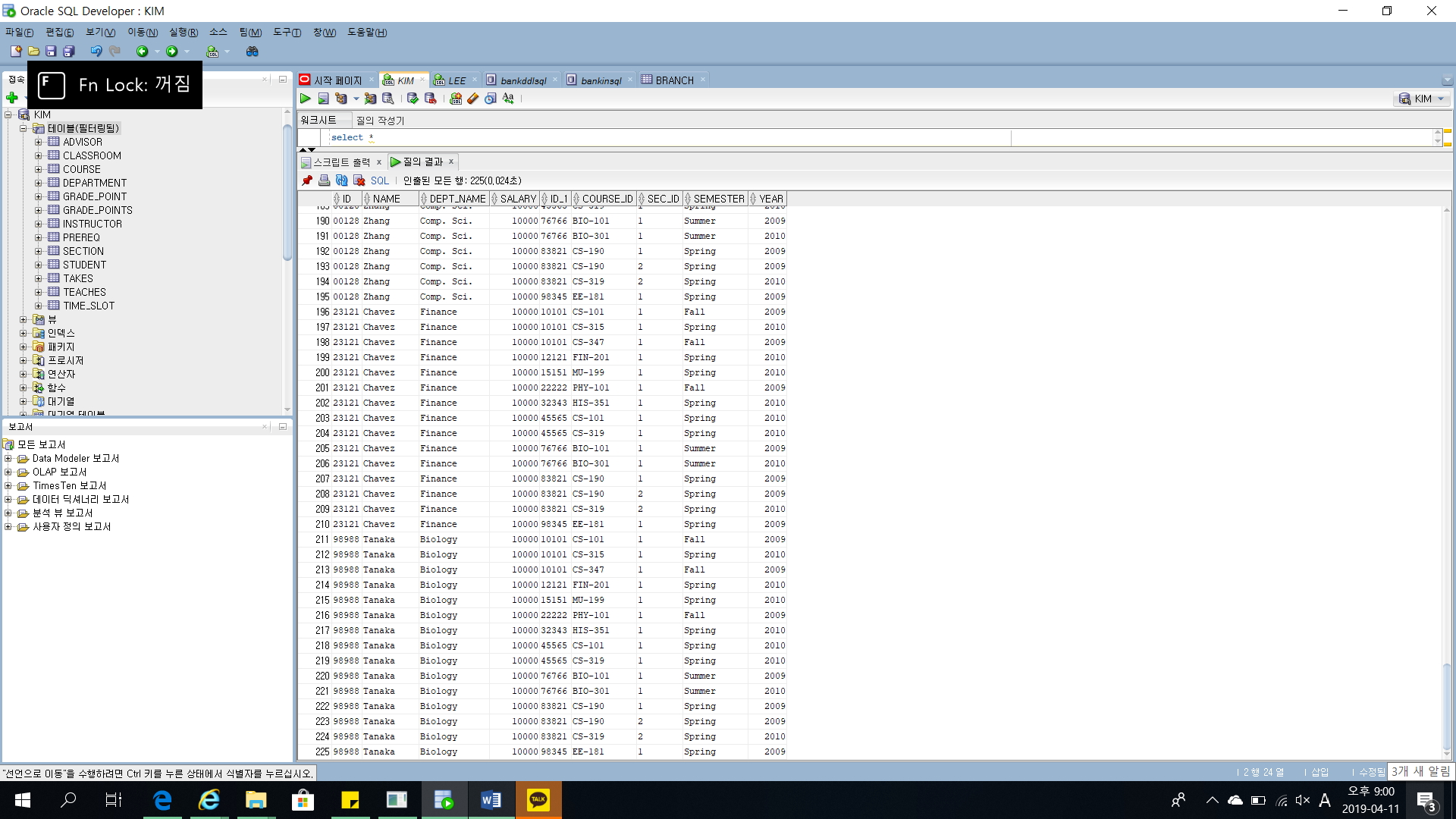
3.15



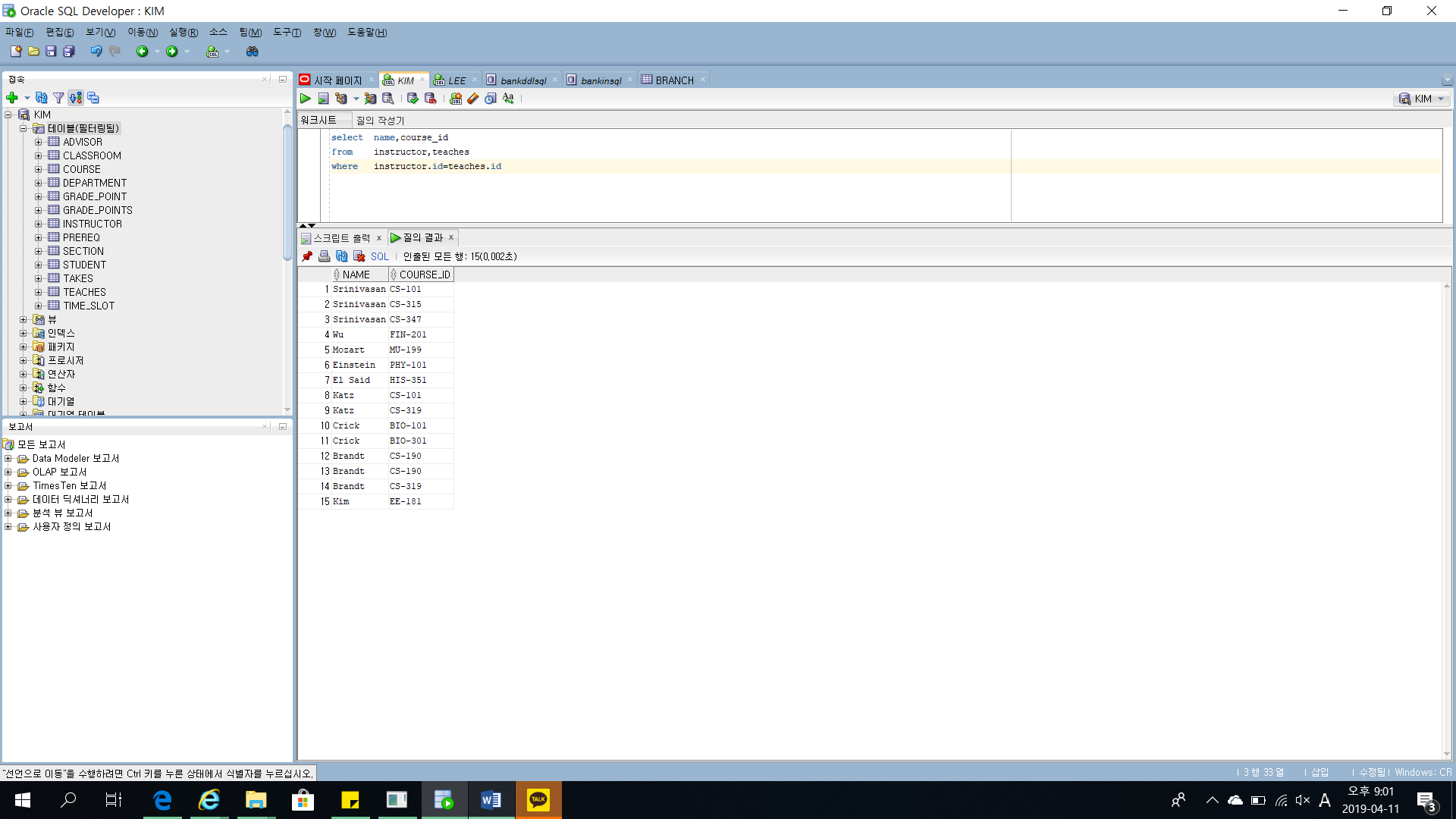
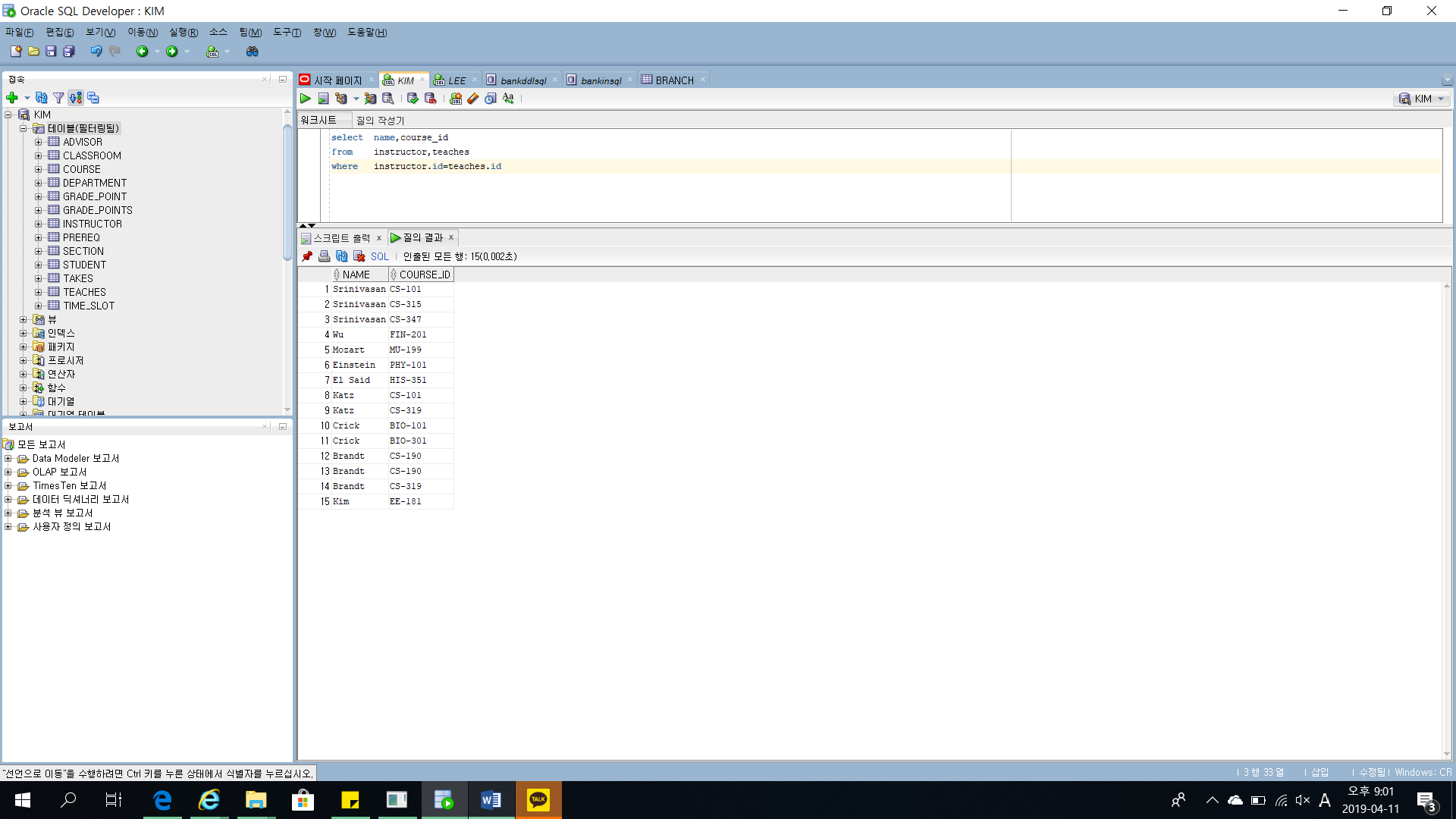




