HW4: Programming

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Creating Dataset example

```
fish <- c("Cod", "Dab", "Greysole", "Haddock","Hake", "Pollock")
price <- c(3.15, 2.85, 5.56, 2.44, 2.21, 1.59 )
sites <- c("A", "B", "C", "D", "E", "F")

prices <- data.frame(fish, price)
set.seed(1)
catch <- matrix(data= sample.int(300, size = length(fish)*length(sites),
                                 replace = TRUE), nrow = length(fish),
                                 ncol = length(sites))
catch <- data.frame(fish, catch)
colnames(catch) <- c("fish", unique(sites))
```

Data Visualization

```
knitr::kable(catch)
```

fish	A	B	C	D	E	F
Cod	80	284	207	115	81	145
Dab	112	199	116	234	116	180
Greysole	172	189	231	281	5	149
Haddock	273	19	150	64	115	56
Hake	61	62	216	196	261	249
Pollock	270	53	298	38	103	201

```
knitr::kable(prices)
```

fish	price
Cod	3.15
Dab	2.85
Greysole	5.56
Haddock	2.44
Hake	2.21
Pollock	1.59

Using fish_function

```
source('~/Documents/GitHub/Rivera_ESM262/HW4/fish_function.R')

Example <- fish_function(prices = prices, catch = catch, plot = T)
```

Extract most frequent fish

```
Example$frequent_fish %>%
  knitr::kable()
```

Site	fish
A	Haddock
B	Cod
C	Pollock
D	Greysole
E	Hake
F	Hake

Extract total revenue by site

```
Example$site_revenue %>%
  knitr::kable()
```

Site	Revenue
A	2757.75
B	2780.24
C	3584.19
D	3241.25
E	1634.73
F	2804.71

The total fisheries sum is 5581

Plot

```
Example$plot
```