

APPENDIX

CREATING TABLES

```
CREATE TABLE <TableName> ( <AttributeName> Type [NOT  
NULL], ...,  
PRIMARY KEY(<AttributeName1>,<AttributeName2>,...),),  
FOREIGN KEY(<AttributeName3>,<AttributeName4>,...) REFERENCES  
<TableNameReferenced>(<AttributeName5>,<AttributeName6>,...)  
<delete rule> <modification rule>,...,  
UNIQUE (<AttributeName7>,<AttributeName8>,...)  
)
```

where:

```
<delete rule>::= ON DELETE <referential action>  
<modification rule>::= ON UPDATE <referential action>  
<referential action>::= CASCADE | SET NULL |  
SET DEFAULT | NO ACTION
```

MODIFYING TABLES

- Adding an attribute:

```
ALTER TABLE <TableName> ADD <AttributeName>  
<TypeAttribute>;
```

- Modifying an attribute:

```
ALTER TABLE <TableName> RENAME COLUMN <AttributeName> TO  
<NuevoAttributeName>;  
ALTER TABLE <TableName> MODIFY <AttributeName>  
<NuevoTypeAttribute>;
```

- Deleting an attribute:

```
ALTER TABLE <TableName> DROP COLUMN <AttributeName>;
```

- Adding a restriction:

```
ALTER TABLE <TableName> ADD {PRIMARY KEY  
(<Field1>,<Field2>,...) | UNIQUE (<Field1>,<Field2>,...) |  
FOREIGN KEY(<Field>) REFERENCES <Table>(<Field>) | CHECK  
(<Expression booleana>)};
```

DELETING TABLES

```
DROP TABLE <TableName>;
```

MANAGING DATA

```
INSERT INTO <TableName> VALUES (<Value1, Value2, ...>);  
INSERT INTO <TableName> <query>;
```

```
UPDATE <TableName>  
SET AttributeName1=<Expression1>,  
      AttributeName2=<Expression2>, ...  
WHERE <Predicate>;
```

```
DELETE FROM <TableName> WHERE <Predicate>;
```

QUERIES

```
SELECT ALL | DISTINCT A1, A2, ..., An  
FROM r1, r2, ..., rm  
WHERE <predicate>;
```

donde:

```
<predicate> ::= <predicate> OR <predicate> |  
<predicate> AND <predicate> | NOT <predicate>
```

WHERE

```
WHERE <attribute> LIKE | NOT LIKE <pattern>;  
      • %: match with any substring.  
      • _: match with any character.
```

```
WHERE <attribute> IS NULL
```

ORDER BY

```
ORDER BY <attribute1> [Desc|Asc]?, <attribute2>  
[Desc|Asc]?, ...
```

UNION, INTERSECT Y MINUS

```
<query> UNION <query>  
<query> INTERSECT <query>  
<query> MINUS <query>
```

IN/NOT IN

```
WHERE <attribute> IN | NOT IN <subquery>
```

EXISTS/NOT EXISTS

```
WHERE <attribute> EXISTS | NOT EXISTS <subquery>
```

SOME/ALL

```
WHERE <attribute> <comparison operator> SOME | ALL  
<subquery>
```

INNER/LEFT/RIGHT JOIN

```
FROM <table1> INNER | LEFT | RIGHT JOIN <table2> ON  
<AttributeCommonTable1 = AttributeCommonTable2>
```

GROUP BY/HAVING

```
SELECT <Attribute1>, <Attribute2>, ... COUNT(*), MIN(At),  
MAX(At), SUM(At), AVG(At)  
FROM r1, r2, ..., rm  
WHERE <predicate>  
GROUP BY <Attribute1>, <Attribute2>, ...  
HAVING <condition>
```

Note:

- i. It is possible that At would be different for each operation.
- ii. It can be more than one operation in the same query.

VIEWS

```
CREATE VIEW <nombre> AS <query>
```