setwd("C:/Users/Bhuvanesh/Documents/R")

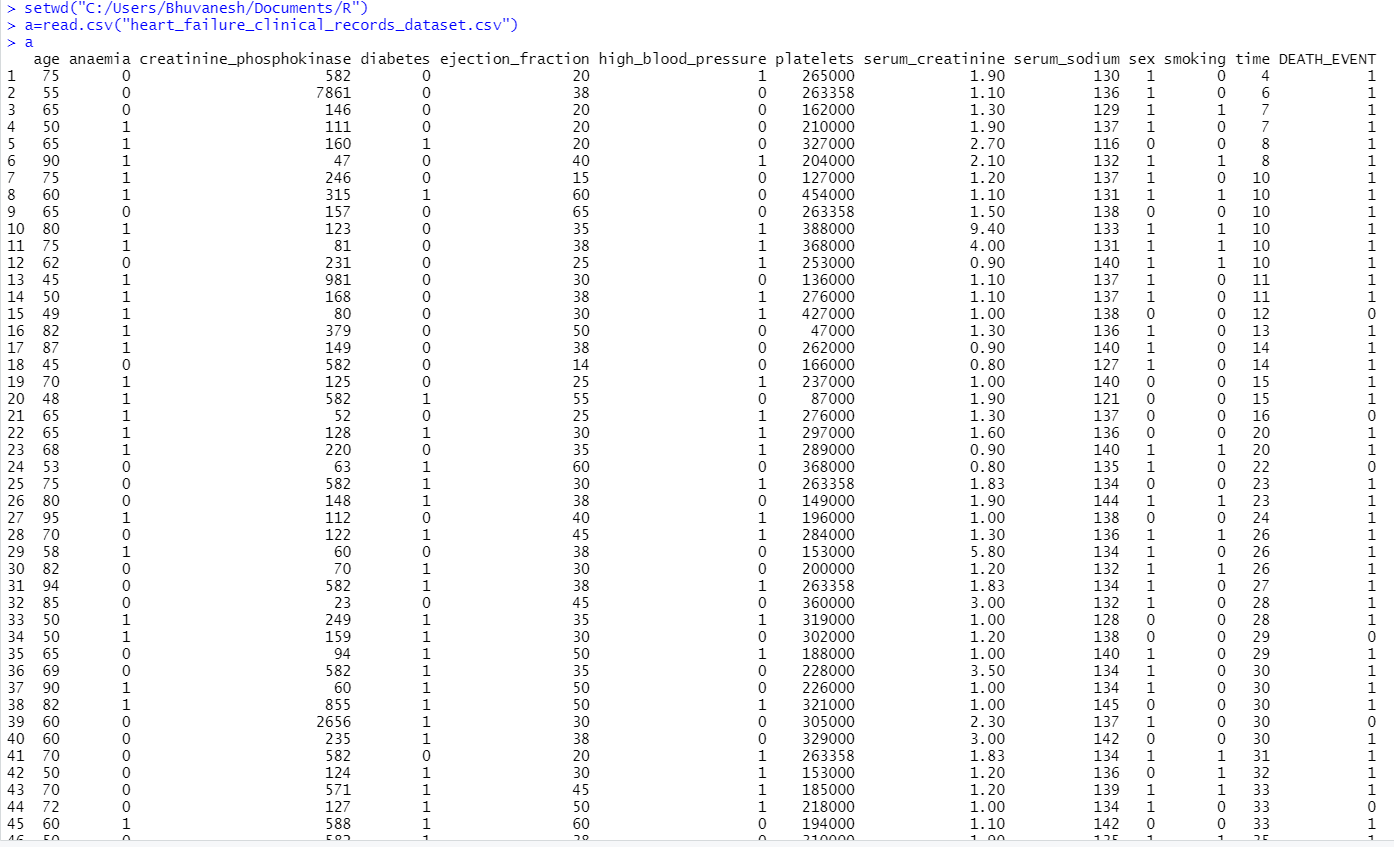
Valiveti Manikanta Bhuvanesh

19BCD7088

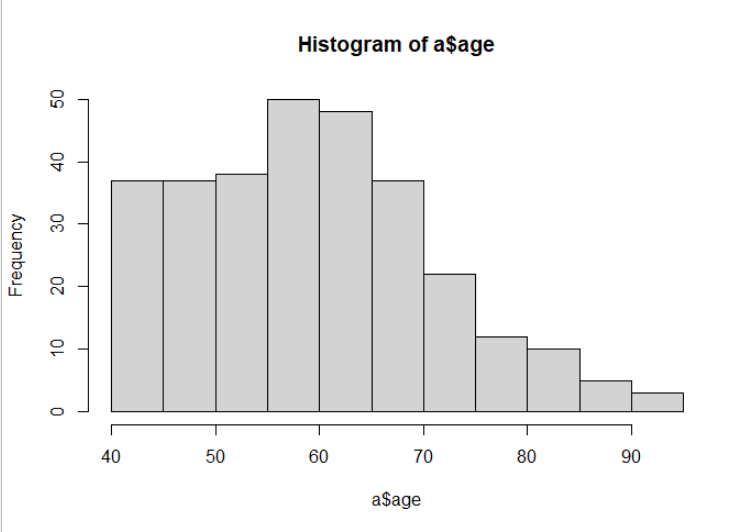
L55+L56

a=read.csv("heart\_failure\_clinical\_records\_dataset.csv")

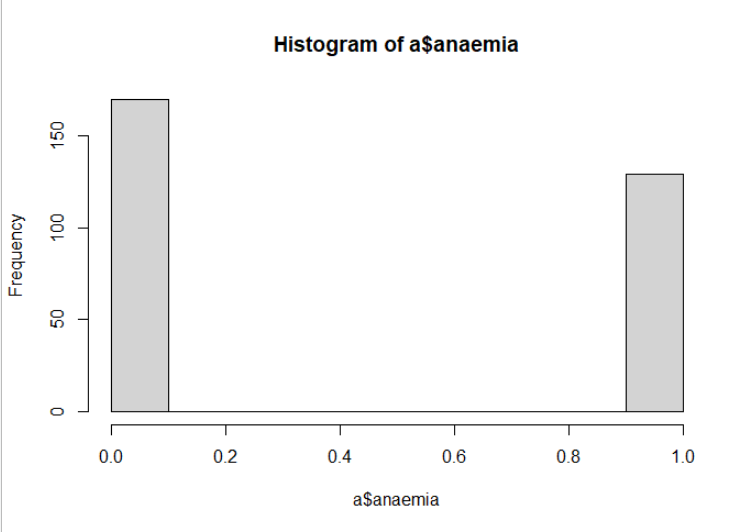
a



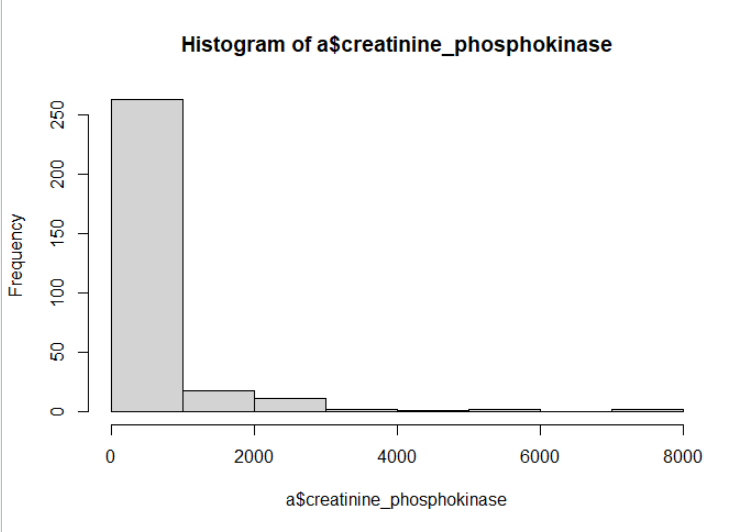
hist(a$age)



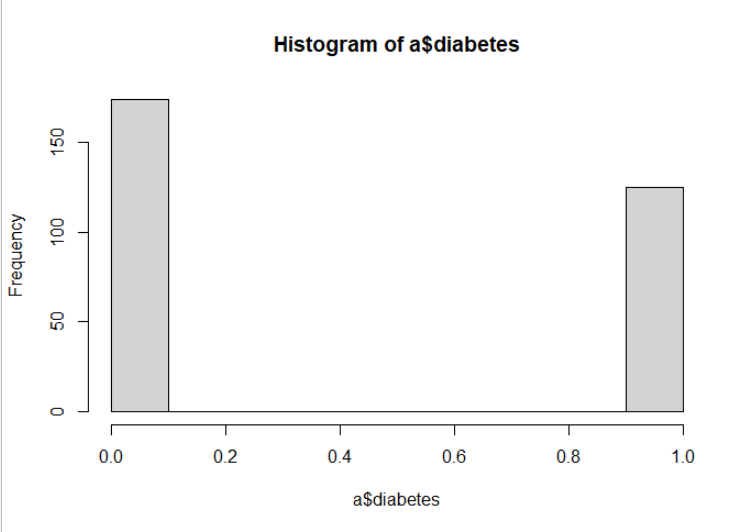
hist(a$anaemia)



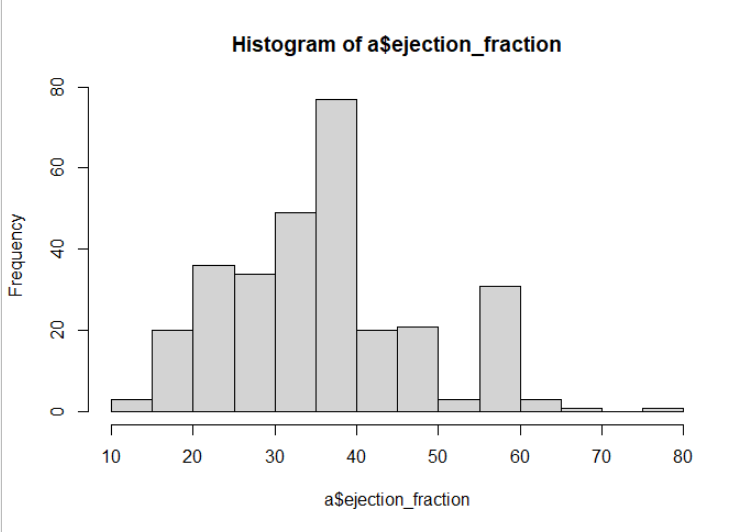
hist(a$creatinine\_phosphokinase)



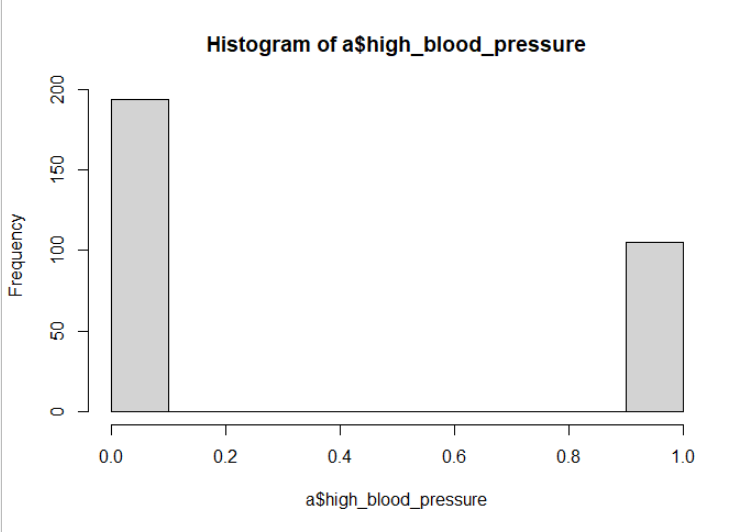
hist(a$diabetes)



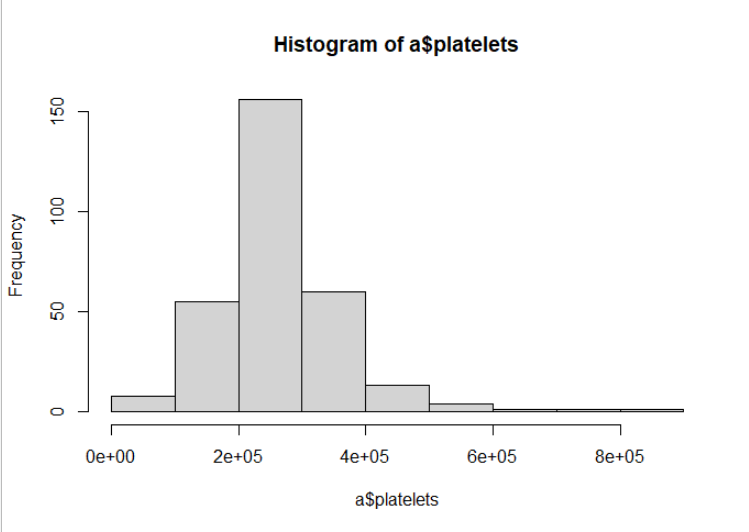
hist(a$ejection\_fraction)



