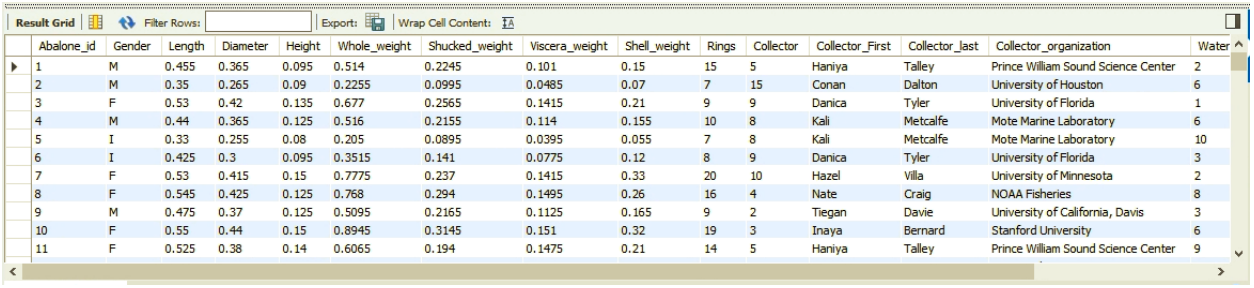
# CIS 2334 Semester Project - Part 1

Name: Ebin Mathew
Cougar ID: 2009205

## Question 1

```
1 •  select*
2        from cis2334csvdata;
```

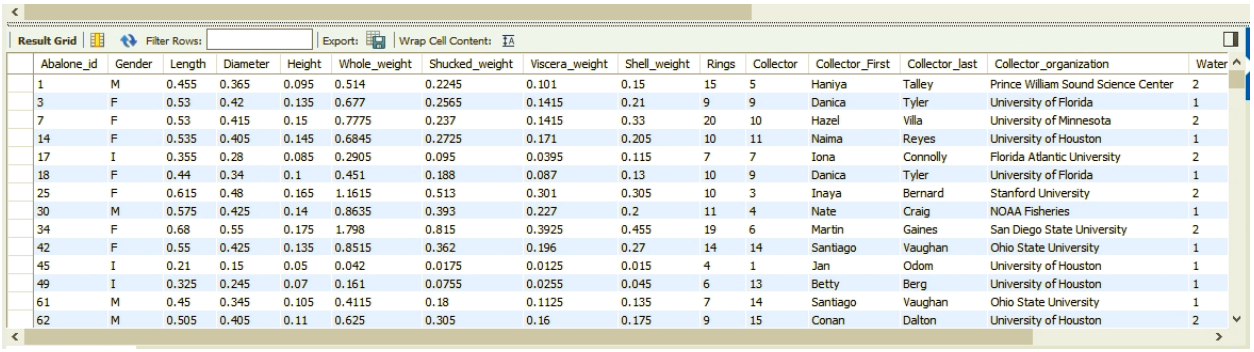


Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| Abalone_id | Gender | Length | Diameter | Height | Whole_weight | Shucked_weight | Viscera_weight | Shell_weight | Rings | Collector | Collector_First | Collector_last | Collector_organization | Water |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M | 0.455 | 0.365 | 0.095 | 0.514 | 0.2245 | 0.101 | 0.15 | 15 | 5 | Haniya | Talley | Prince William Sound Science Center | 2 |
| 2 | M | 0.35 | 0.265 | 0.09 | 0.2255 | 0.0995 | 0.0485 | 0.07 | 7 | 15 | Conan | Dalton | University of Houston | 6 |
| 3 | F | 0.53 | 0.42 | 0.135 | 0.677 | 0.2565 | 0.1415 | 0.21 | 9 | 9 | Danica | Tyler | University of Florida | 1 |
| 4 | M | 0.44 | 0.365 | 0.125 | 0.516 | 0.2155 | 0.114 | 0.155 | 10 | 8 | Kali | Metcalfe | Mote Marine Laboratory | 6 |
| 5 | I | 0.33 | 0.255 | 0.08 | 0.205 | 0.0895 | 0.0395 | 0.055 | 7 | 8 | Kali | Metcalfe | Mote Marine Laboratory | 10 |
| 6 | I | 0.425 | 0.3 | 0.095 | 0.3515 | 0.141 | 0.0775 | 0.12 | 8 | 9 | Danica | Tyler | University of Florida | 3 |
| 7 | F | 0.53 | 0.415 | 0.15 | 0.7775 | 0.237 | 0.1415 | 0.33 | 20 | 10 | Hazel | Villa | University of Minnesota | 2 |
| 8 | F | 0.545 | 0.425 | 0.125 | 0.768 | 0.294 | 0.1495 | 0.26 | 16 | 4 | Nate | Craig | NOAA Fisheries | 8 |
| 9 | M | 0.475 | 0.37 | 0.125 | 0.5095 | 0.2165 | 0.1125 | 0.165 | 9 | 2 | Tiegan | Davie | University of California, Davis | 3 |
| 10 | F | 0.55 | 0.44 | 0.15 | 0.8945 | 0.3145 | 0.151 | 0.32 | 19 | 3 | Inaya | Bernard | Stanford University | 6 |
| 11 | F | 0.525 | 0.38 | 0.14 | 0.6065 | 0.194 | 0.1475 | 0.21 | 14 | 5 | Haniya | Talley | Prince William Sound Science Center | 9 |

