HW2

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R Markdown

```
set.seed(202026035)
v = list(rnorm(100))
```

This is our data.

```
start_time1 <- Sys.time()
l <- lapply(v, sum)
end_time1 <- Sys.time()
elapsed_time1 <- as.numeric(difftime(time1 = end_time1,
                                     time2 = start_time1,
                                     units = "secs"))
cat("sum : ",sprintf("%.5f", l),", elapsed time1 : ",sprintf("%.3f",elapsed_time1),"sec",sep="")
```

```
## sum : 5.15493, elapsed time1 : 0.002sec
```

```
start_time2 <- Sys.time()
f <- 0
for(i in c(1:100)){
  f <- f + v[[1]][i]
}
end_time2 <- Sys.time()
elapsed_time2 <- as.numeric(difftime(time1 = end_time2,
                                     time2 = start_time2,
                                     units = "secs"))
cat("sum : ",sprintf("%.5f", f),", elapsed time2: ",sprintf("%.3f",elapsed_time2),"sec",sep="")
```

```
## sum : 5.15493, elapsed time2: 0.036sec
```

As you can check above, if we use 'lapply' function, we can calculate faster than 'for loop'.