

Direct one-to-one 1..1

```
class Bill {
    int billNo;
    LocalDate billGeneratedDate;
    String customerName;
    LocalDate dueDate;
    String mobileNo;
    String planName;
    double billAmount;
    ItemizedBill itemizedBill;
}
```

1..1

```
class ItemizedBill {
    int billNo;
    int localMessages;
    int internationalMessages;
    int localVoiceInMinutes;
    int internationalVoiceInMinutes;
    double previousDueAmount;
    Bill bill;
}
```

```
bill
bill_no (pk)
bill_generated_dt
customer_nm
due_date
mobile_no
plan_nm
bill_amt
```

```
itemized bill
bill_no (pk) (fk)
local_messages
international_messages
local_voice_in_mins
international_voice_in_mins
previous_due_amt
```

The ItemizedBill doesnt have existence without the Bill, so Bill and ItemizedBill, both has the same identity and the cardinality of the association is 1 to 1. So we can map them into the table model as direct one-to-one relationship

In itemized_bill table we declare bill_no as an primary key and foreign key to the bill table bill_no(pk), stating an itemized_bill record can be created for an existing bill only.

How to perform persistence operation on the above entity classes into the table?

1. PERSIST/SAVE
1.1 Bill entity class
directly into the bill table

1.2 ItemizedBill entity class
The ItemizedBill is associated with an Bill object inside it, stating the ItemizedBill has been created for this Bill. To persist that association we need to take the associated bill object primary key billNo value and persist into my table (itemized_bill) pk(fk) bill_no

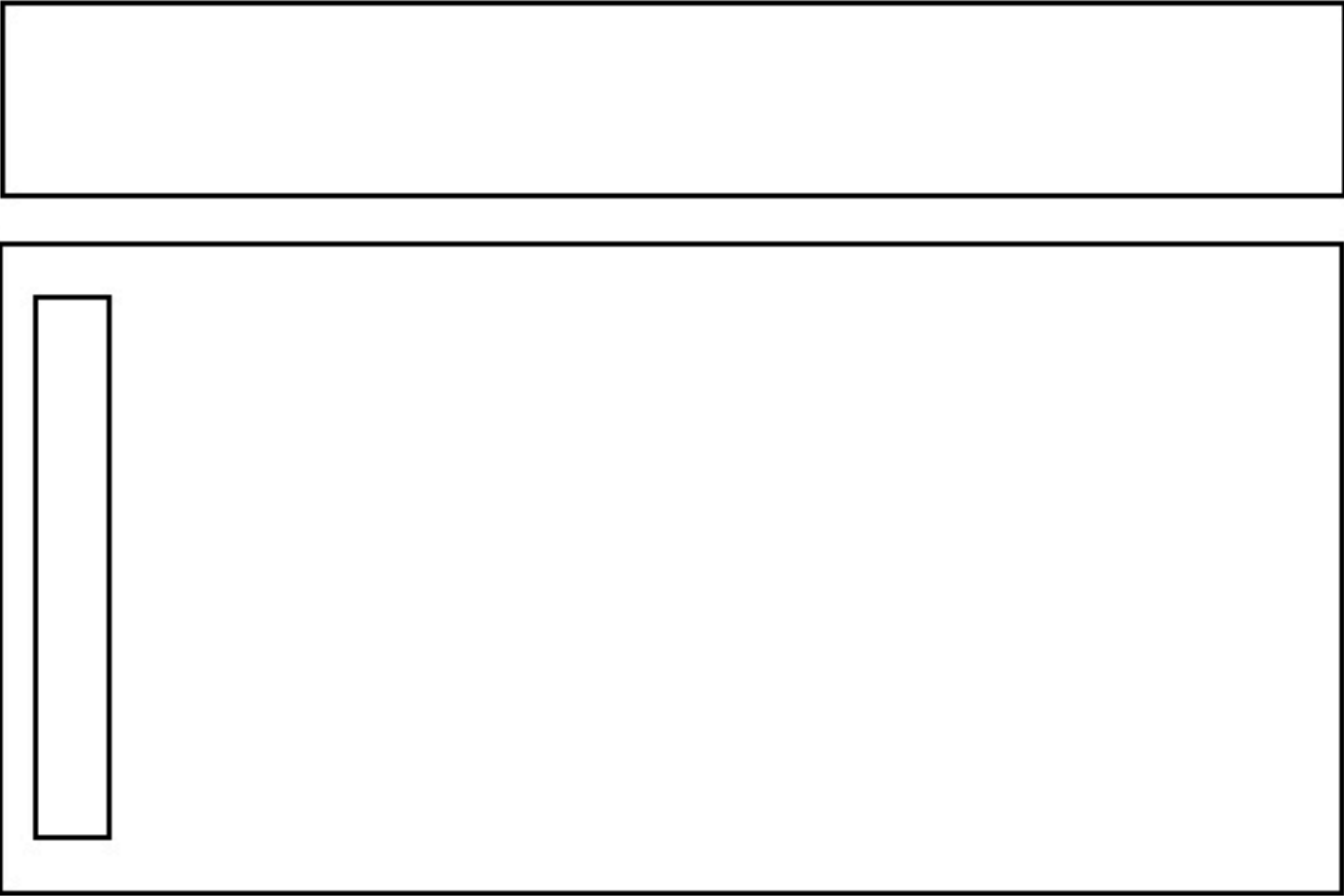
since the primary key itself is the foreign key and primary key is generated by id generators, we use special id generator: foreign, that picks the associate object primary key and return as primary of our entity object

```
<id name="billNo" column="bill_no">
    <generator class="foreign">
        <param name="property">bill</param>
    </generator>
</id>
```

2. FETCH/GET
2.1. Bill entity class
directly retrieve the data from bill table

2.2 ItemizedBill entity class
for all the primitive attributes of the ItemizedBill entity class, query them directly from the respective columns of the itemized_bill table itself. But for the associate object bill inside the ItemizedBill entity class we need take my primary key and query/join with their primary key to find the bill associated with this ItemizedBill

```
<class name="ItemizedBill" table="itemized_bill">
    <id name="billNo" column="bill_no">
        <generator class="foreign">
            <param name="property">bill</param>
        </generator>
    </id>
    <one-to-one name="bill" class="Bill"/>
</class>
```



```
<input type="checkbox" name="taskNo" value="${task.taskNo}"/>
```