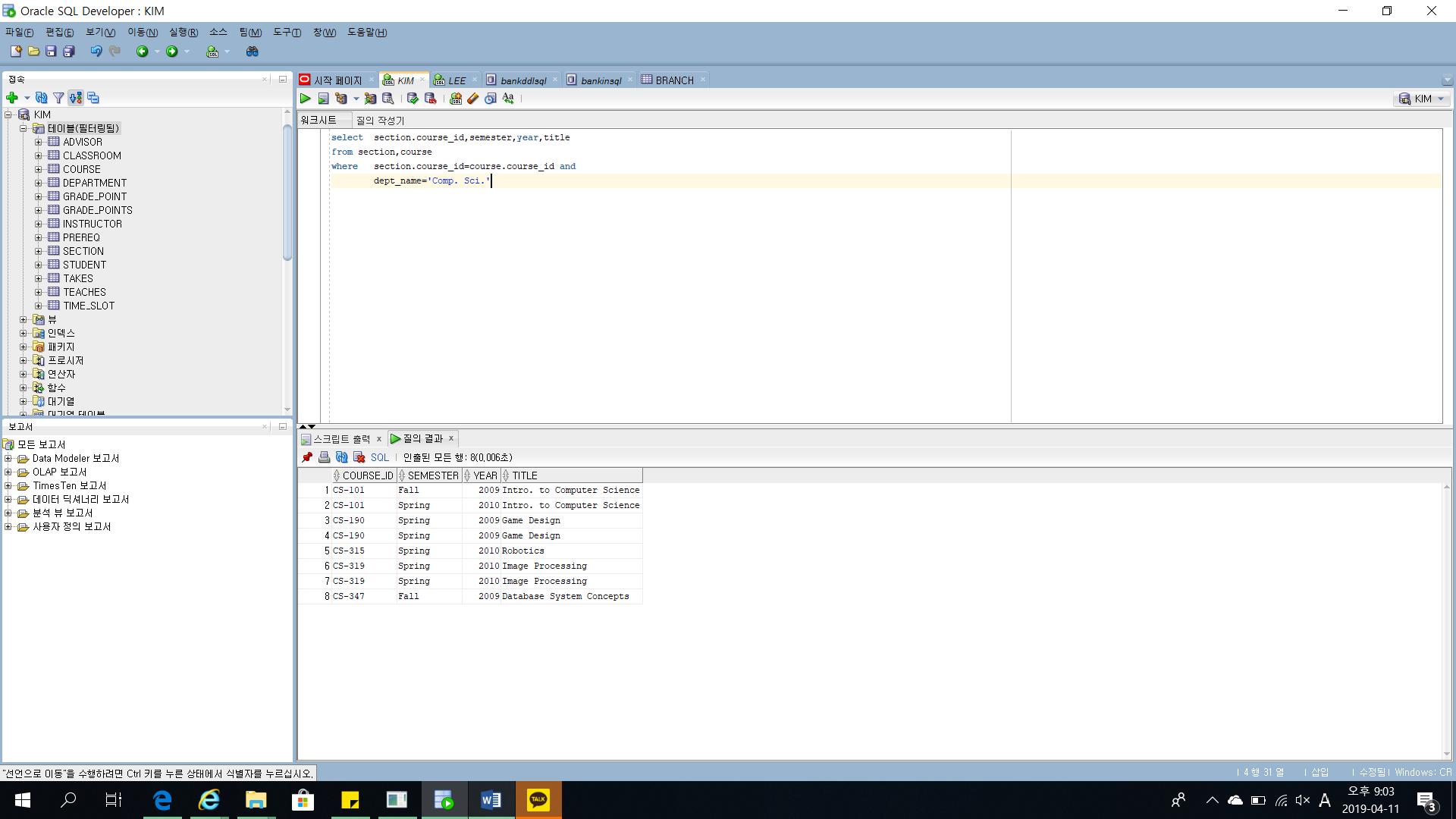
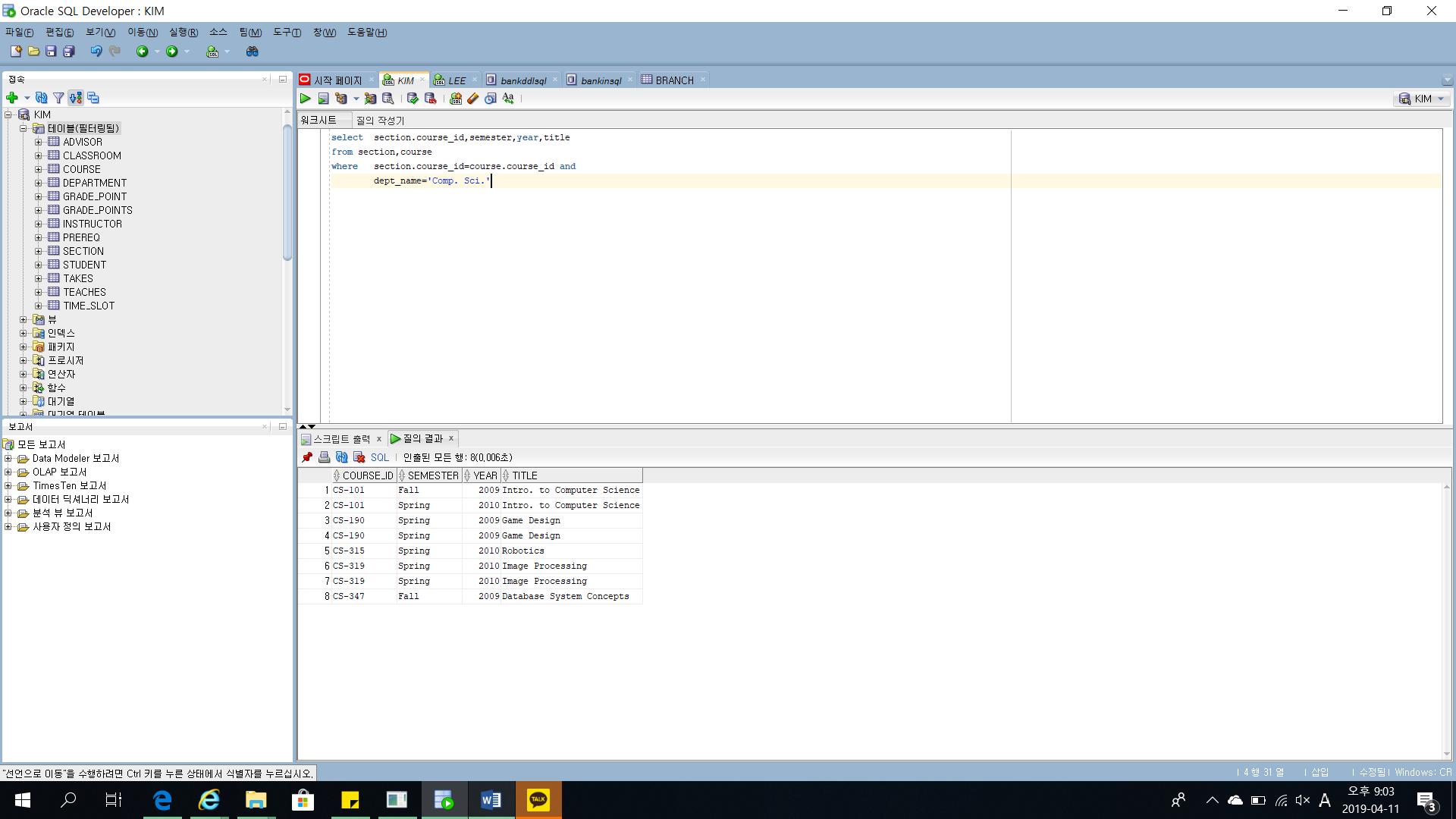




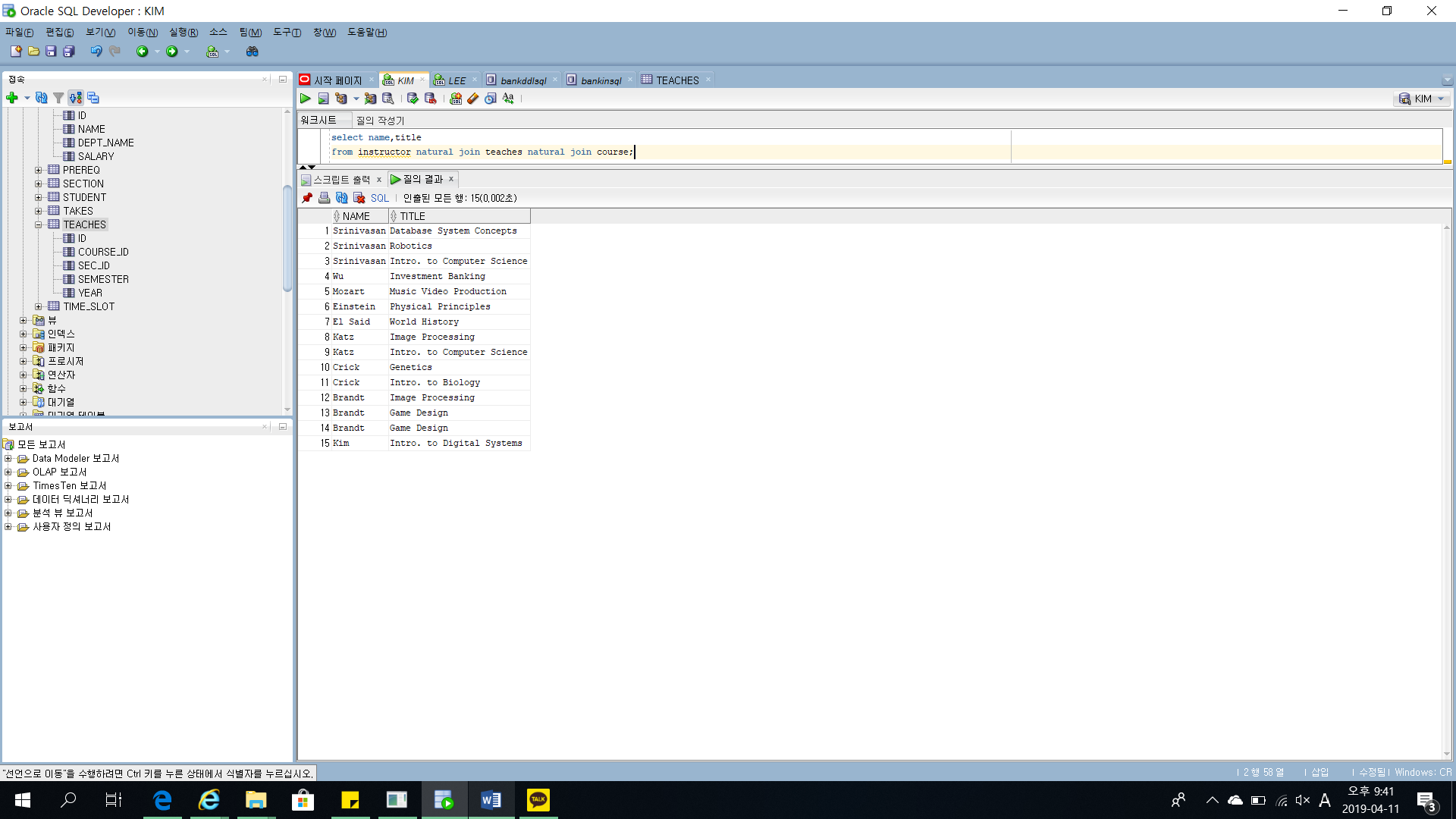
3.17-1