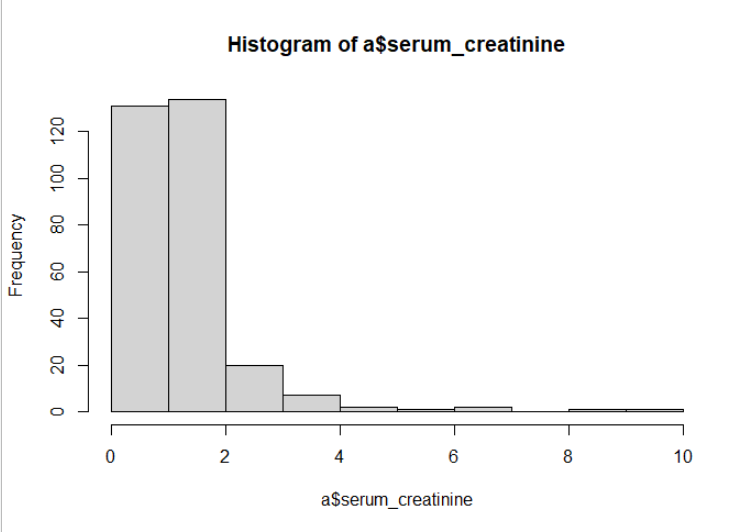
hist(a$high\_blood\_pressure)



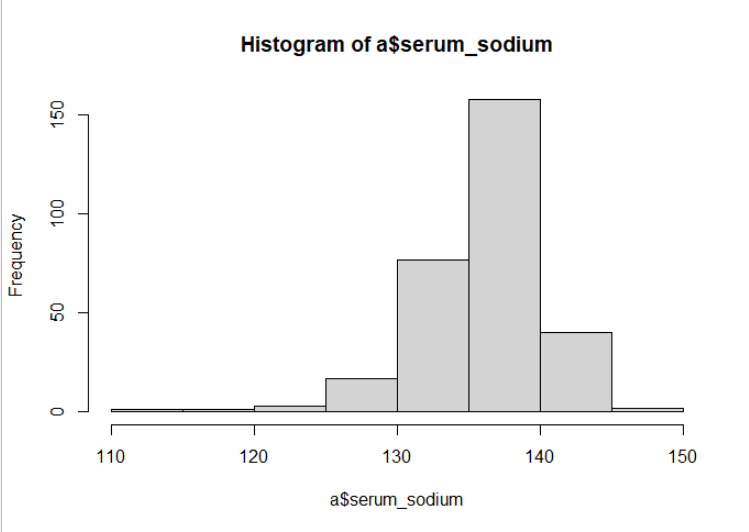
hist(a$platelets)



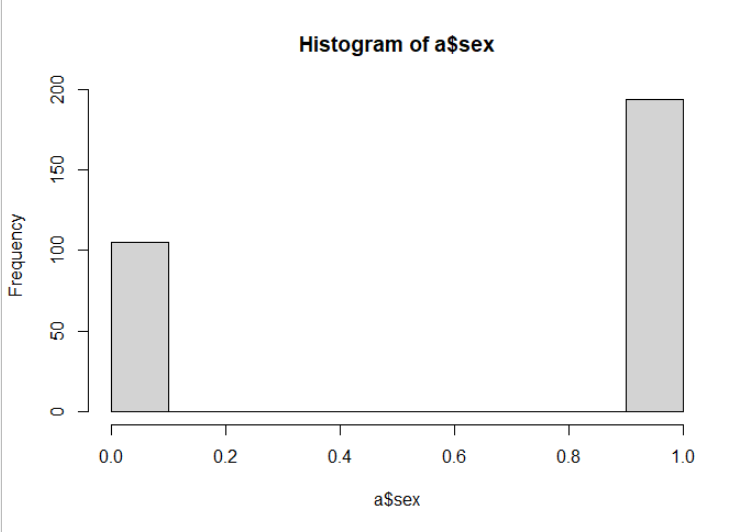
hist(a$serum\_creatinine)



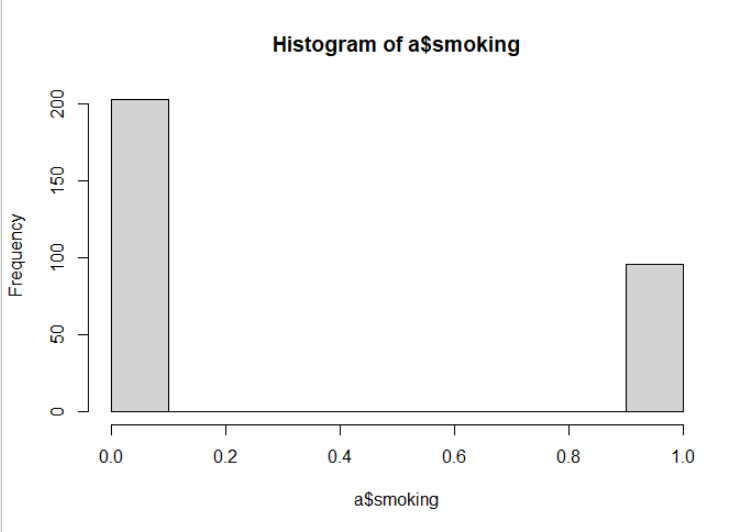
hist(a$serum\_sodium)



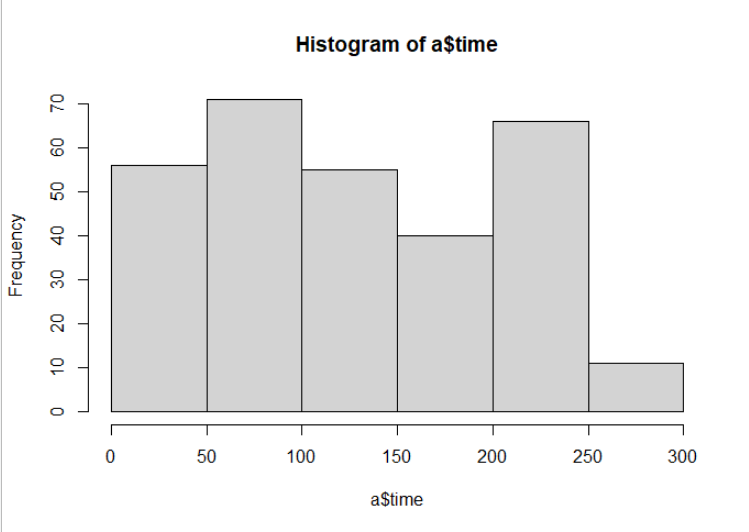
hist(a$sex)



hist(a$smoking)



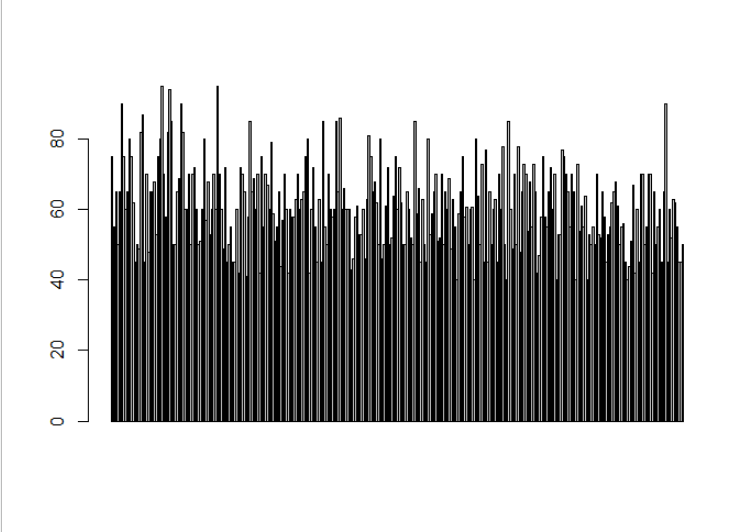
hist(a$time)



hist(a$DEATH\_EVENT)



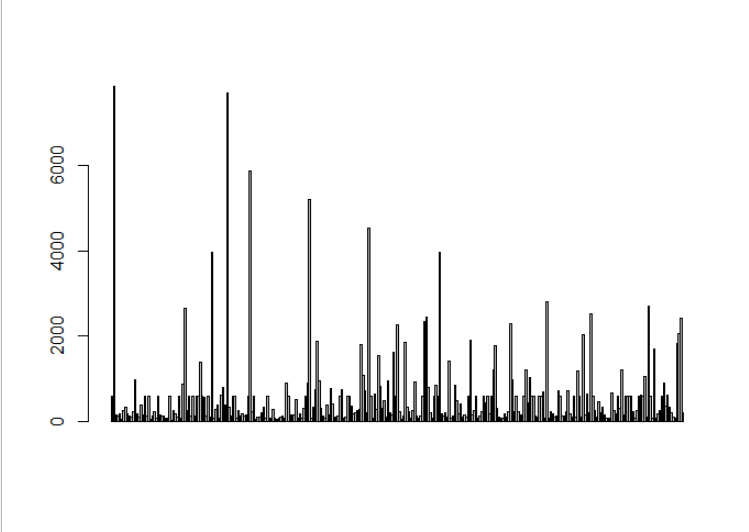
barplot(a$age)



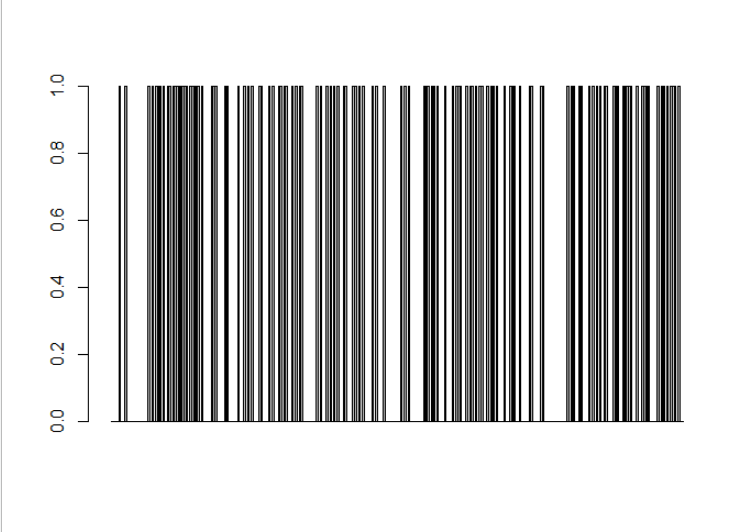
barplot(a$anaemia)



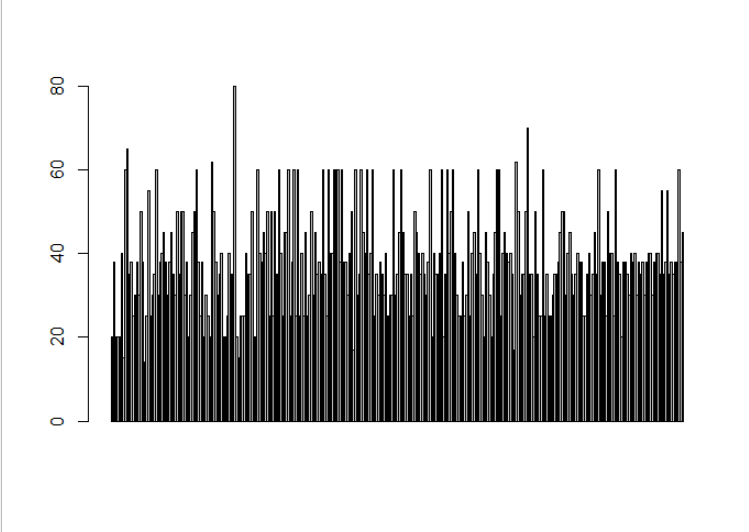
barplot(a$creatinine\_phosphokinase)