## Question 2

```
1 •  SELECT * FROM cis2334csvdata
2        WHERE cis2334csvdata.Water_region = 'Florida Gulf Coast'
3            or cis2334csvdata.Water_region = 'Florida Atlantic Coast'
4
```



Result Grid | Filter Rows: | Export: | Wrap Cell Content:

| Abalone_id | Gender | Length | Diameter | Height | Whole_weight | Shucked_weight | Viscera_weight | Shell_weight | Rings | Collector | Collector_First | Collector_last | Collector_organization | Water |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M | 0.455 | 0.365 | 0.095 | 0.514 | 0.2245 | 0.101 | 0.15 | 15 | 5 | Haniya | Talley | Prince William Sound Science Center | 2 |
| 3 | F | 0.53 | 0.42 | 0.135 | 0.677 | 0.2565 | 0.1415 | 0.21 | 9 | 9 | Danica | Tyler | University of Florida | 1 |
| 7 | F | 0.53 | 0.415 | 0.15 | 0.7775 | 0.237 | 0.1415 | 0.33 | 20 | 10 | Hazel | Villa | University of Minnesota | 2 |
| 14 | F | 0.535 | 0.405 | 0.145 | 0.6845 | 0.2725 | 0.171 | 0.205 | 10 | 11 | Naima | Reyes | University of Houston | 1 |
| 17 | I | 0.355 | 0.28 | 0.085 | 0.2905 | 0.095 | 0.0395 | 0.115 | 7 | 7 | Iona | Connolly | Florida Atlantic University | 2 |
| 18 | F | 0.44 | 0.34 | 0.1 | 0.451 | 0.188 | 0.087 | 0.13 | 10 | 9 | Danica | Tyler | University of Florida | 1 |
| 25 | F | 0.615 | 0.48 | 0.165 | 1.1615 | 0.513 | 0.301 | 0.305 | 10 | 3 | Inaya | Bernard | Stanford University | 2 |
| 30 | M | 0.575 | 0.425 | 0.14 | 0.8635 | 0.393 | 0.227 | 0.2 | 11 | 4 | Nate | Craig | NOAA Fisheries | 1 |
| 34 | F | 0.68 | 0.55 | 0.175 | 1.798 | 0.815 | 0.3925 | 0.455 | 19 | 6 | Martin | Gaines | San Diego State University | 2 |
| 42 | F | 0.55 | 0.425 | 0.135 | 0.8515 | 0.362 | 0.196 | 0.27 | 14 | 14 | Santiago | Vaughan | Ohio State University | 1 |
| 45 | I | 0.21 | 0.15 | 0.05 | 0.042 | 0.0175 | 0.0125 | 0.015 | 4 | 1 | Jan | Odom | University of Houston | 1 |
| 49 | I | 0.325 | 0.245 | 0.07 | 0.161 | 0.0755 | 0.0255 | 0.045 | 6 | 13 | Betty | Berg | University of Houston | 1 |
| 61 | M | 0.45 | 0.345 | 0.105 | 0.4115 | 0.18 | 0.1125 | 0.135 | 7 | 14 | Santiago | Vaughan | Ohio State University | 1 |
| 62 | M | 0.505 | 0.405 | 0.11 | 0.625 | 0.305 | 0.16 | 0.175 | 9 | 15 | Conan | Dalton | University of Houston | 2 |

