Advanced Topics in Algebra – Lab#2

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Today We Learned:
if(){}else{}, ==, !, |, &, for(i in 1:5){}, next, function,

matrix sub range substitution

For Loop[2]

```
for (i in 1:6) {
  if (!i %% 2){
    next
  }
    print(i)
}
1
3
5
```

In-line piecewise[3]

```
> x <- -5
> y <- if(x > 0) 5 else 6
> y
[1] 6
```

Logical operations

==, !, |, & #similar to **c**

Functions[4]

```
priceCalculator <- function(hours,
pph=40){
    net.price <- hours * pph
    if(hours > 100) {
      net.price <- net.price * 0.9
    }
    round(net.price)
}
# The outcome of the last statement in the
body of your function is the returned
value.

> priceCalculator(hours = 55)
[1] 2200
```

Matrix subrange5

```
m <- matrix(1:100, ncol=10)
m.from <- c(2, 5, 4, 4, 6, 3, 1, 4, 2, 5)
m.to   <- c(7, 9, 6, 8, 9, 5, 6, 8, 4, 8)
m[col(m) <= 5] <- 0
m[col(m)<=m.from|col(m)>= m.to]<-0


?if #does not work!
?'if'
?"if"
?`if`
```

[2] https://www.r-bloggers.com/how-to-write-the-first-for-loop-in-r/
[3] https://www.datamentor.io/r-programming/if-else-statement/
[4] https://www.dummies.com/programming/r/how-to-use-if-statements-in-r/
[5] https://stackoverflow.com/questions/12516186/accessing-a-certain-range-of-matrix-elements-in-r