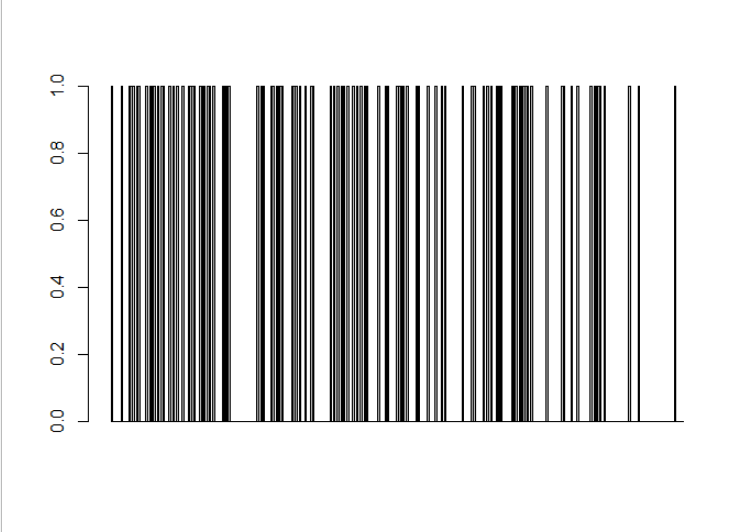
barplot(a$diabetes)



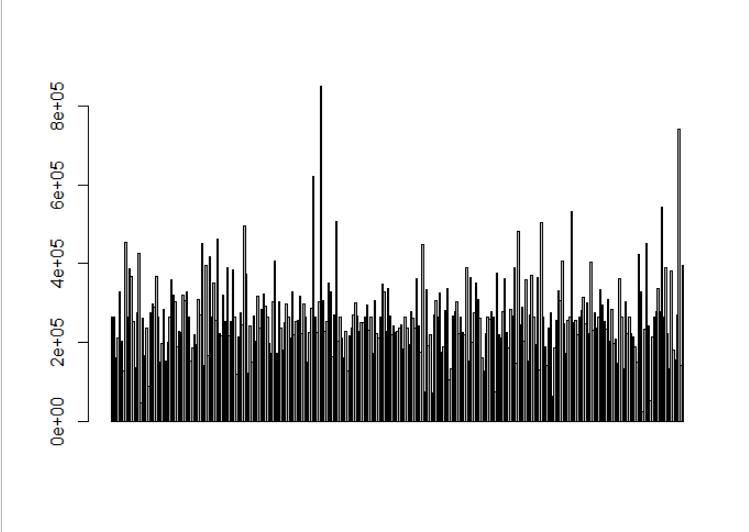
barplot(a$ejection\_fraction)



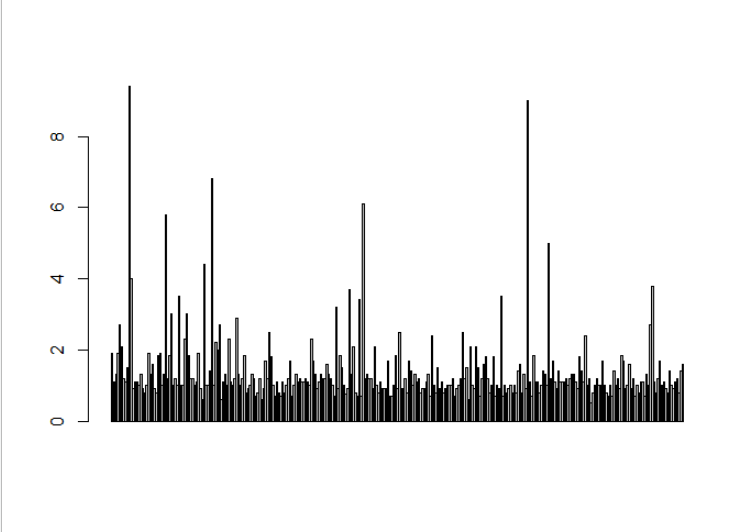
barplot(a$high\_blood\_pressure)



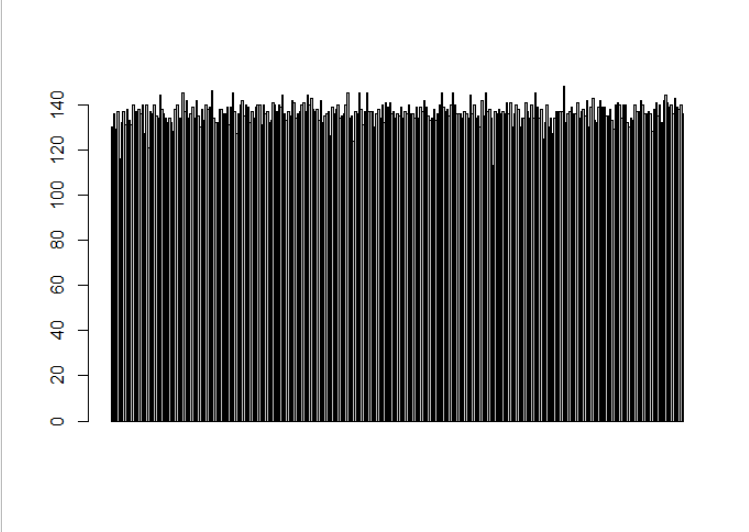
barplot(a$platelets)



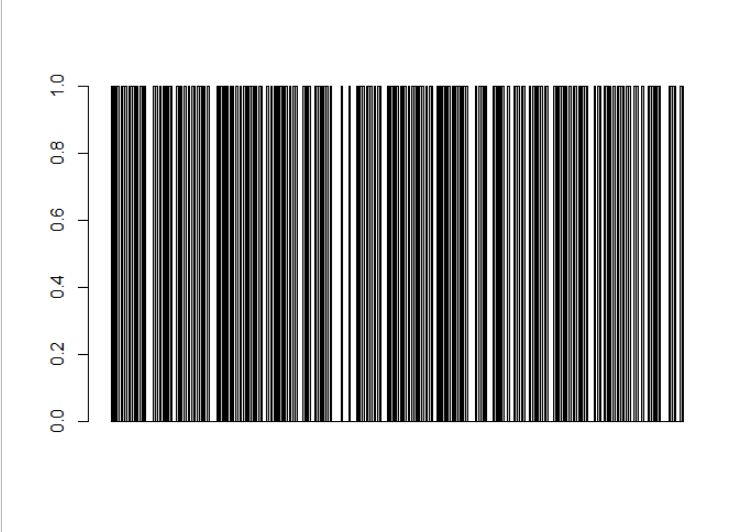
barplot(a$serum\_creatinine)



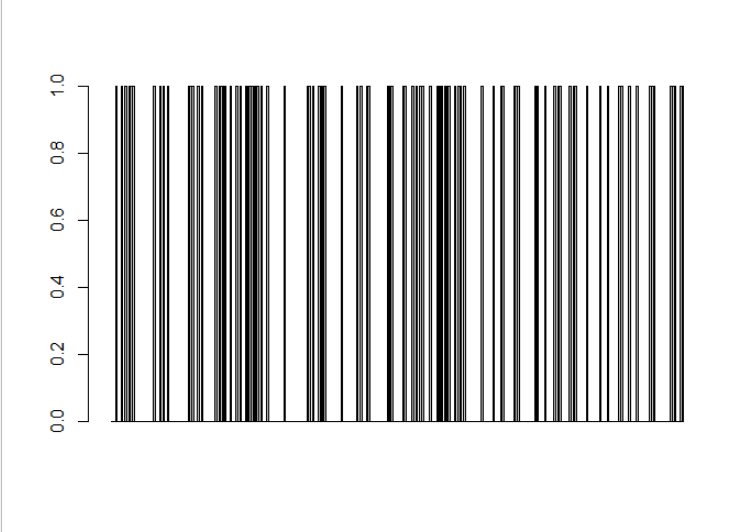
barplot(a$serum\_sodium)



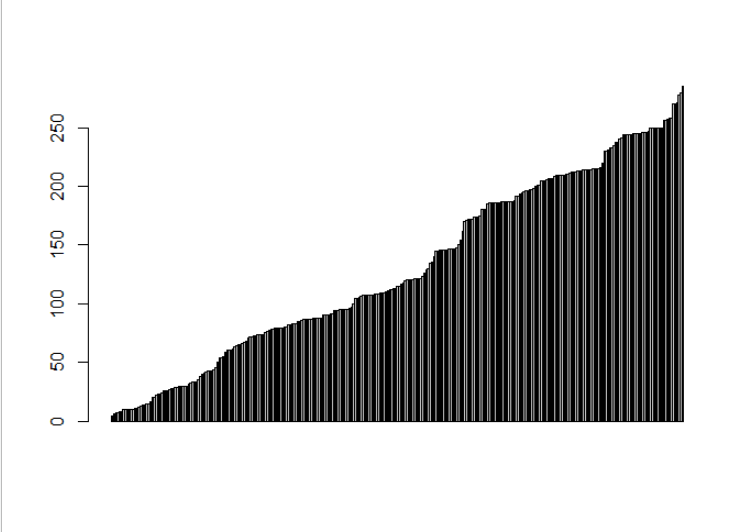
barplot(a$sex)



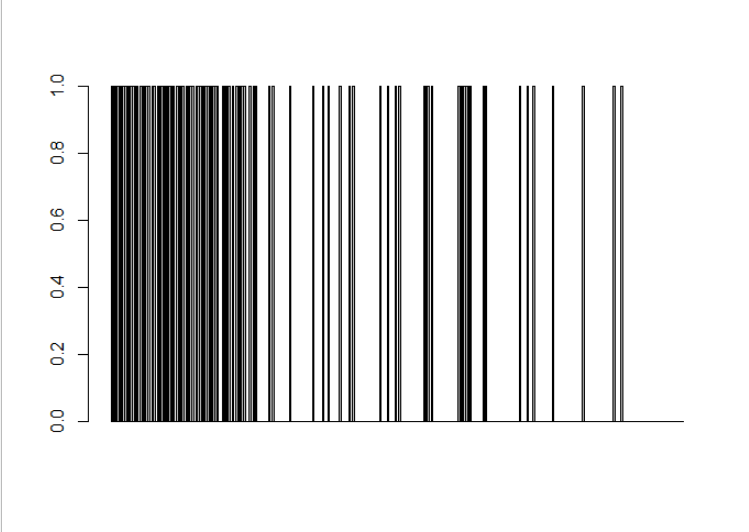
barplot(a$smoking)



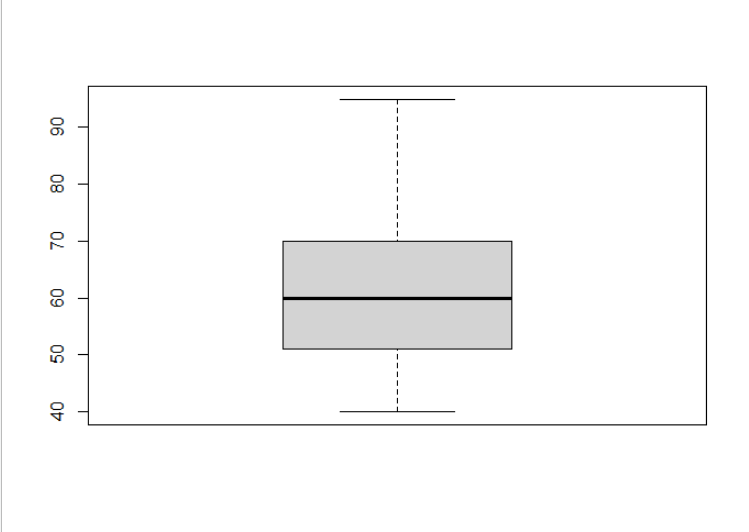
barplot(a$time)



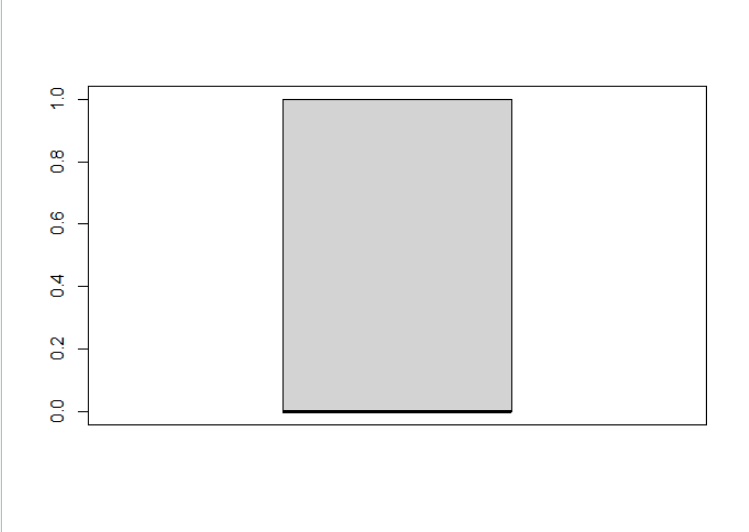
barplot(a$DEATH\_EVENT)



