

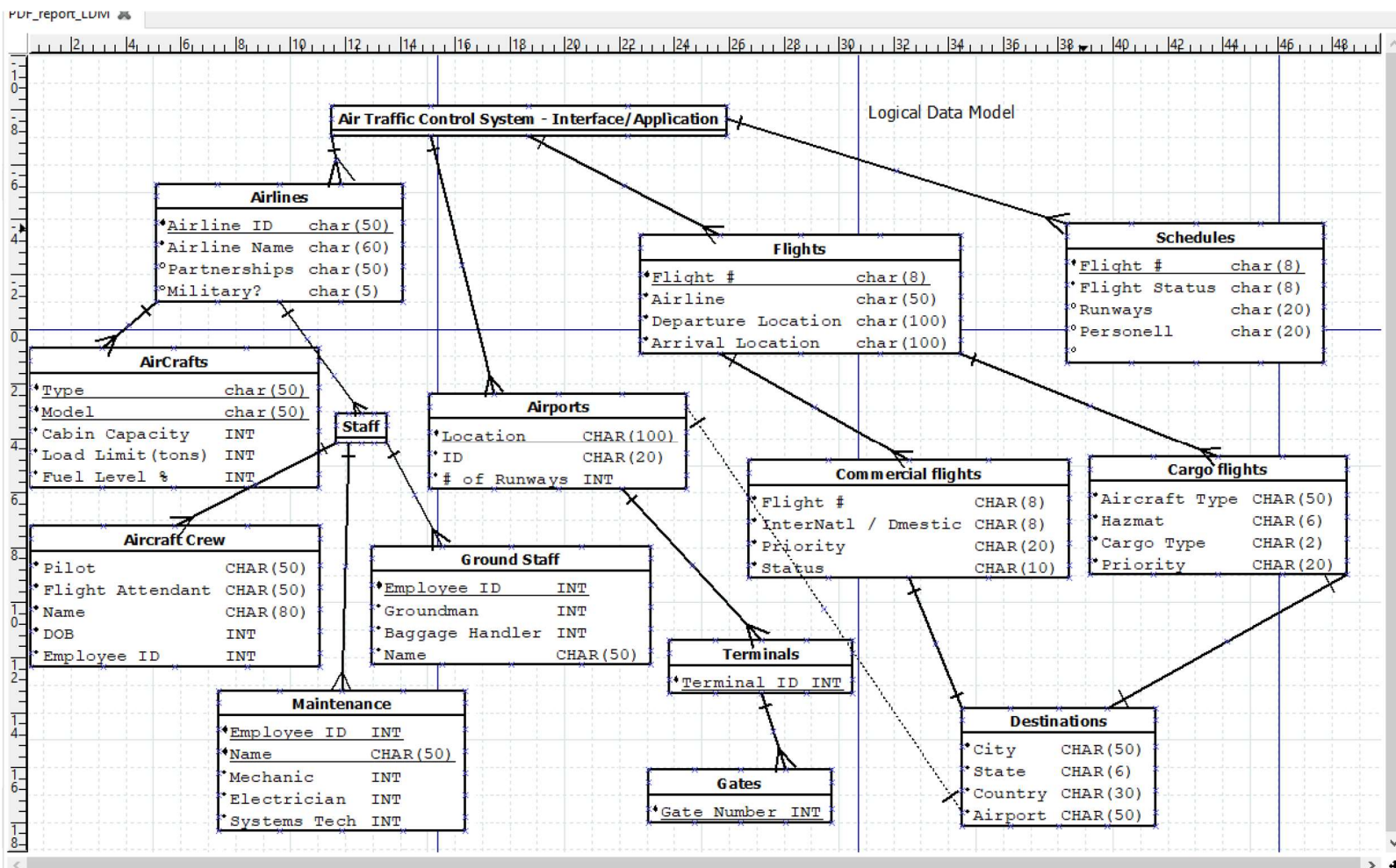
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## PDF Report Submission #2



Differences between data definition language (DDL) and data manipulation language (DML).

DDL is used to define data and or object definitions. This creates the database schema and some of the constraints (column-attributes) and uses statements like Create, Drop, Rename, Alter.

DDL is also a declarative language. When DDL statements are used, they effect the whole table.

DML is used to manipulate the data like when you need to add, delete, or update the data in a database. You can use DML to query and modify data with statements like Select, Insert, Delete, and Merge. DML is an imperative language. DML also is classified as Procedural and Non and Procedural. DLL is not classified any further unlike DML.

The screenshot displays the Microsoft SQL Server Management Studio (SSMS) interface. The title bar indicates the connection to 'AdventureWorks2017' on 'RYANS-SURFACE\SQLEXPRESS01'. The 'Object Explorer' on the left shows the database structure, including tables like 'Person.Person' and 'Person.EmailPromotion'. The main query editor contains two SQL queries. The first query counts email promotions by type, and the second query counts person types by email address, joined by business entity ID. The 'Results' pane at the bottom shows the output of the first query, which has 3 rows.

```
--get count from types of email promotions
--group by the email promotions
--select count(*) from person.person
select
p.emailpromotion as email_promotion,
count(p.EmailPromotion) as email_promotion_counts
from
person.Person p
group by --when using group by, the group by columns are not part of aggregate fields
p.EmailPromotion

--get counts by person types and order descending fashion
--by joining between two tables
select
p.persontype,
ea.EmailAddress,
count(p.persontype) as person_type_count
from
person.person p
inner join
person.EmailAddress ea
on p.BusinessEntityID = ea.BusinessEntityID
group by
p.PersonType
```

email_promotion	email_promotion_counts
0	11158
1	5044
2	3770

Query executed successfully. RYANS-SURFACE\SQLEXPRESS01 ... RYANS-SURFACE\and\_o (66) AdventureWorks2017 00:00:00 3 rows