## Question 3

```
1 •  SELECT * FROM cis2334csvdata
2        WHERE cis2334csvdata.Gender = 'I'
3
```

| Abalone_id | Gender | Length | Diameter | Height | Whole_weight | Shucked_weight | Viscera_weight | Shell_weight | Rings | Collector | Collector_First | Collector_last | Collector_organization | Water | Water_region | Feb_temp |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5 | I | 0.33 | 0.255 | 0.08 | 0.205 | 0.0895 | 0.0395 | 0.055 | 7 | 8 | Kali | Metcalfe | Mote Marine Laboratory | 10 | Pacific | 24.1 |
| 6 | I | 0.425 | 0.3 | 0.095 | 0.3515 | 0.141 | 0.0775 | 0.12 | 8 | 9 | Danica | Tyler | University of Florida | 3 | Northeast | 3.6 |
| 17 | I | 0.355 | 0.28 | 0.085 | 0.2905 | 0.095 | 0.0395 | 0.115 | 7 | 7 | Iona | Connolly | Florida Atlantic University | 2 | Florida Gulf Coast | 18 |
| 22 | I | 0.38 | 0.275 | 0.1 | 0.2255 | 0.08 | 0.049 | 0.085 | 10 | 2 | Tiegan | Davie | University of California, Davis | 8 | West Coast | 12.3 |
| 43 | I | 0.24 | 0.175 | 0.045 | 0.07 | 0.0315 | 0.0235 | 0.02 | 5 | 9 | Danica | Tyler | University of Florida | 4 | Mid-Atlantic | 6.1 |
| 44 | I | 0.205 | 0.15 | 0.055 | 0.042 | 0.0255 | 0.015 | 0.012 | 5 | 7 | Iona | Connolly | Florida Atlantic University | 4 | Mid-Atlantic | 6.1 |
| 45 | I | 0.21 | 0.15 | 0.05 | 0.042 | 0.0175 | 0.0125 | 0.015 | 4 | 1 | Jan | Odom | University of Houston | 1 | Florida Atlantic Coast | 22.1 |
| 46 | I | 0.39 | 0.295 | 0.095 | 0.203 | 0.0875 | 0.045 | 0.075 | 7 | 4 | Nate | Craig | NOAA Fisheries | 3 | Northeast | 3.6 |
| 49 | I | 0.325 | 0.245 | 0.07 | 0.161 | 0.0755 | 0.0255 | 0.045 | 6 | 13 | Betty | Berg | University of Houston | 1 | Florida Atlantic Coast | 22.1 |
| 51 | I | 0.52 | 0.41 | 0.12 | 0.595 | 0.2385 | 0.111 | 0.19 | 8 | 1 | Jan | Odom | University of Houston | 6 | Gulf of Mexico | 14.1 |
| 59 | I | 0.245 | 0.19 | 0.06 | 0.086 | 0.042 | 0.014 | 0.025 | 4 | 12 | Rebecca | Bennett | University of Houston | 8 | West Coast | 12.3 |
| 70 | I | 0.31 | 0.235 | 0.07 | 0.151 | 0.063 | 0.0405 | 0.045 | 6 | 5 | Haniya | Talley | Prince William Sound Science ... | 8 | West Coast | 12.3 |
| 101 | I | 0.36 | 0.265 | 0.095 | 0.2315 | 0.105 | 0.046 | 0.075 | 7 | 1 | Jan | Odom | University of Houston | 6 | Gulf of Mexico | 14.1 |
| 113 | I | 0.435 | 0.32 | 0.08 | 0.3325 | 0.1485 | 0.0635 | 0.105 | 9 | 7 | Iona | Connolly | Florida Atlantic University | 9 | North Pacific | 1.9 |
| 122 | I | 0.385 | 0.295 | 0.085 | 0.2535 | 0.103 | 0.0575 | 0.085 | 7 | 4 | Nate | Craig | NOAA Fisheries | 6 | Gulf of Mexico | 14.1 |

