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DBMS CS6106 Lab 8 ONSPOT

1. **Consider the following relational schema that manages the telephone bills of a mobile phone company.**

   CUSTOMER (SSN, Name, Surname, PhoneNum, Plan)
   PRICINGPLAN (Code, ConnectionFee, PricePerSecond)
   PHONECALL (SSN, Date, Time, CalledNum, Seconds)
   BILL (SSN, Month, Year, amount)

a. **Write a trigger that after each phone call updates the customer's bill.**

```
create TRIGGER tr1
AFTER insert of phonecall
        for each row
BEGIN
        update bill set amount = amount + ( select pricingplan.connectionfee +
        pricingplan.pricepersecond * NEW.seconds from pricingplan  JOIN customer on
        customer.plan = pricingplan.code where NEW.ssn = customer.ssn )
        where bill.ssn = NEW.ssn  and bill.year = NEW.date.year and
         bill.month = NEW.date.month;
END;
/
```

b. **We make the assumption that the bills to be updated are always already present in the database. In order to do this, we can create another trigger that creates a bill with an amount of 0 for each registered customer at the beginning of each month (suppose we have the event END_MONTH).**

```
create TRIGGER tr2
AFTER month_end
BEGIN
        insert into bill
        select ssn , sysdate().month, sysdate().year, 0
        from customer;
END;
/
```