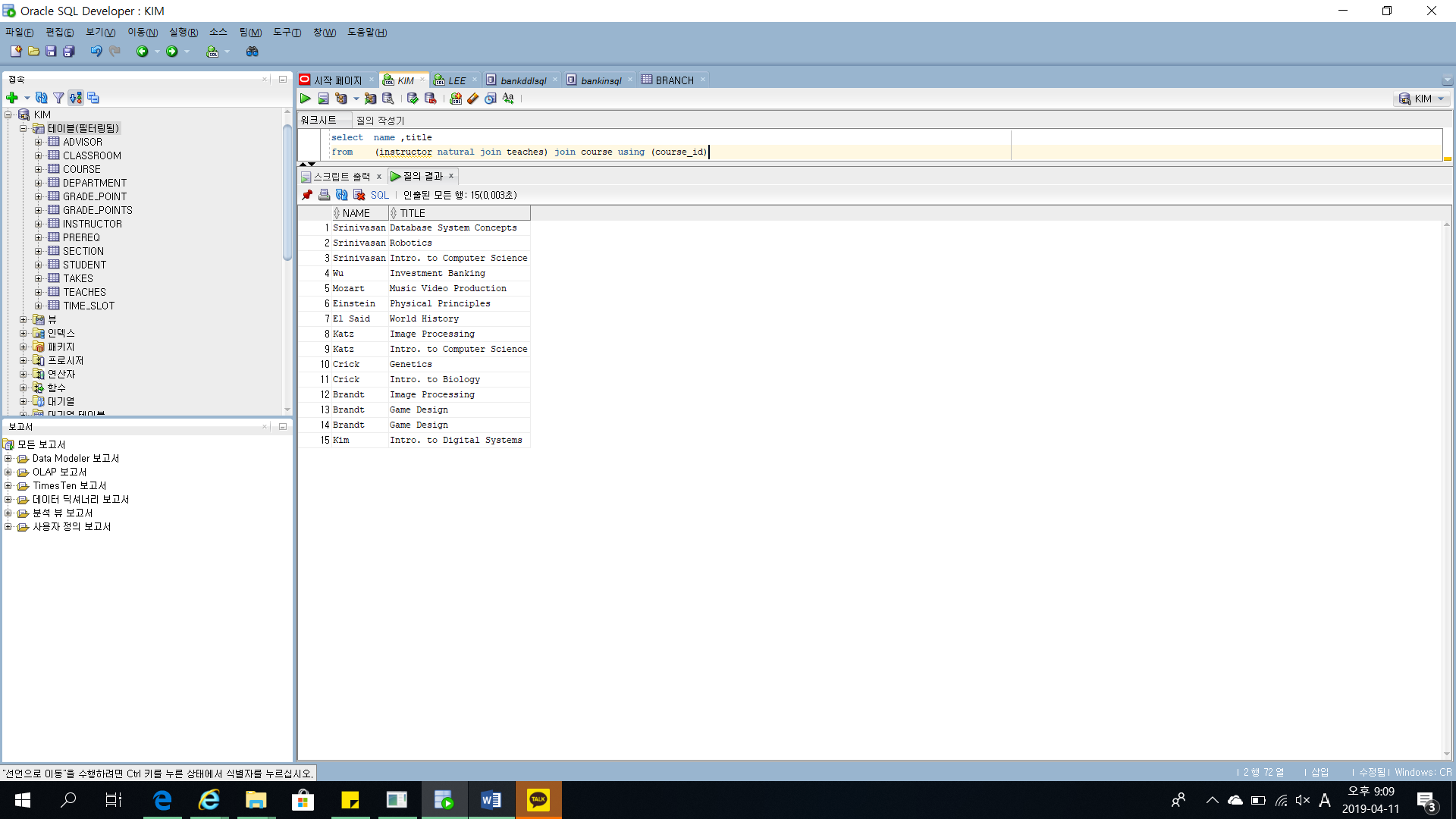
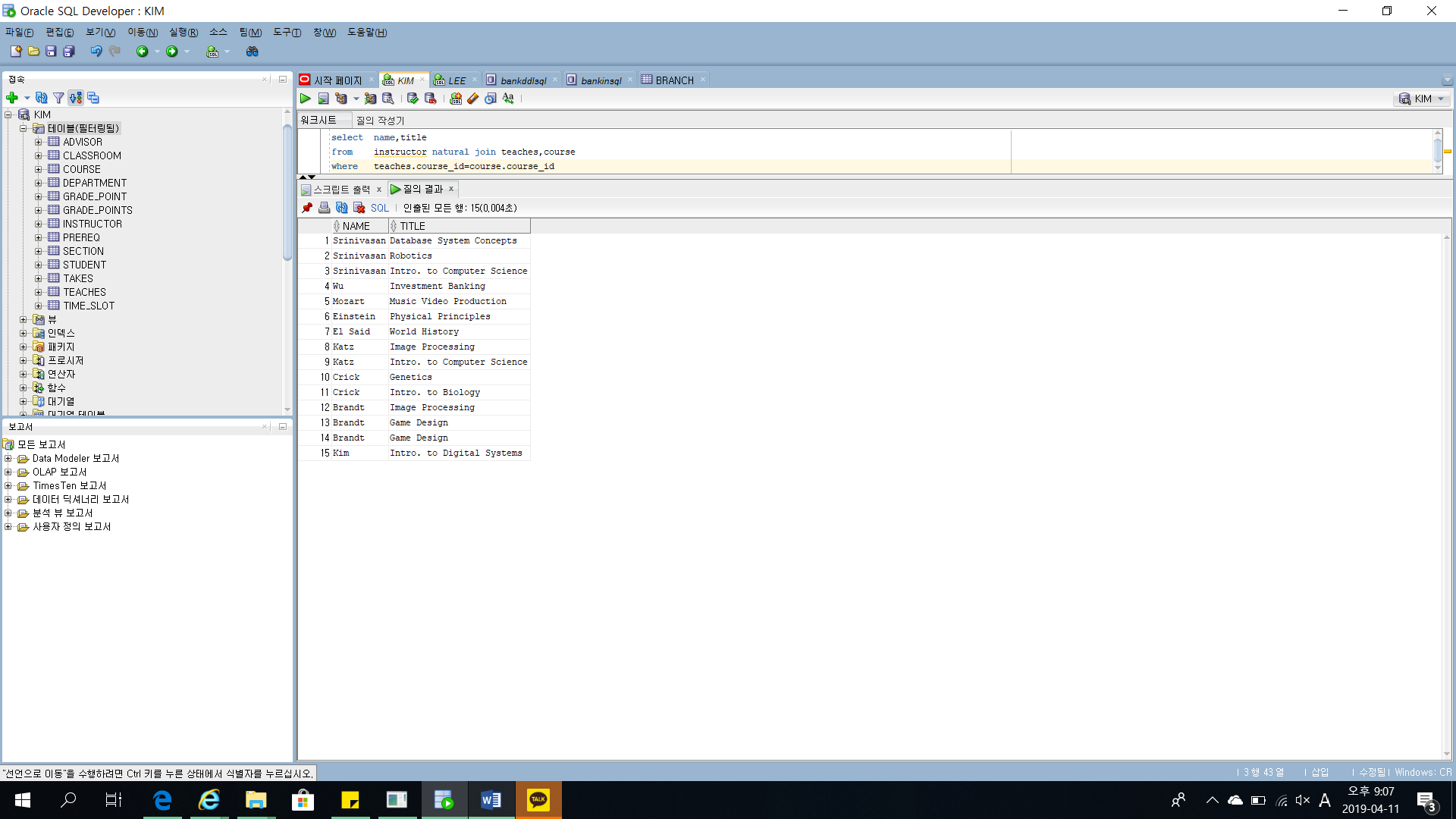


2.



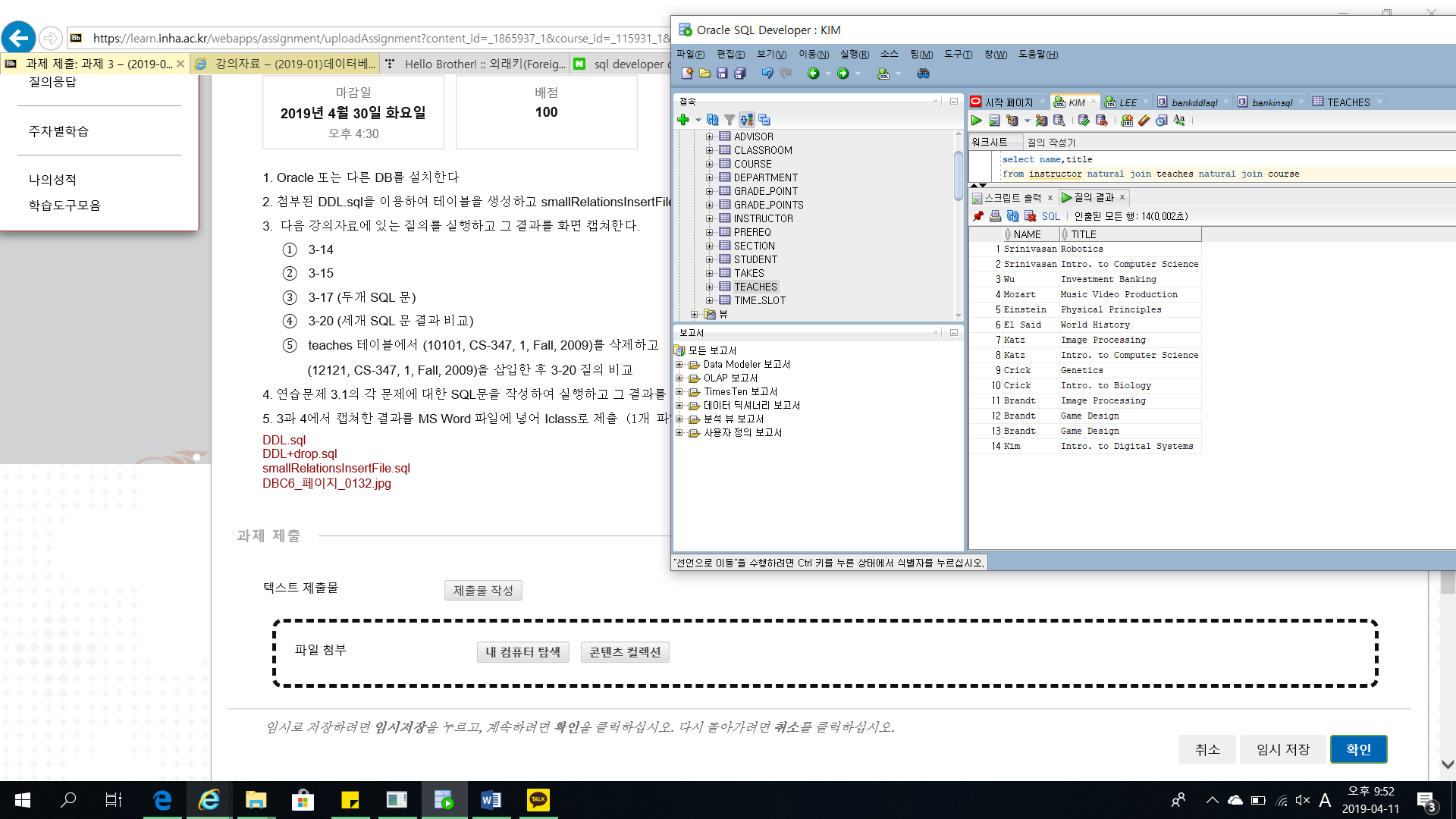
3.20