# Question 4

```
SELECT * FROM cis2334csvdata
    WHERE cis2334csvdata.Feb_temp > 1;

```

| Abalone_id | Gender | Length | Diameter | Height | Whole_weight | Shucked_weight | Viscera_weight | Shell_weight | Rings | Collector | Collector_First | Collector_last | Collector_organization | Water | Water_region | Feb_temp |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | M | 0.455 | 0.365 | 0.095 | 0.514 | 0.2245 | 0.101 | 0.15 | 15 | 5 | Haniya | Talley | Prince William Sound Science Center | 2 | Florida Gulf Coast | 18 |
| 2 | M | 0.35 | 0.265 | 0.09 | 0.2255 | 0.0995 | 0.0485 | 0.07 | 7 | 15 | Conan | Dalton | University of Houston | 6 | Gulf of Mexico | 14.1 |
| 3 | F | 0.53 | 0.42 | 0.135 | 0.677 | 0.2565 | 0.1415 | 0.21 | 9 | 9 | Danica | Tyler | University of Florida | 1 | Florida Atlantic Coast | 22.1 |
| 4 | M | 0.44 | 0.365 | 0.125 | 0.516 | 0.2155 | 0.114 | 0.155 | 10 | 8 | Kali | Metcalfe | Mote Marine Laboratory | 6 | Gulf of Mexico | 14.1 |
| 5 | I | 0.33 | 0.255 | 0.08 | 0.205 | 0.0895 | 0.0395 | 0.055 | 7 | 8 | Kali | Metcalfe | Mote Marine Laboratory | 10 | Pacific | 24.1 |
| 6 | I | 0.425 | 0.3 | 0.095 | 0.3515 | 0.141 | 0.0775 | 0.12 | 8 | 9 | Danica | Tyler | University of Florida | 3 | Northeast | 3.6 |
| 7 | F | 0.53 | 0.415 | 0.15 | 0.7775 | 0.237 | 0.1415 | 0.33 | 20 | 10 | Hazel | Vila | University of Minnesota | 2 | Florida Gulf Coast | 18 |
| 8 | F | 0.545 | 0.425 | 0.125 | 0.768 | 0.294 | 0.1495 | 0.26 | 16 | 4 | Nate | Craig | NOAA Fisheries | 8 | West Coast | 12.3 |
| 9 | M | 0.475 | 0.37 | 0.125 | 0.5095 | 0.2165 | 0.1125 | 0.165 | 9 | 2 | Tiegan | Davie | University of California, Davis | 3 | Northeast | 3.6 |
| 10 | F | 0.55 | 0.44 | 0.15 | 0.8945 | 0.3145 | 0.151 | 0.32 | 19 | 3 | Inaya | Bernard | Stanford University | 6 | Gulf of Mexico | 14.1 |
| 11 | F | 0.525 | 0.38 | 0.14 | 0.6065 | 0.194 | 0.1475 | 0.21 | 14 | 5 | Haniya | Talley | Prince William Sound Science Center | 9 | North Pacific | 1.9 |
| 12 | M | 0.43 | 0.35 | 0.11 | 0.406 | 0.1675 | 0.081 | 0.135 | 10 | 4 | Nate | Craig | NOAA Fisheries | 9 | North Pacific | 1.9 |
| 13 | M | 0.49 | 0.38 | 0.135 | 0.5415 | 0.2175 | 0.095 | 0.19 | 11 | 12 | Rebecca | Bennett | University of Houston | 8 | West Coast | 12.3 |
| 14 | F | 0.535 | 0.405 | 0.145 | 0.6845 | 0.2725 | 0.171 | 0.205 | 10 | 11 | Naima | Reyes | University of Houston | 1 | Florida Atlantic Coast | 22.1 |
| 15 | F | 0.47 | 0.355 | 0.1 | 0.4755 | 0.1675 | 0.0805 | 0.185 | 10 | 8 | Kali | Metcalfe | Mote Marine Laboratory | 8 | West Coast | 12.3 |

# Question 5

```
insert into cis2334csvdata (Gender, Length, Diameter, Height, Whole_weight, Shucked_weight, Viscera_weight, Shell_weight, Rings, Collector_First,Collector_last, Collector_organization, Water_region, Feb_temp)
    values ('M', '0.71', '0.555', '0.195', '1.9485', '0.9455', '0.3765', '0.495', '12', 'Jan', 'Odom', 'University of Houston', 'Florida Atlantic Coast', 22.1);

select*
    from cis2334csvdata;