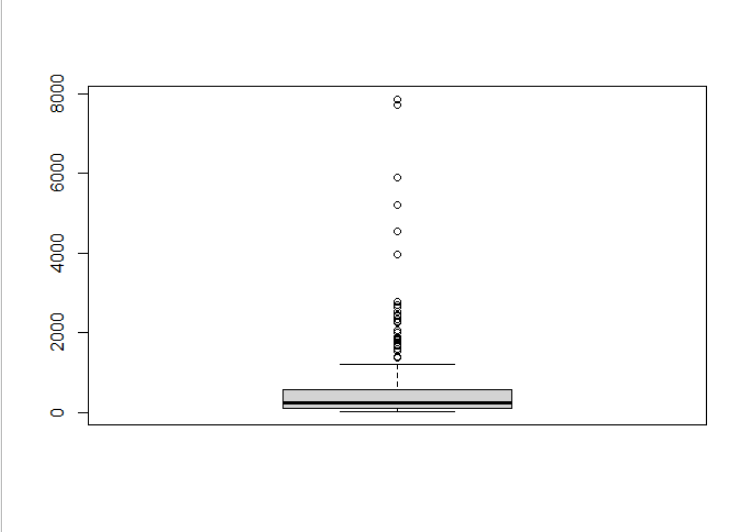
boxplot(a$age)



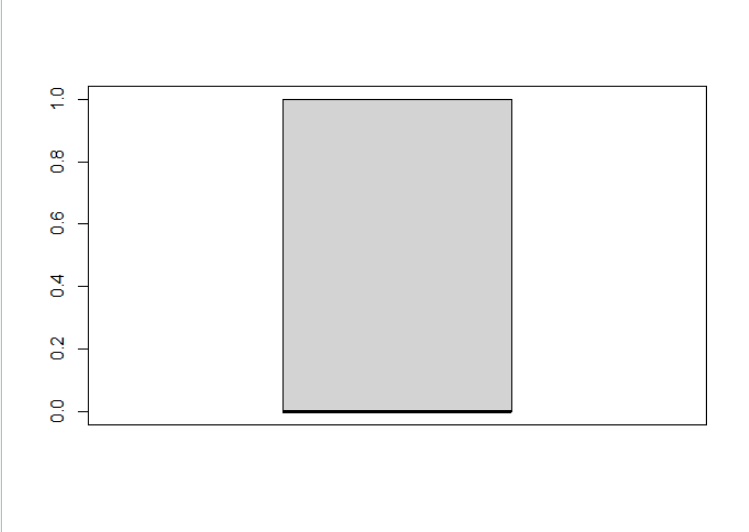
boxplot(a$anaemia)



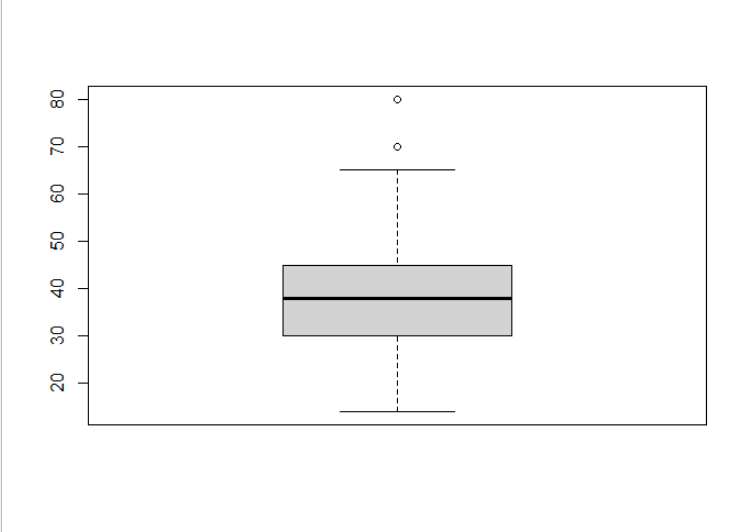
boxplot(a$creatinine\_phosphokinase)



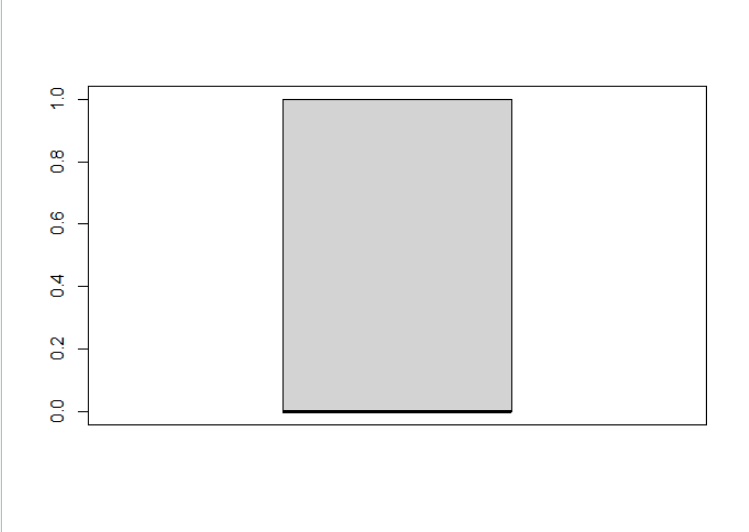
boxplot(a$diabetes)



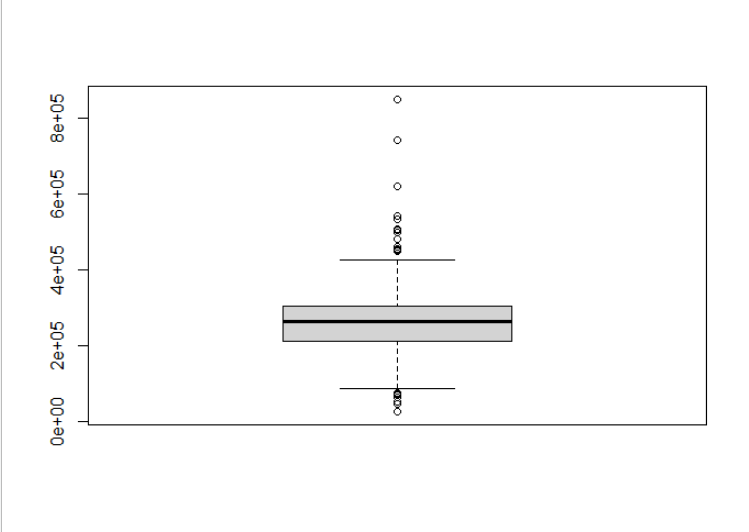
boxplot(a$ejection\_fraction)



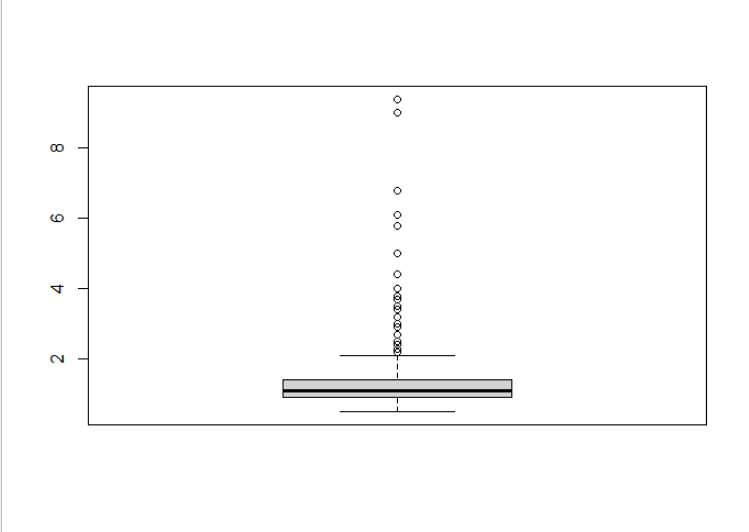
boxplot(a$high\_blood\_pressure)



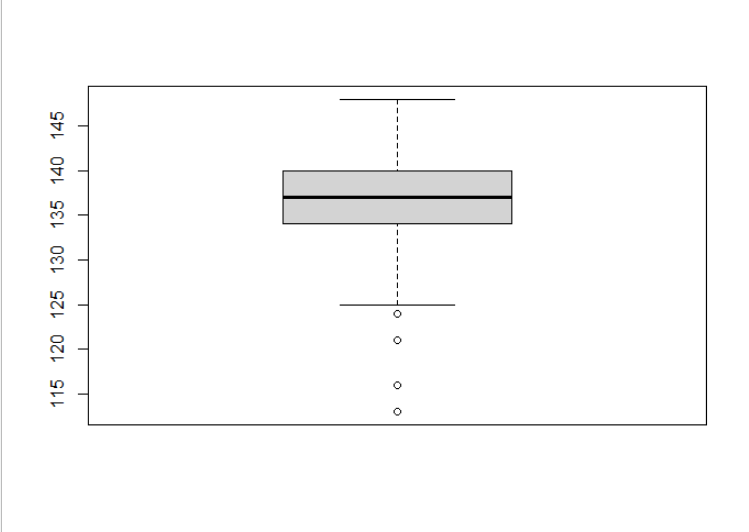
boxplot(a$platelets)



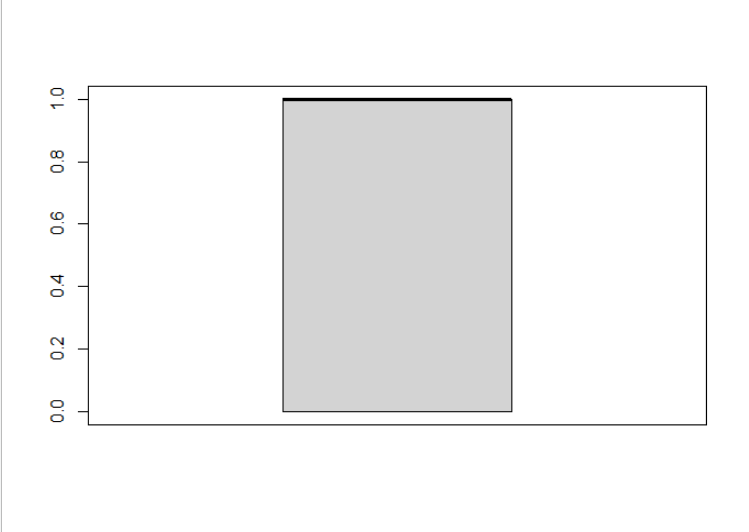
boxplot(a$serum\_creatinine)



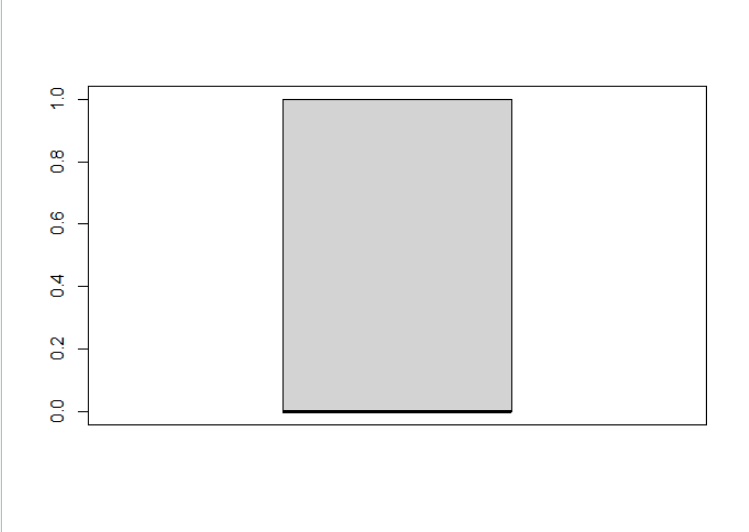
boxplot(a$serum\_sodium)



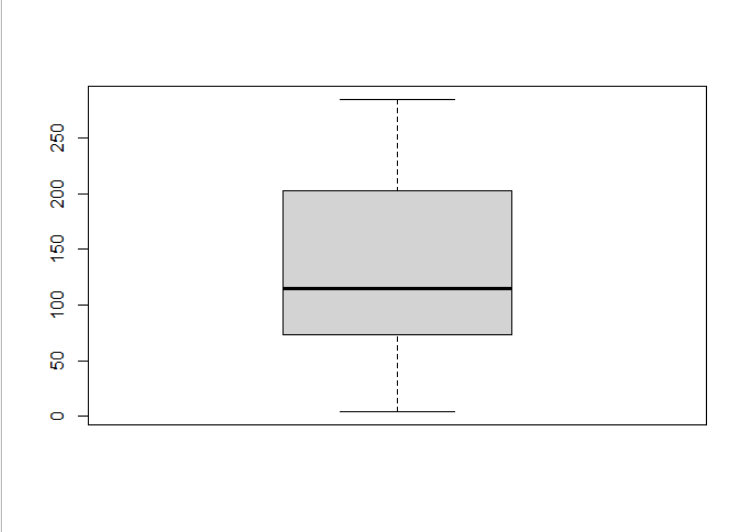
boxplot(a$sex)