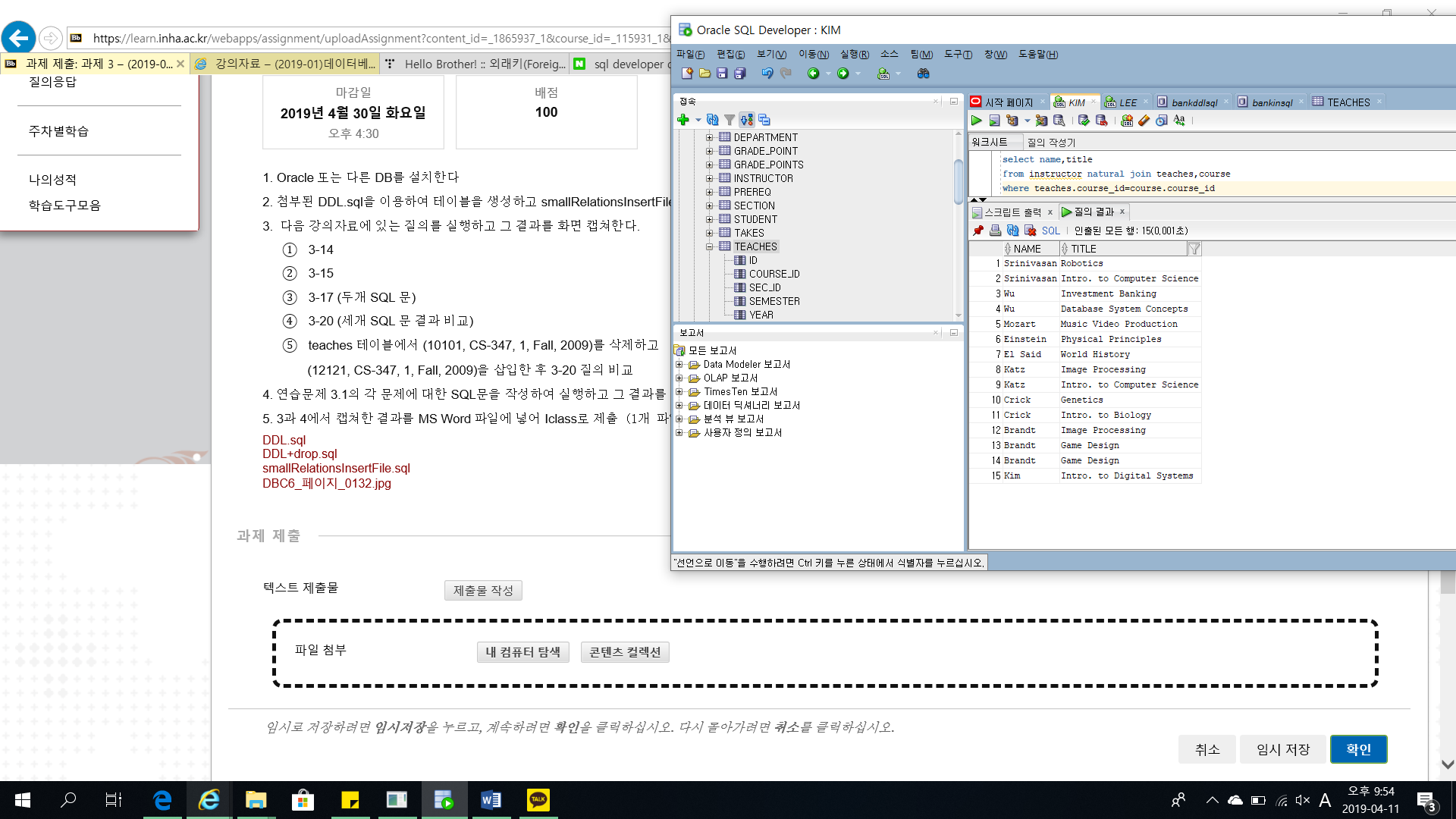
교수의 dept\_name과 course의 dept\_name이 모두 같은 값이기 때문에 전부 같은 결과를 출력

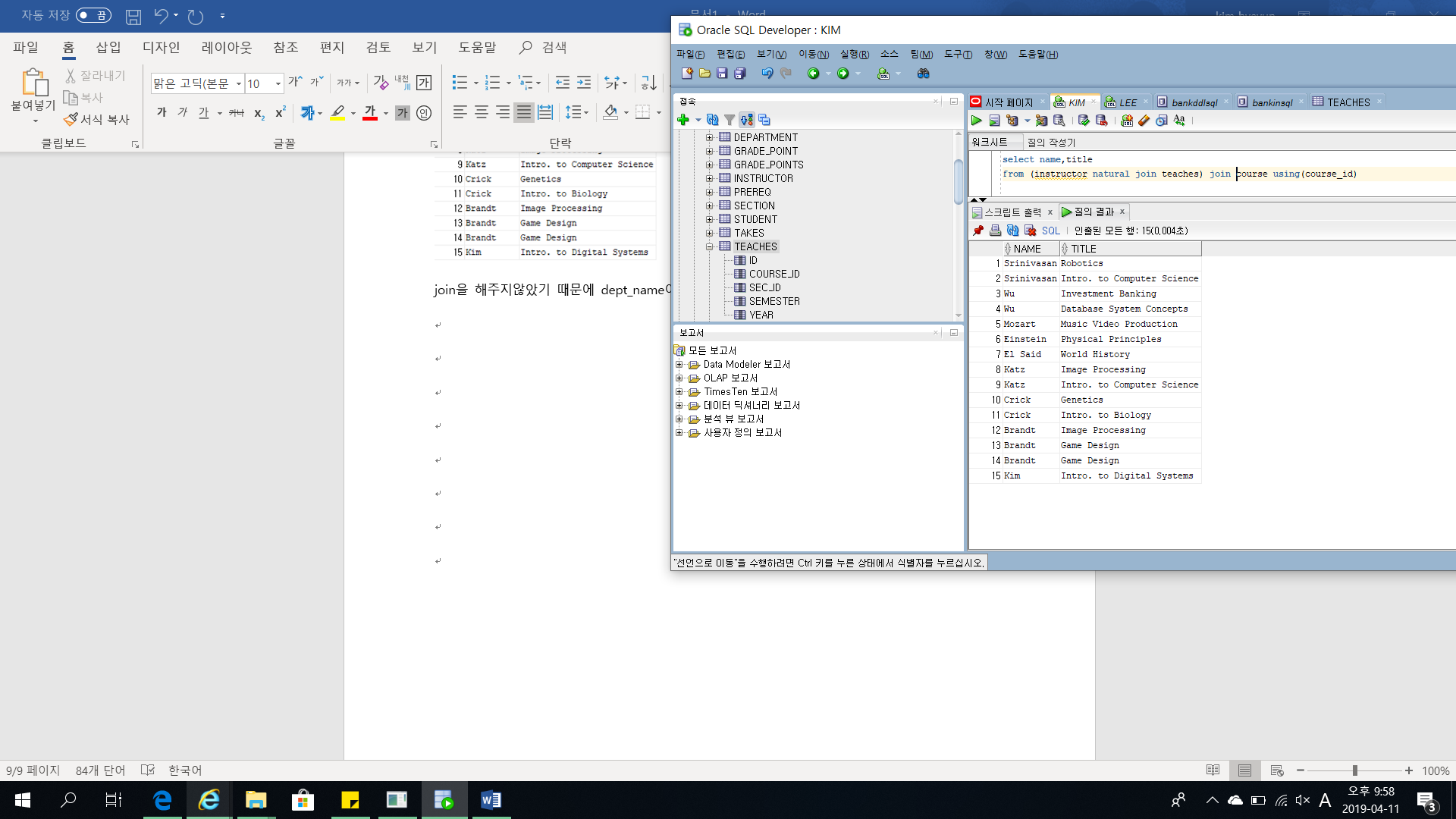
삭제후추가



새로 추가한 데이터는 교수와 course의 dept\_name이 다르기 때문에 결과에 나타나지 않음.

Instructor과 teaches의 자연조인은 (id,name,dept\_name,salary,course\_id,sec\_id) 속성을 갖는 반면,course 릴레이션은 (course\_id,title,dept\_name,credits)속성을 가짐, 이 둘의 자연 조인은 두 입력으로부터의 dept\_name 속성 값이 같아질 것과 course\_id 속성 값이 같아질 것을 요구함. 그러면 이 질의는 교수가 소속된 학과가 아닌 다른 학과에서 가르치는 수업을 포함하는 모든 (교수이름, 수업제목)짝을 제거함.

처음에 나타나지않은 값이 나타남. Course는 natural join을 해주지않았기 때문에 dept\_name이 같지않더라도 출력.



두번째와 똑 같은 결과를 출력함. Course는 course\_id를 가지고 natural join이 아닌 join을 해주었기 때문에 course dept\_name 과 instructor dept\_name이 달라도 제외를 하지않음