```

| Abalone_id | Gender | Length | Diameter | Height | Whole_weight | Shucked_weight | Viscera_weight | Shell_weight | Rings | Collector | Collector_First | Collector_last | Collector_organization | Water | Water_region | Feb_temp |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 4171 | M | 0.55 | 0.43 | 0.13 | 0.8395 | 0.3155 | 0.1955 | 0.2405 | 10 | 12 | Rebecca | Bennett | University of Houston | 4 | Mid-Atlantic | 6.1 |
| 4172 | M | 0.56 | 0.43 | 0.155 | 0.8675 | 0.4 | 0.172 | 0.229 | 8 | 9 | Danica | Tyler | University of Florida | 6 | Gulf of Mexico | 14.1 |
| 4173 | F | 0.565 | 0.45 | 0.165 | 0.887 | 0.37 | 0.239 | 0.249 | 11 | 15 | Conan | Dalton | University of Houston | 6 | Gulf of Mexico | 14.1 |
| 4174 | M | 0.59 | 0.44 | 0.135 | 0.966 | 0.439 | 0.2145 | 0.2605 | 10 | 7 | Iona | Connolly | Florida Atlantic University | 4 | Mid-Atlantic | 6.1 |
| 4175 | M | 0.6 | 0.475 | 0.205 | 1.176 | 0.5255 | 0.2875 | 0.308 | 9 | 9 | Danica | Tyler | University of Florida | 2 | Florida Gulf Coast | 18 |
| 4176 | F | 0.625 | 0.485 | 0.15 | 1.0945 | 0.531 | 0.261 | 0.296 | 10 | 9 | Danica | Tyler | University of Florida | 9 | North Pacific | 1.9 |
| NULL | M | 0.71 | 0.555 | 0.195 | 1.9485 | 0.9455 | 0.3765 | 0.495 | 12 | NULL | Jan | Odom | University of Houston | NULL | Florida Atlantic Coast | 22.1 |
| NULL | M | 0.71 | 0.555 | 0.195 | 1.9485 | 0.9455 | 0.3765 | 0.495 | 12 | NULL | Jan | Odom | University of Houston | NULL | Florida Atlantic Coast | 22.1 |

# Question 6

```
SET SQL_SAFE_UPDATES = 0;
delete
        from cis2334csvdata
            where cis2334csvdata.Whole_weight > 1.25;

select*
    from cis2334csvdata;

```

| Abalone_id | Gender | Length | Diameter | Height | Whole_weight | Shucked_weight | Viscera_weight | Shell_weight |
|---|---|---|---|---|---|---|---|---|
| 4124 | I | 0.49 | 0.375 | 0.115 | 0.557 | 0.2275 | 0.1335 | 0.1765 |
| 4125 | I | 0.5 | 0.385 | 0.12 | 0.516 | 0.197 | 0.1305 | 0.165 |
| 4126 | I | 0.54 | 0.415 | 0.135 | 0.709 | 0.3195 | 0.174 | 0.185 |
| 4127 | M | 0.55 | 0.42 | 0.145 | 0.7385 | 0.321 | 0.1485 | 0.252 |
| 4128 | I | 0.55 | 0.445 | 0.11 | 0.7935 | 0.378 | 0.142 | 0.26 |
| 4129 | M | 0.555 | 0.435 | 0.145 | 0.9205 | 0.404 | 0.2275 | 0.255 |
| 4130 | I | 0.57 | 0.425 | 0.14 | 0.7655 | 0.331 | 0.14 | 0.24 |

## Question 7

a. Find the shorthand representation of the corresponding table. Find all the functional dependences.
b. Is the table in the first NF? If not, explain why not and then perform the first normalization.
c. Is the table in the second NF? If not, explain why not and then perform the second normalization.
d. Is the table in the third NF? If not, explain why not and then perform the third normalization.
e. Create a CSV files for each table that has been created by the normalizations.
f. File submission: Name your csv files Firstname_Lastname_Abalone.csv, Firstname_Lastname_Collectors.csv and Firstname_Lastname_Water.csv.
g. Draw by hand an Entity-Relationship Diagram using the craw foot representation. Take a picture of it.
h. Report submission:
i. Use the same MS Word document.
ii. Use the subtitle “Question 7”.
iii. Insert all the tables and Entity-Relationship Diagram.