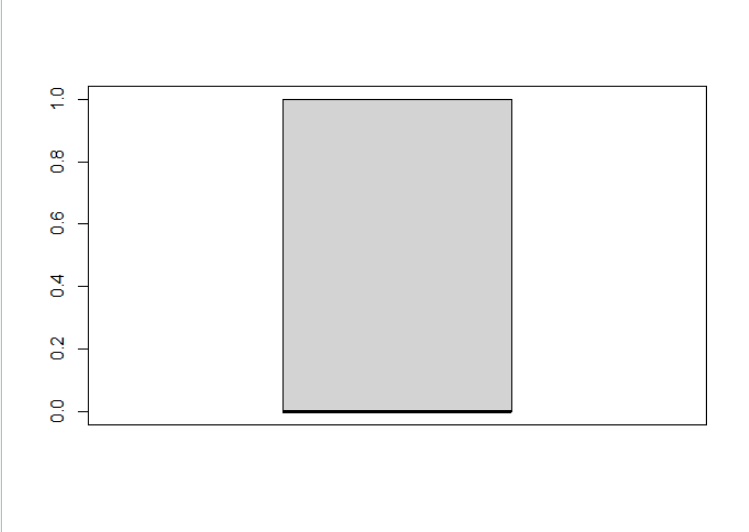
boxplot(a$smoking)



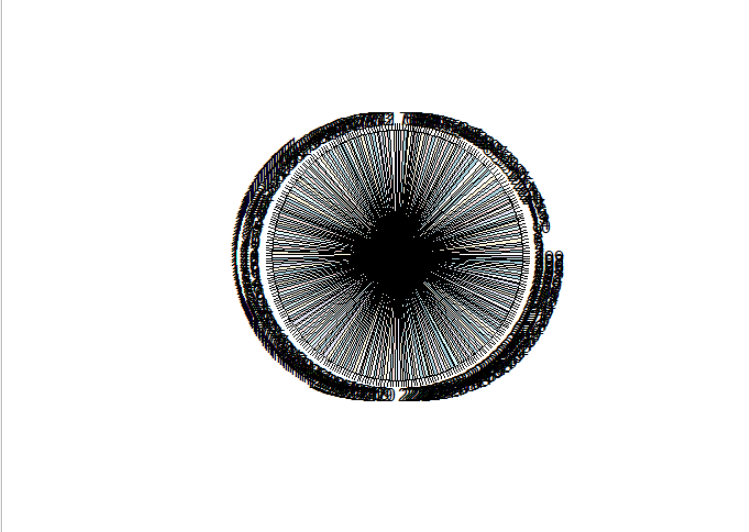
boxplot(a$time)



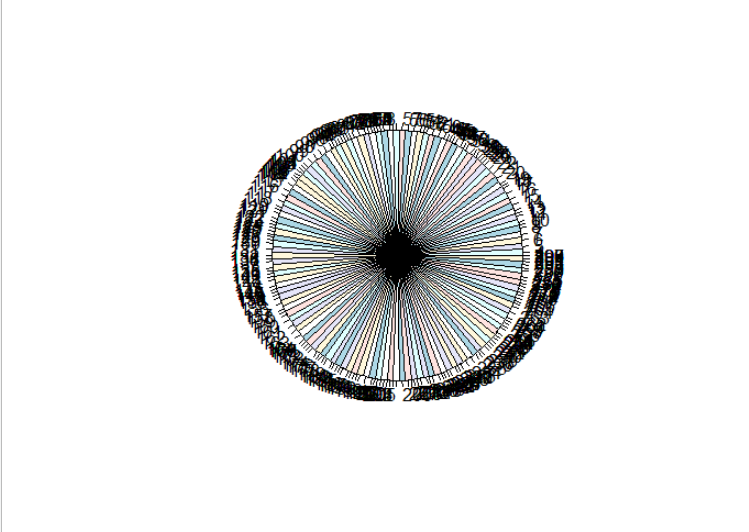
boxplot(a$DEATH\_EVENT)



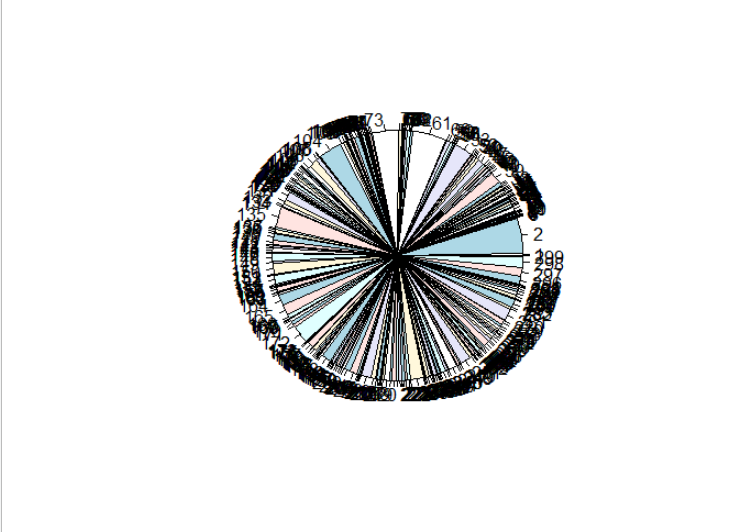
pie(a$age)



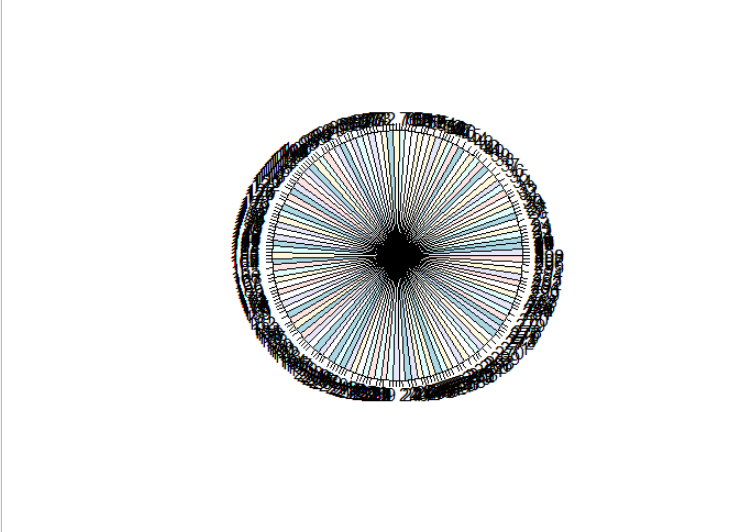
pie(a$anaemia)



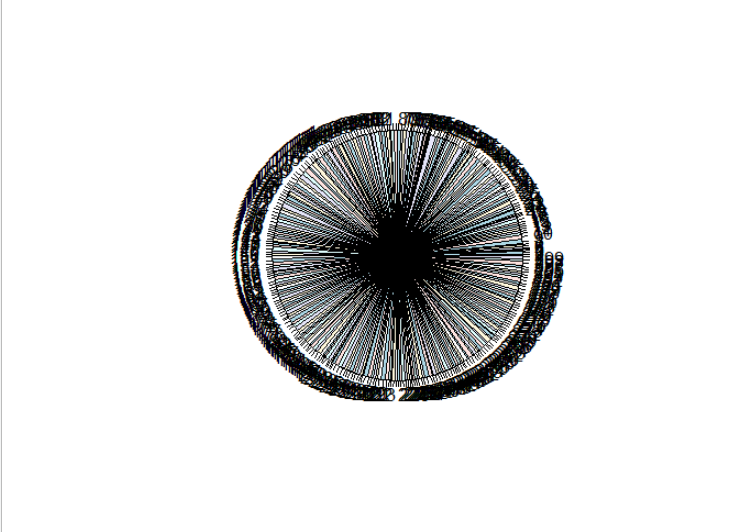
pie(a$creatinine\_phosphokinase)



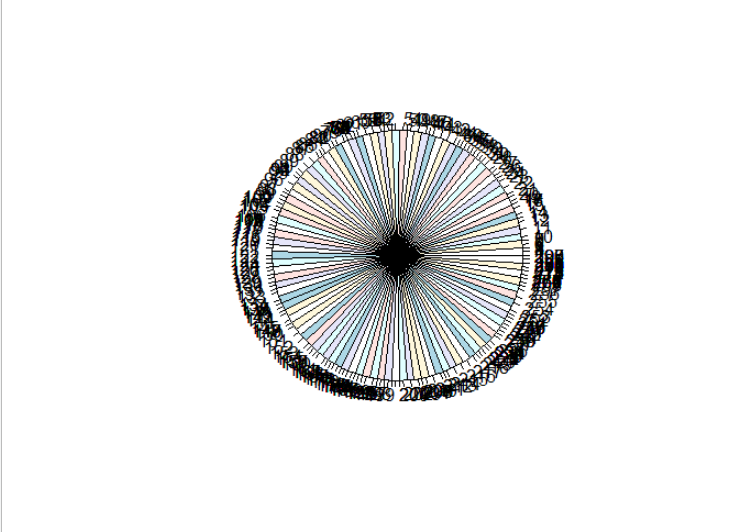
pie(a$diabetes)



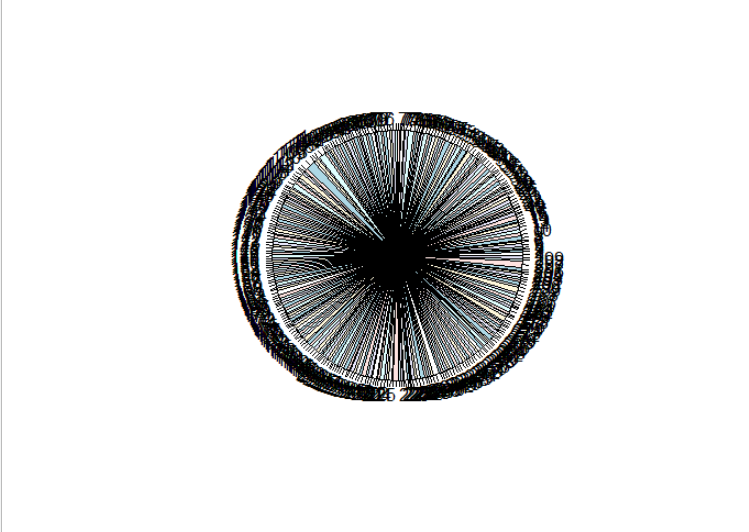
pie(a$ejection\_fraction)



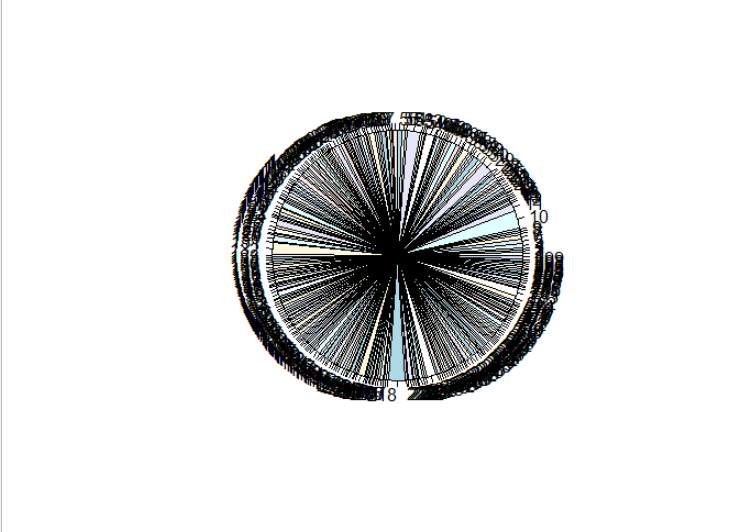
pie(a$high\_blood\_pressure)



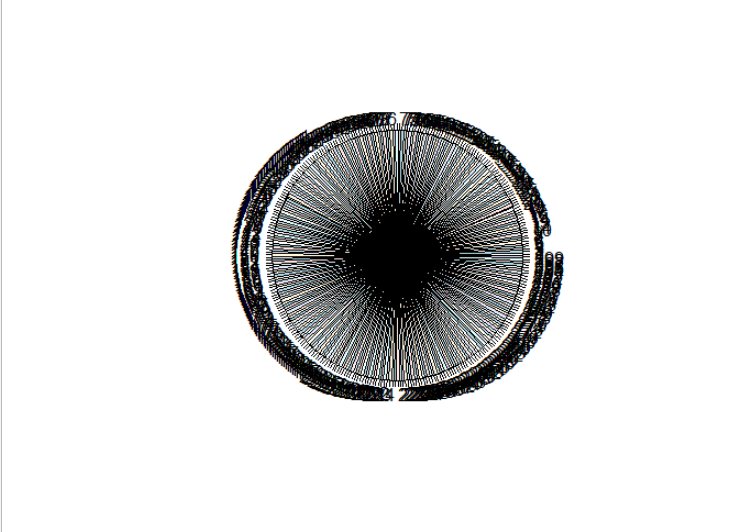
pie(a$platelets)



