```sql
-- Lab 1

/* Review of the Data Hierarchy, Data Aggregation and Horizontal Reporting */

/* Use AdventureWorks2017 database */

/* The following code creates a longlist report. */

SELECT DISTINCT h.SalesPersonID, p.FirstName, p.LastName, d.ProductID
FROM Sales.SalesOrderHeader h
join Sales.SalesOrderDetail d
on d.SalesOrderID=h.SalesOrderID
JOIN Person.Person p
ON h.SalesPersonID = p.BusinessEntityID
ORDER BY h.SalesPersonID, ProductID;


/* We want to create a shortlist report containing the same data
   without duplicating the salesperson info. The code below tried to do
   it but the generated report had an issue. It still duplicated some
   salesperson info. */

select distinct sh.SalesPersonID, pp.FirstName,pp.LastName,
stuff((select ', ', rtrim (cast(ProductID as char))
        from Sales.SalesOrderDetail
        where SalesOrderID= sh.SalesOrderID
        order by sd.ProductID
        for xml path('')), 1,2,'' ) as Product
from Sales.SalesOrderHeader sh
join
Sales.SalesOrderDetail sd
on sd.SalesOrderID=sh.SalesOrderID
join Person.Person pp
on pp.BusinessEntityID = sh.SalesPersonID
order by sh.SalesPersonID;


/* Please investigate the issue and find out what caused the issue.
   Give a detailed explanation of your findings. Writing some code
   to prove your explanation would be convincing. */



/* Modify the incorrect solution provided above to create the correct
   report. */


/* Use STRING_AGG to create the same report */
```