# CIS 315 - Homework 1

## Deadline:

1:00 pm (beginning of lab) on Wednesday, September 8th

## How to submit:

When you are ready, within the directory `315hw1` on `nrs-labs.humboldt.edu` (and at the nrs-labs UNIX prompt, NOT inside `sqlplus`!) type:

```
~st10/315submit
```

...to submit these `.sql` and `.txt` files, using a homework number of `1`. (You should see 3 files being submitted!)

## Purpose:

To practice creating (and dropping) tables using SQL, inserting rows into a table using SQL, and writing and executing simple SQL scripts.

## Additional notes:

- You are required to use the HSU Oracle `student` database for this homework.
- This homework is not typical; it is simpler than the "typical" CIS 315 homework assignment.

## Problem 0:

Use `ssh` to connect to `nrs-labs.humboldt.edu`, and create a directory named `315hw1` on nrs-labs:

```
mkdir 315hw1
```

...and change this directory's permissions so that only you can read it:

```
chmod 700 315hw1
```

...and change your current directory to that directory (go to that new directory) to do this homework:

```
cd 315hw1
```

Put all of your files for this homework in this directory. (And it is from this directory that you should type `~st10/315submit` to submit your files when you are done.)

Use `nano` (or `vi` or `emacs`) to create a file named `hw1-1.sql` within directory `315hw1`:

```
nano hw1-1.sql
```

While within `nano` (or whatever), type in the following:

- your name within a SQL comment

- `315 Homework 1-1` as a SQL comment
- the date this file was last modified as a SQL comment

## Problem 1:

Consider the following relations, written in **tabular form**:

### *the Client relation:*

| Cli_num | Cli_lname | Cli_fname | Cli_phone |
|---|---|---|---|
| 0000 | Alpha | Ann | 000-0001 |
| 1111 | Beta | Bob | 111-1112 |
| 2222 | Beta | Ann | 222-2223 |
| 3333 | Carlos | David | 333-3334 |
| 4444 | Delta | Edie | 111-1112 |

### *the Video relation:*

| Vid_id | Vid_format | Vid_purchase_date | Vid_rental_price | Vid_length |
|---|---|---|---|---|
| 000000 | Beta | 11-JAN-1998 | 1.99 | 73 |
| 111111 | DVD | 22-FEB-1999 | 4.99 | 91 |
| 222222 | VHS | 03-MAR-1997 | 1.99 | 105 |
| 333333 | DVD | 22-FEB-1999 | 3.99 | 69 |
| 444444 | VHS | 04-APR-1994 | 0.99 | 91 |

In `hw1-1.sql`, add SQL `drop table` statements and `create table` statements for `Client` and `Video`, being sure to:

- include all of the columns shown
- give each column a reasonable, appropriate type
- explicitly set an appropriate primary key for each table (note that you may not add additional columns to any of these tables)
- note that you may **not** use types `char` or `varchar2` for `Video`'s `vid_purchase_date` nor `vid_rental_price` columns -- choose more appropriate types instead!
- remember which type is more appropriate when a character string column's contents are of **different** lengths, and which is more appropriate when a character string column's contents are **always** the same length

This would be a good time to save your `hw1-1.sql` file, and go into `sqlplus` and see if:

```
start hw1-1.sql
```

...works -- are the 2 tables dropped and created? (Remember that the `drop table` commands will fail until you actually manage to create these tables for the first time, since until then there is nothing to drop.)

Don't submit this file yet; you have more to add to it.

## Problem 2:

In `hw1-1.sql`, now add SQL `insert` statements to insert the rows shown in Problem 1 into these tables.

This would be a good time to save your `hw1-1.sql` file, and go into `sqlplus` and see if:

```
start hw1-1.sql
```

...still works -- are rows added to the 2 tables?

Don't submit this file yet; you have more to add to it.

## Problem 3:

In `hw1-1.sql`, now add SQL `insert` statements to insert:

- one additional row of your own design/choice into the `Client` table
- one additional row of your own design/choice into the `Video` table

This would be a good time to save your `hw1-1.sql` file, and go into `sqlplus` and see if:

```
start hw1-1.sql
```

...still works -- are these new rows also added to the 2 tables?

This file `hw1-1.sql` is now ready to submit.

## Problem 4:

You may have noticed - we didn't use `spool` in `hw1-1.sql`! That's because I want to make a point about how tables **persist** in a database --- once created, they STAY until they are dropped! We're going to display these tables' contents using a separate SQL script, to show that we can.

Use `nano` (or `vi` or `emacs`) to create a file named `hw1-2.sql`:

```
nano hw1-2.sql
```

While within `nano` (or whatever), type in the following:

- your name within a SQL comment
- `315 Homework 1-2` as a SQL comment
- the date this file was last modified as a SQL comment
- use `spool` to start writing the results for this script's actions into a file `hw1-results.txt`
- include a `spool off` command, at the BOTTOM/END of this file. Type your answers to the

problems below BEFORE this spool off command!

Don't submit this file yet; you have more to add to it.

## Problem 5:

In this script `hw1-2.sql`, you are JUST going to show what is in these tables (that already and still exist).

In `hw1-2.sql`, add a SQL `select` statement for each of these 2 tables you've created, to show each table's contents.

(do not worry about "ugliness" like chopped-off column headings, or too-long rows that wrap to the next line, or how values are formatted - we'll discuss how to change how these display later)

This would be a good time to save your `hw1-2.sql` file, and go into `sqlplus` and see if:

```
start hw1-2.sql
```

...works -- do you see the contents of these 2 tables?

This would also be a good time to look at the contents of `hw1-results.txt` --- at the nrs-labs prompt (the UNIX level, NOT in `sqlplus`!), type:

```
more hw1-results.txt
```

You should see that `hw1-results.txt` shows the file contents you just saw within `sqlplus`.

When you are satisfied with these, then `hw1-2.sql` and `hw1-results.txt` are ready to submit.