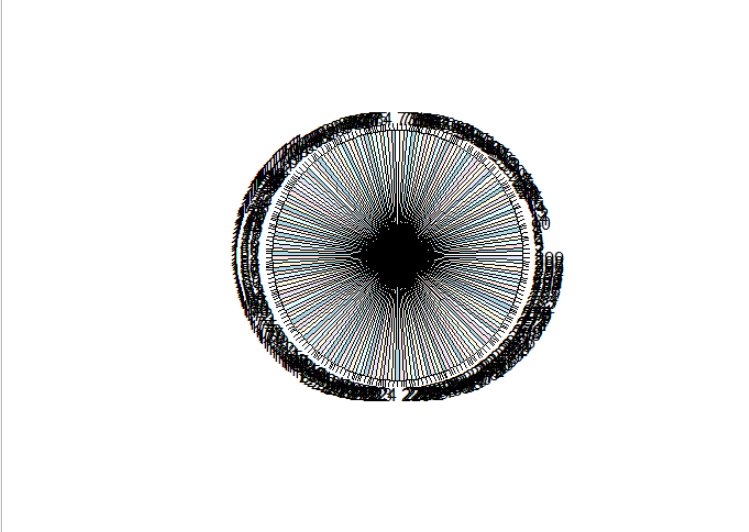
pie(a$serum\_creatinine)



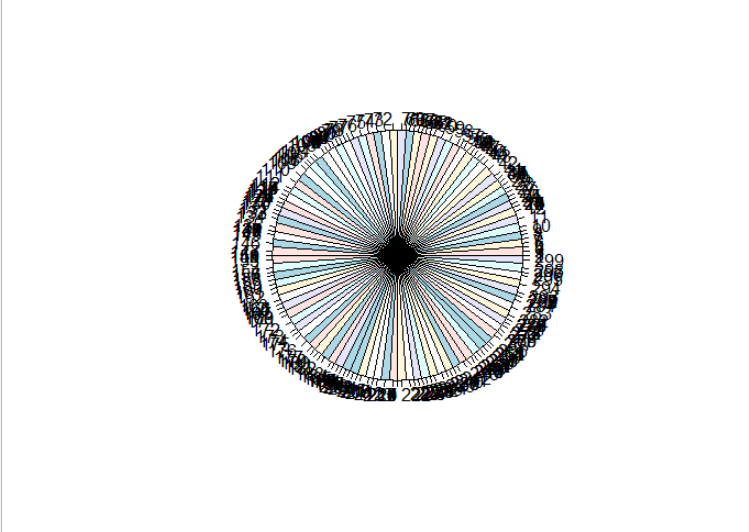
pie(a$serum\_sodium)



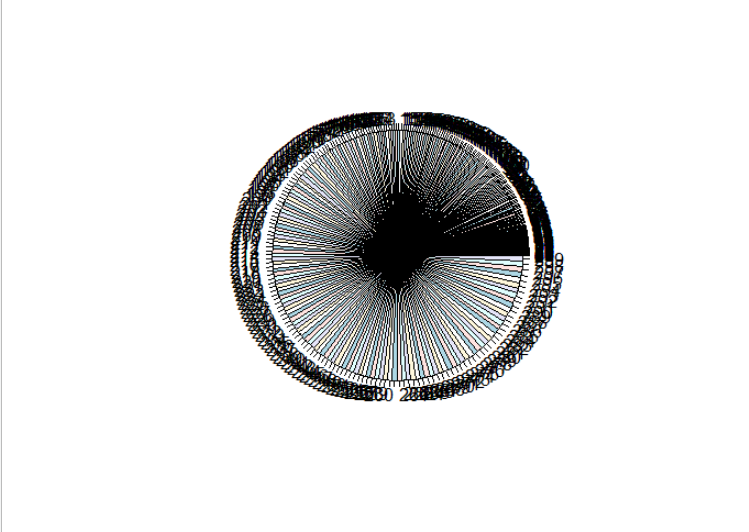
pie(a$sex)



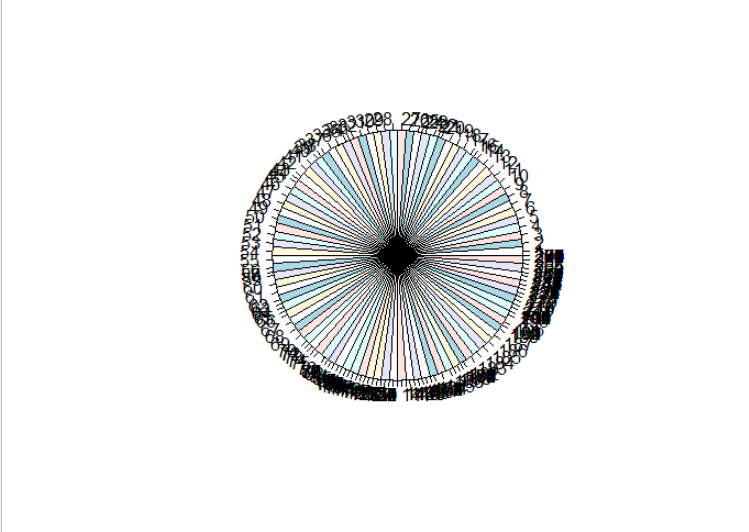
pie(a$smoking)



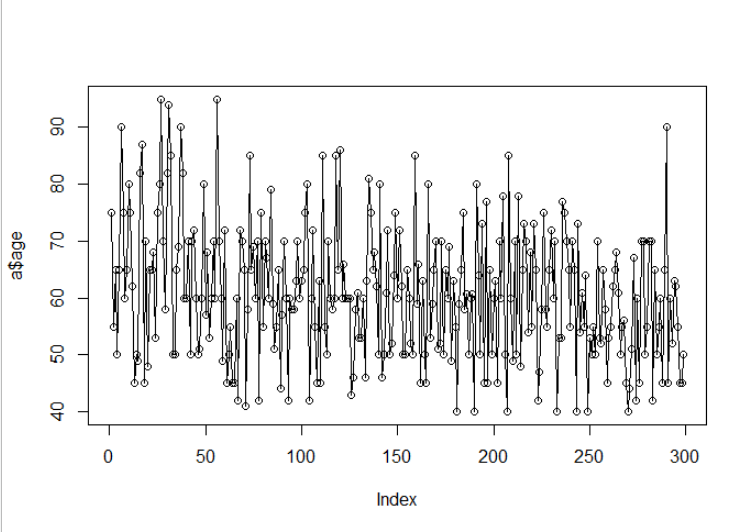
pie(a$time)



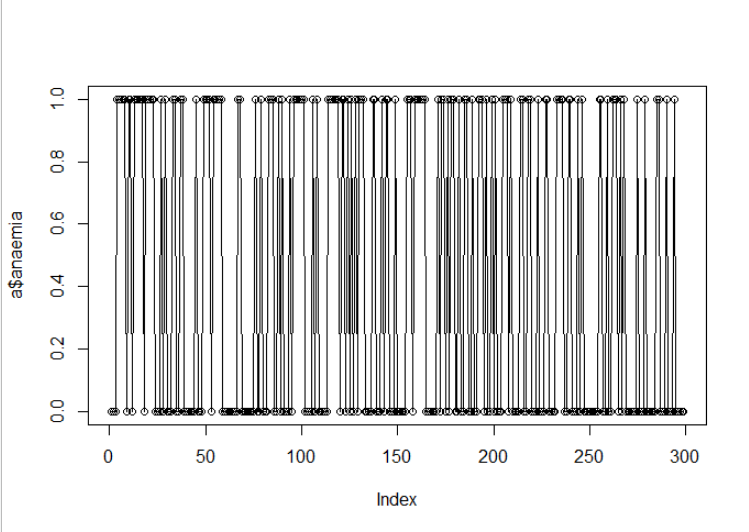
pie(a$DEATH\_EVENT)



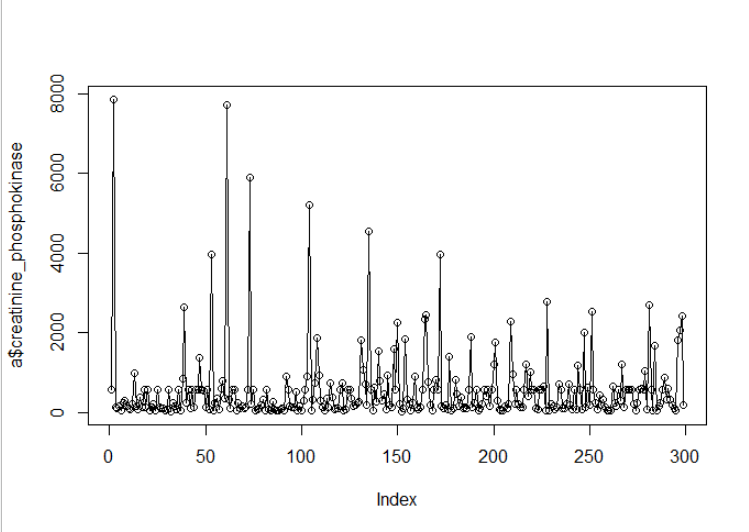
plot(a$age,type="o")



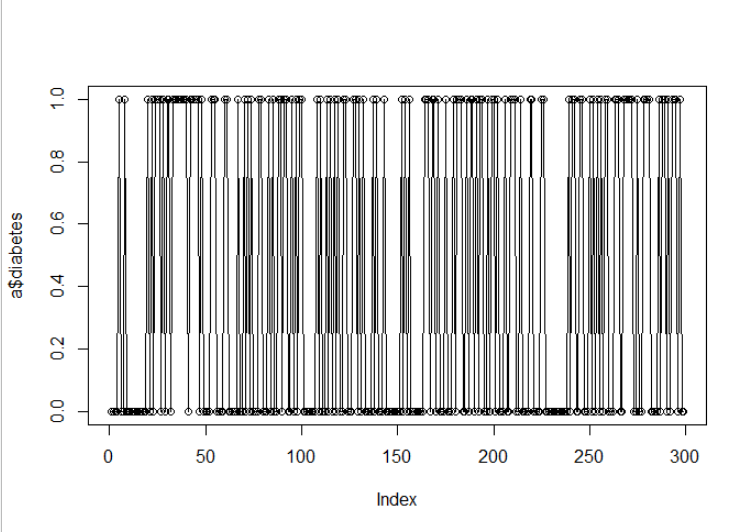
plot(a$anaemia,type="o")



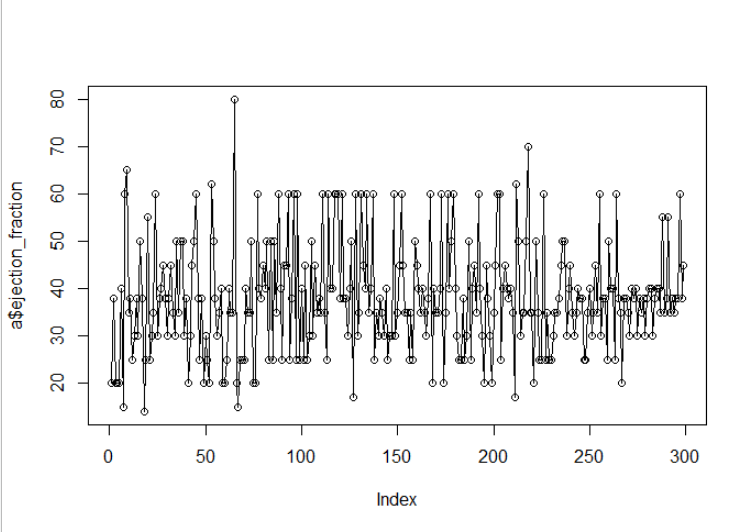
plot(a$creatinine\_phosphokinase,type="o")



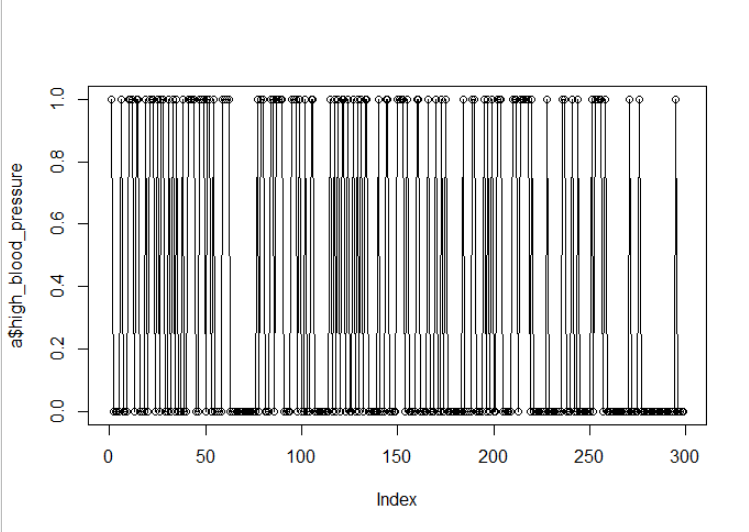
plot(a$diabetes,type="o")



