10. Forecast accuracy for all customers for a given fiscal year

Details: aggregate forecast accuracy report for all the customers for a given fiscal year to track accuracy of forecast. Report should have following columns

-- customer code

-- customer name

 -- market

-- total sold quantity

-- total forecast quantity

-- net error

-- absolute error

-- forecast accuracy

Created single table which includes sales and forecast quantity to make query simple and created triggers to automatically update new records from fact_sales_monthly and fact_forecat_monthly to fact_act_est

```sql
create table fact_act_est (
select
s.date as date,
s.fiscal_year as fiscal_year,
s.product_code as product_code,
s.customer_code as customer_code,
s.sold_quantity as sold_quantity,
f.forecast_quantity as forecast_quantity
from fact_sales_monthly s
left join fact_forecast_monthly f
using(customer_code, product_code, date)
union
select
f.date as date,
f.fiscal_year as fiscal_year,
f.product_code as product_code,
f.customer_code as customer_code,
s.sold_quantity as sold_quantity,
f.forecast_quantity as forecast_quantity
from fact_sales_monthly s
right join fact_forecast_monthly f
using(customer_code, product_code, date));
```

Forecast accuracy for given year

```sql
CREATE DEFINER=`root`@`localhost` PROCEDURE `get_forecast_accurracy`(
in_fiscal_year int)
BEGIN
with abs_error_table  as (select
customer_code,
sum(sold_quantity) as sold_quantity,
sum(forecast_quantity) as forecast_quantity,
sum(forecast_quantity-sold_quantity) as net_error,
sum(forecast_quantity-sold_quantity)/sum(forecast_quantity)*100 as net_error_pct,
sum(abs(forecast_quantity-sold_quantity)) as abs_error,
sum(abs(forecast_quantity-sold_quantity))/ sum(forecast_quantity)*100 as abs_error_pct
from fact_act_est
where fiscal_year = in_fiscal_year
group by customer_code)
select a.*,
c.customer,
c.market,
if(abs_error_pct > 100,  0, 100-abs_error_pct) as forecast_accuracy_pct
from abs_error_table a
join
dim_customer c
using(customer_code)
order by forecast_accuracy_pct desc;
END
```

```sql
12 •    call gdb0041.get_forecast_accurracy(2021);
```

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customer_code	sold_quantity	forecast_quantity	net_error	net_error_pct	abs_error	abs_error_pct	customer	market	forecast_accuracy_pct
90013120	109547	133532	23985	17.9620	70467	52.7716	Coolblue	Italy	47.2284
70010048	119439	142010	22571	15.8940	75711	53.3139	Atliq e Store	Bangladesh	46.6861
90023027	236189	279962	43773	15.6353	149303	53.3297	Costco	Canada	46.6703
90023026	228988	273492	44504	16.2725	146948	53.7303	Relief	Canada	46.2697