Hunter Armstrong R Code for the Analysis section

Comments are highlighted in green, Code is highlighted in Blue

(Reading in each dataset of results for the different possible combinations of cache replacement policies, writing schemes, and reading schemes)

>CAWT<-read.csv("/Users/hunterarmstrong/Desktop/CAWT.csv")

> RTWT<-read.csv("/Users/hunterarmstrong/Desktop/RTWT.csv")

> CAWB<-read.csv("/Users/hunterarmstrong/Desktop/CAWB.csv")

> RTWB<-read.csv("/Users/hunterarmstrong/Desktop/RTWB.csv")

(bar plot comparing the different run times of each replacement policy for Read Through, Write Back)

> attach(RTWB)

> barplot(Run.Time..ms., names.arg=c("MRU", "LRU", "FIFO", "LIFO", "RR", "LFU"),xlab="Replacement Policy", ylab="Run Time (ms)", main="Read Through, Write Back")

> box()



(More code below, just couldn’t fit the graph on this page)

(bar plot comparing the different run times of each replacement policy for Cache Aside, Write Back)

> attach(CAWB)

> barplot(Run.Time..ms., names.arg=c("MRU", "LRU", "FIFO", "LIFO", "RR", "LFU"),xlab="Replacement Policy", ylab="Run Time (ms)", main="Cache Aside, Write Back")

> box()



(bar plot comparing the different run times of each replacement policy for Read Through, Write Through)

> attach(RTWT)

> barplot(Run.Time..ms., names.arg=c("MRU", "LRU", "FIFO", "LIFO", "RR", "LFU"),xlab="Replacement Policy", ylab="Run Time (ms)", main="Read Through, Write Through")

> box()



(bar plot comparing the different run times of each replacement policy for Cache Aside, Write Through)

> attach(CAWT)

> barplot(Run.Time..ms., names.arg=c("MRU", "LRU", "FIFO", "LIFO", "RR", "LFU"),xlab="Replacement Policy", ylab="Run Time (ms)", main="Cache Aside, Write Through")

> box()



(bar plot comparing the different hit rates of each replacement policy)

> barplot(Hit.Rate, names.arg=c("MRU", "LRU", "FIFO", "LIFO", "RR", "LFU"),xlab="Replacement Policy", ylab="Hit Rate", main="Hit Rates for Each Replacement Policy", ylim=c(.43,.53))

> box()



(creating the matrix that contains the poisson data)

> poisson<-matrix(c(.309, .485, .439, .423, .443, .379, .239, .459, .441, .202, .419, .218, .128, .501, .511, .135, .469, .184), nc=3)

(creating a barplot and legend for the poisson data matrix)

> barplot(poisson, beside=T, names.arg=c(.25, .5, .75), xlab="Three Center (Lambda) values", ylab="Hit Rate Percentage", main="Hit Rates for Poisson Data", col=c("red", "blue", "green", "orange", "yellow", "purple"))

> legend(x=0, y=.52, pch=19, c("MRU", "LRU", "FIFO", "LIFO", "RR", "LFU"), col=c("red", "blue", "green", "orange", "yellow", "purple"), bty="n")