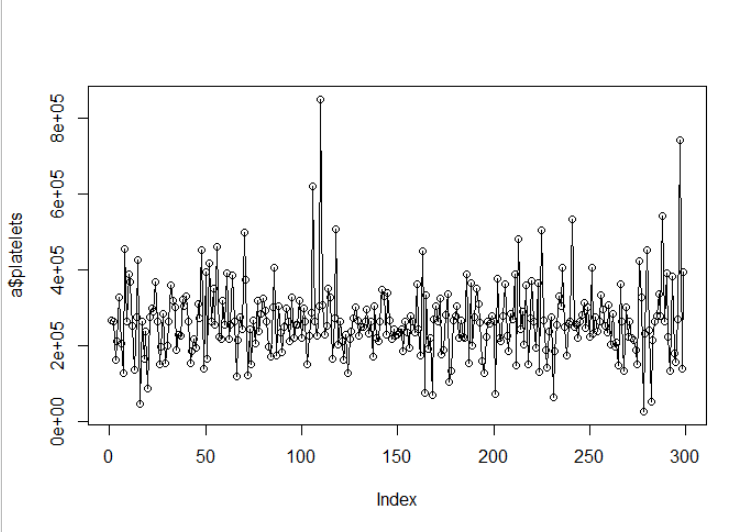
plot(a$ejection\_fraction,type="o")



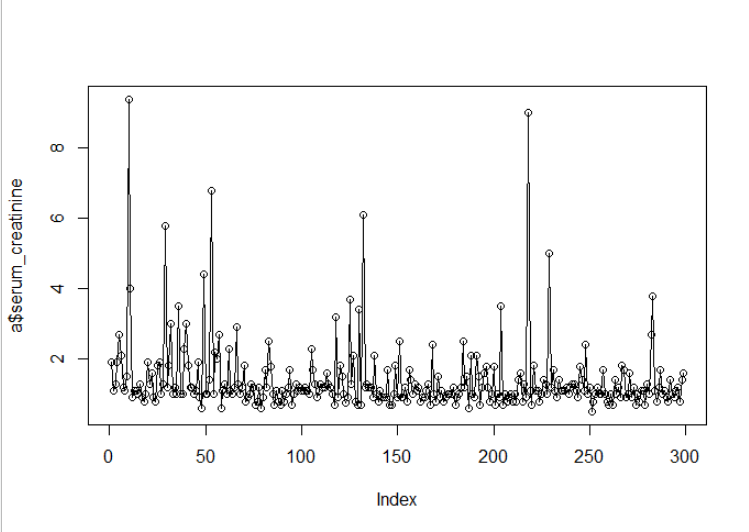
plot(a$high\_blood\_pressure,type="o")



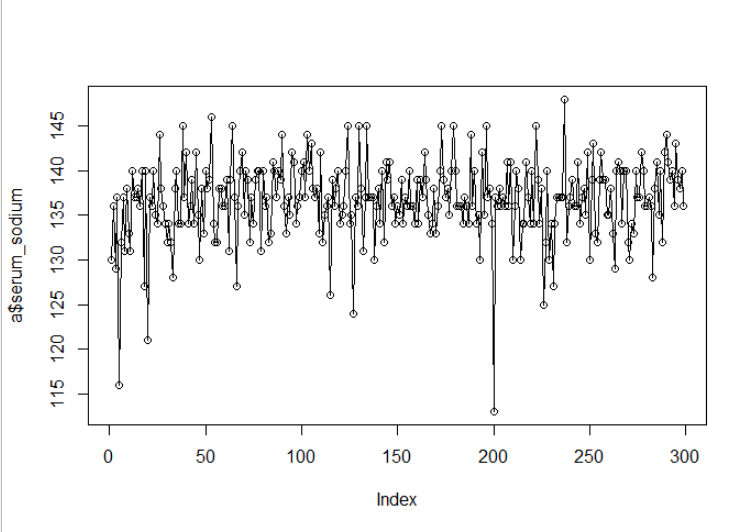
plot(a$platelets,type="o")



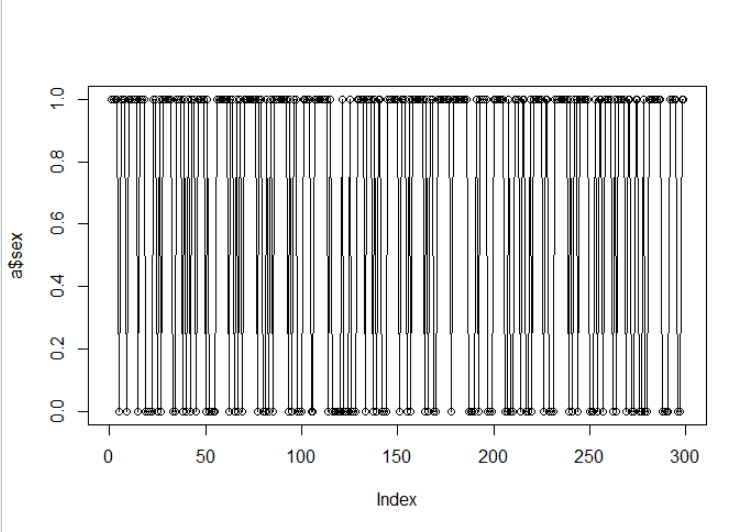
plot(a$serum\_creatinine,type="o")



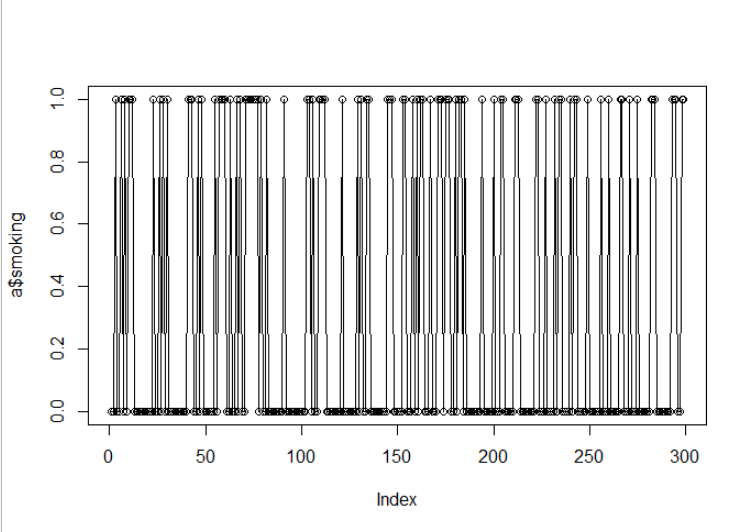
plot(a$serum\_sodium,type="o")



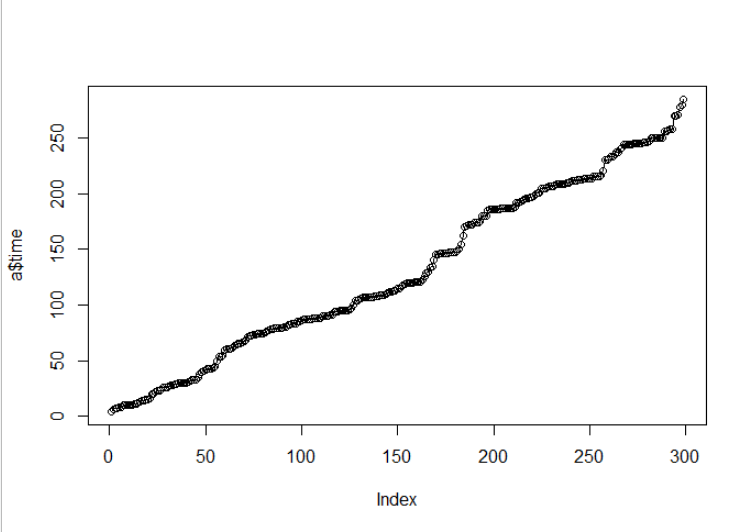
plot(a$sex,type="o")



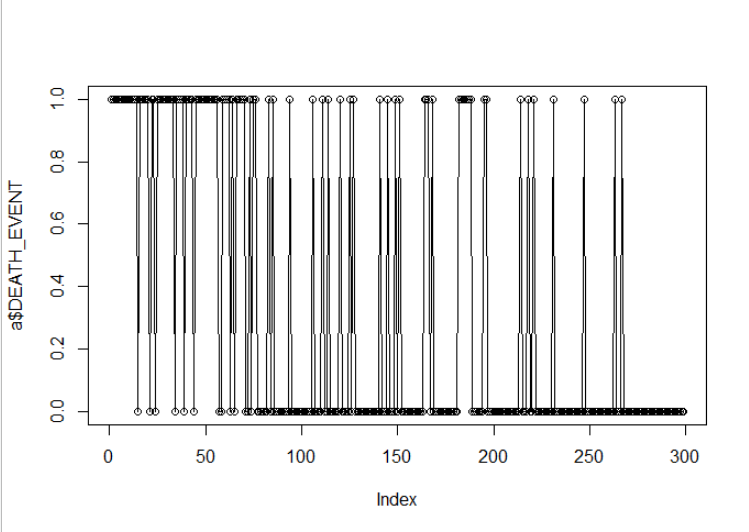
plot(a$smoking,type="o")



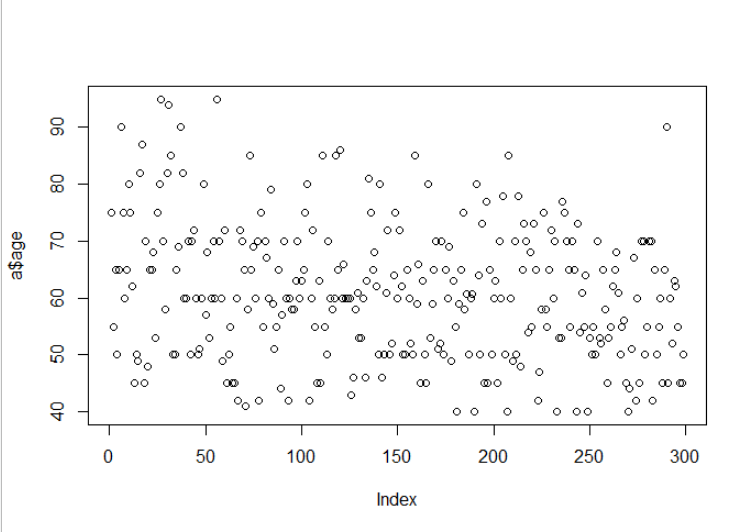
plot(a$time,type="o")



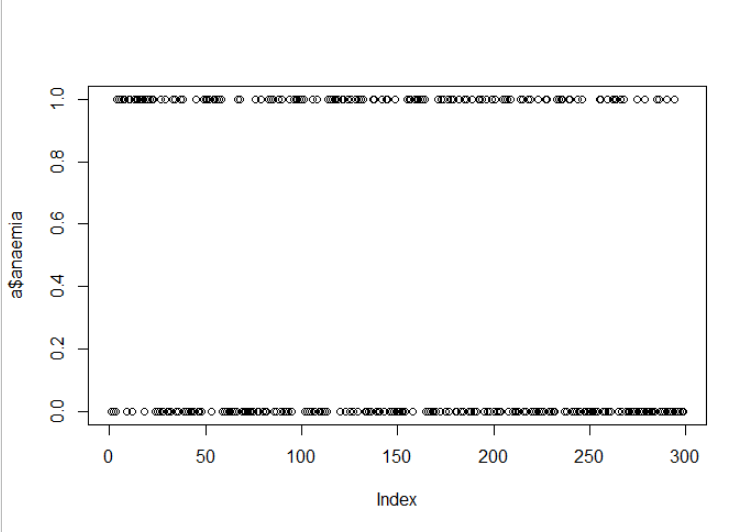
plot(a$DEATH\_EVENT,type="o")



