

# Week 4 Notes

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## Oracle built in types

- Numbers | Number | Number(n, scale)
- Character Strings | Char[n], varchar2 | char(10), VarChar2(50)
- Date and time | Date
- Large strings and BLOBS

## Creating a table

```
create table Department(  
    Dept_no char(4) PRIMARY KEY,  
    Dept_name varchar2(25));
```

Or with constraints:

```
create table Department(  
    dept_no char(4),  
    dept_name varchar2(25),  
    CONSTRAINT dept_PK PRIMARY KEY(dept_no));
```

## Defining Foreign Key

```
create table Staff(  
    staff_no char(3),  
    staff_name varchar2(20),  
    dept_name char(4),  
    CONSTRAINT staff_pk PRIMARY KEY(staff_no),  
    CONSTRAINT staff_fk foreign key(dept_no)  
        references department(dept_no)  
);
```

Note that it is important that FK attributes have the same type

## Check Constraints

```
create table Staff(  
    staff_no char(3),  
    staff_name varchar2(20) not null,  
    staff_gender char(1) check (staff_gender in ('M', 'F'));
```

```
staff_salary number(8, 2) not null,  
Constraint staff_pk Primary key (staff_no),  
Constraint staff_sal check (staff_salary > 1000.00),  
);
```

## Inserting data

Insert into Department values ('0001', 'sales'); Insert into Department values ('0002','accounting');

## Deleting data

Delete from staff; Delete from staff where staff\_no = '002'; Delete from staff where staff\_salary > 500000;

## Part 2

### Alter tables

```
Alter table table_name  
add(column_spec constraint);
```

### Modify Tables

```
Alter table table_name  
drop (column_name);
```

### Dropping Tables

Drop table Department If you have foreign keys it will drop the constraint Drop table Department cascade constraints

## Viewing Tables and Table Structures

select \* from cat; Where cat is the system catalogue (Oracle feature)

### Updating Data

```
Update staff  
SET staff_name = 'David Smith'  
dept_no='0002'  
Where staff_no = '001';
```

### Rollback and Commit

To make your data update permanent, **commit**; To undo your data update, **rollback**;

## Making Selections

```
Select *  
from product;
```

Select two different values

```
select prodNo, prodName  
from product  
where price <=200;
```

```
select custName  
from customer  
where age > 25 and custCity ='Gold Coast'  
order by age;
```