ls("package:RcmdrPlugin.TeachingDemos")

function ()

{

Library("TeachingDemos")

initializeDialog(title = gettextRcmdr("Central Limit Theorem"))

defaults <- list(nVar = "1", repsVar = 10000, nclassVar = "16")

dialog.values <- getDialog("centralLimitTheorem", defaults)

nVar <- tclVar(dialog.values$nVar)

nEntry <- tkentry(top, width = "6", textvariable = nVar)

repsVar <- tclVar(dialog.values$repsVar)

repsEntry <- tkentry(top, width = "6", textvariable = repsVar)

nclassVar <- tclVar(dialog.values$nclassVar)

nclassEntry <- tkentry(top, width = "6", textvariable = nclassVar)

onOK <- function() {

closeDialog()

n <- round(as.numeric(tclvalue(nVar)))

if (is.na(n) || n <= 0) {

errorCondition(recall = simulateConfidenceIntervals,

message = "Sample size must be a positive integer.")

return()

}

reps <- round(as.numeric(tclvalue(repsVar)))

if (is.na(reps) || reps <= 0) {

errorCondition(recall = simulateConfidenceIntervals,

message = "Number of samples must be a positive integer.")

return()

}

nclass <- round(as.numeric(tclvalue(nclassVar)))

if (is.na(nclass) || reps <= 0) {

errorCondition(recall = simulateConfidenceIntervals,

message = "Number of samples must be a positive integer.")

return()

}

putDialog("centralLimitTheorem", lapply(list(nVar = n,

repsVar = reps, nclassVar = nclass), as.character))

command <- paste("clt.examp(n = ", n, ", reps = ", reps,

", nclass =", nclass, ")", sep = "")

doItAndPrint(command)

tkfocus(CommanderWindow())

}

OKCancelHelp(helpSubject = "clt.examp", reset = "centralLimitTheorem",

apply = "centralLimitTheorem")

tkgrid(tklabel(top, text = "Sample size"), nEntry, sticky = "e")

tkgrid(tklabel(top, text = "Number of samples"), repsEntry,

sticky = "e")

tkgrid(tklabel(top, text = "Approximate number of bins for histograms"),

nclassEntry, sticky = "e")

tkgrid(buttonsFrame, sticky = "w", columnspan = 2)

tkgrid.configure(nEntry, sticky = "w")

tkgrid.configure(repsEntry, sticky = "w")

tkgrid.configure(nclassEntry, sticky = "w")

dialogSuffix(rows = 4, columns = 2, focus = nEntry)

}