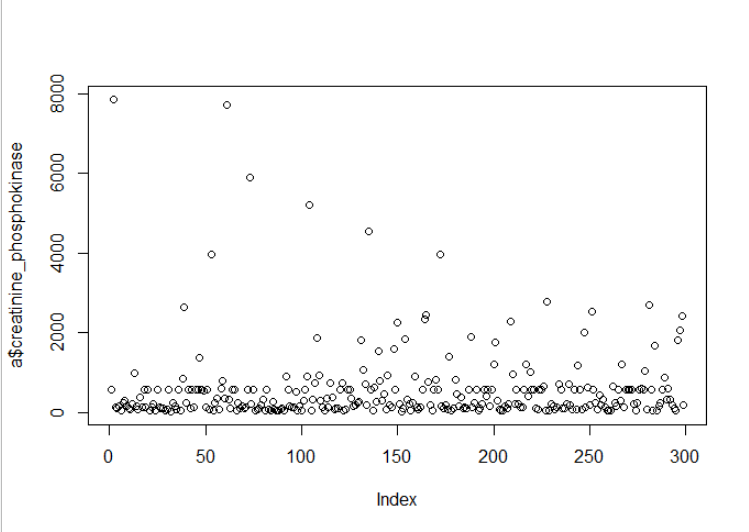
plot(a$age)



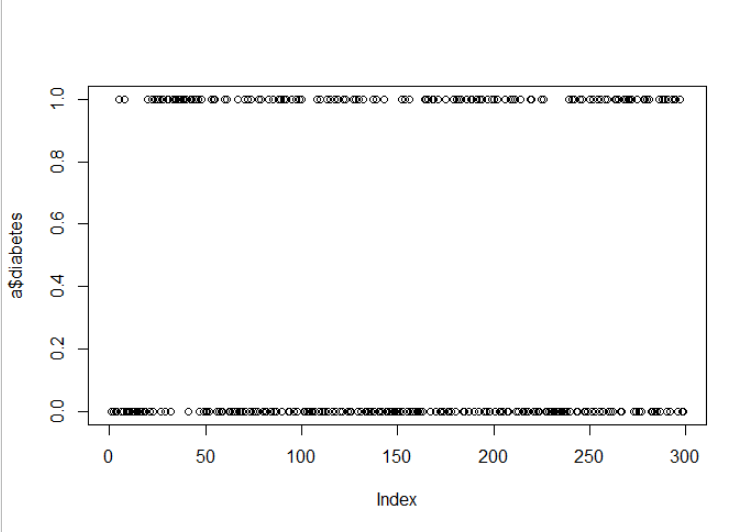
plot(a$anaemia)



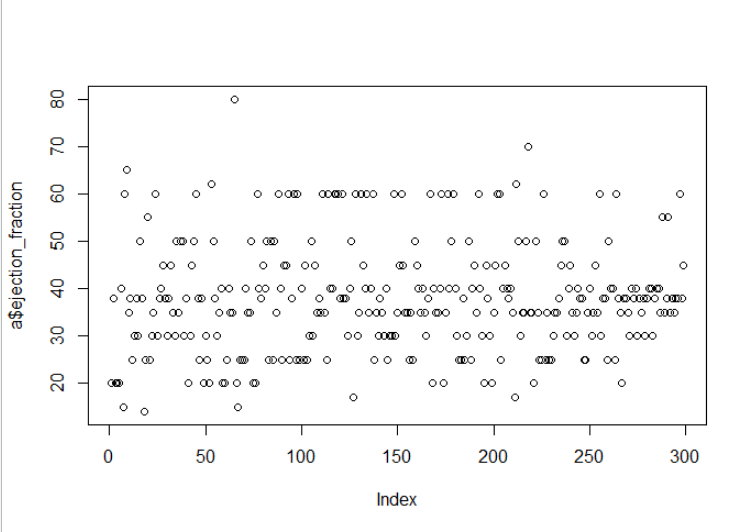
plot(a$creatinine\_phosphokinase)



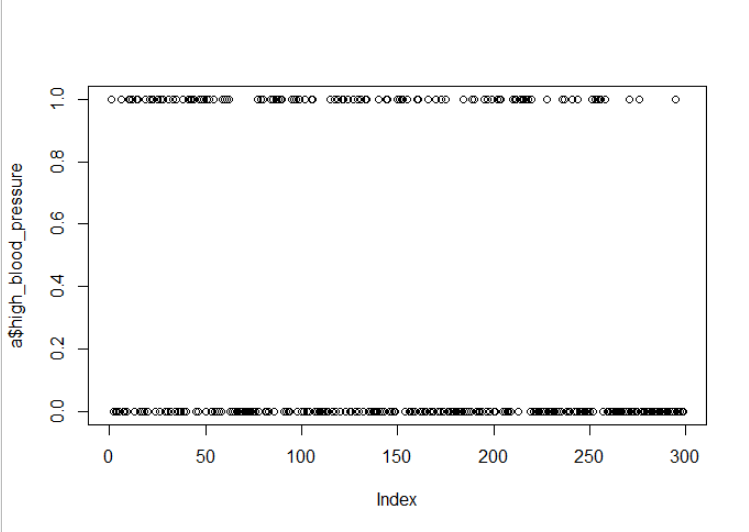
plot(a$diabetes)



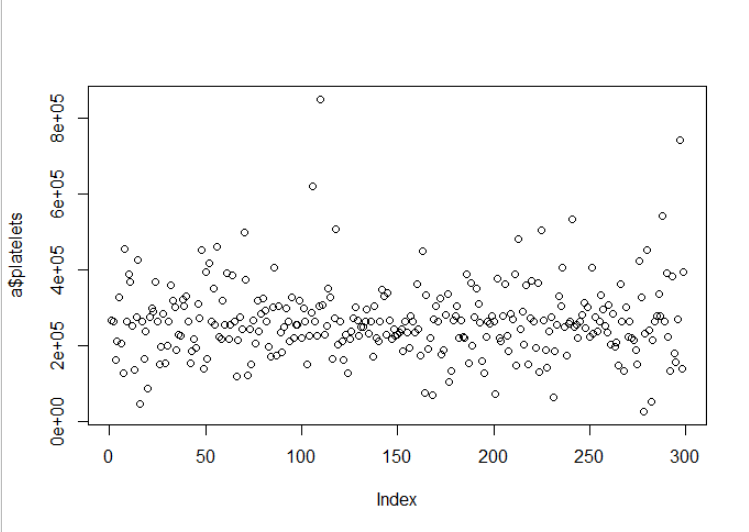
plot(a$ejection\_fraction)



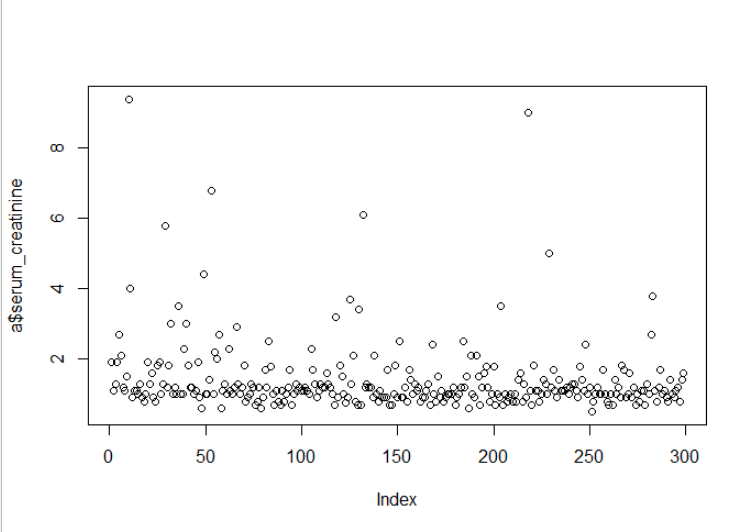
plot(a$high\_blood\_pressure)



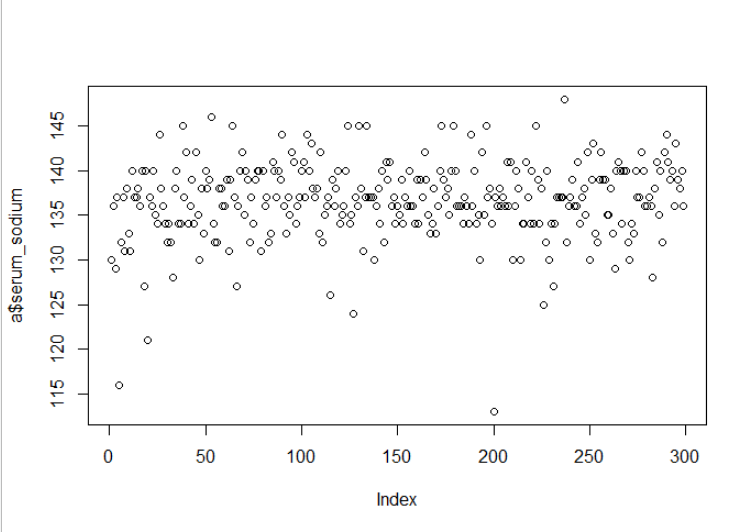
plot(a$platelets)



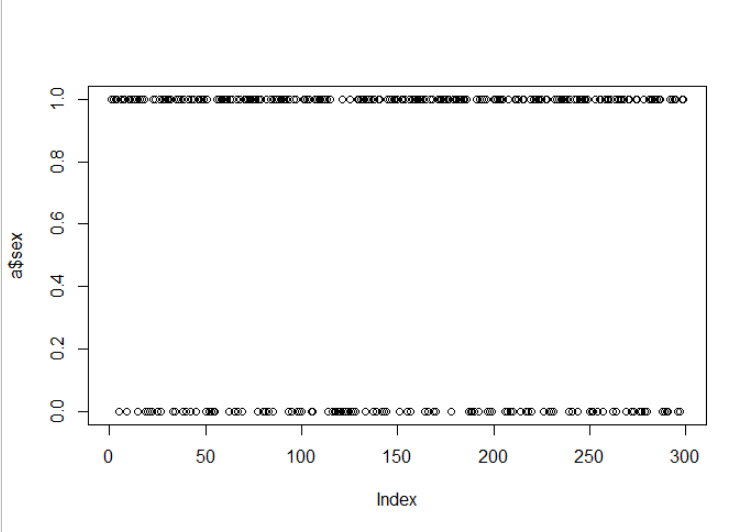
plot(a$serum\_creatinine)



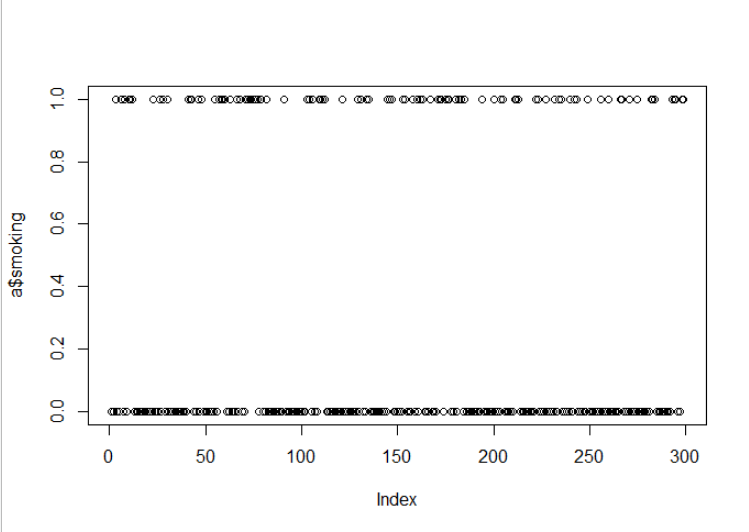
plot(a$serum\_sodium)



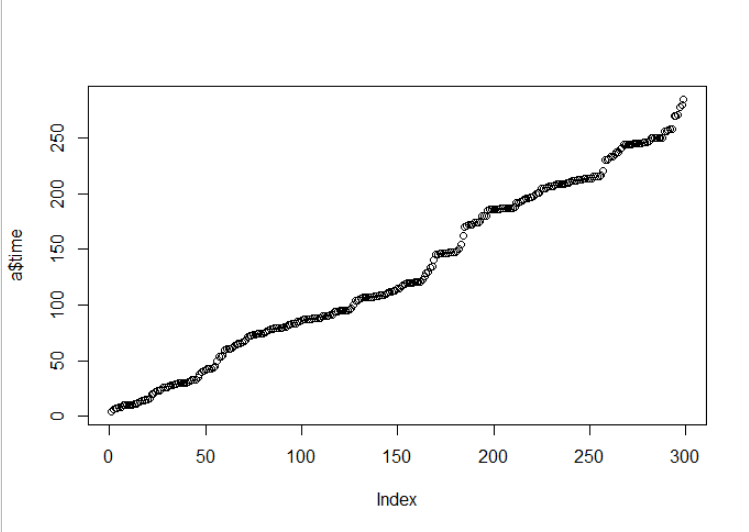
plot(a$sex)



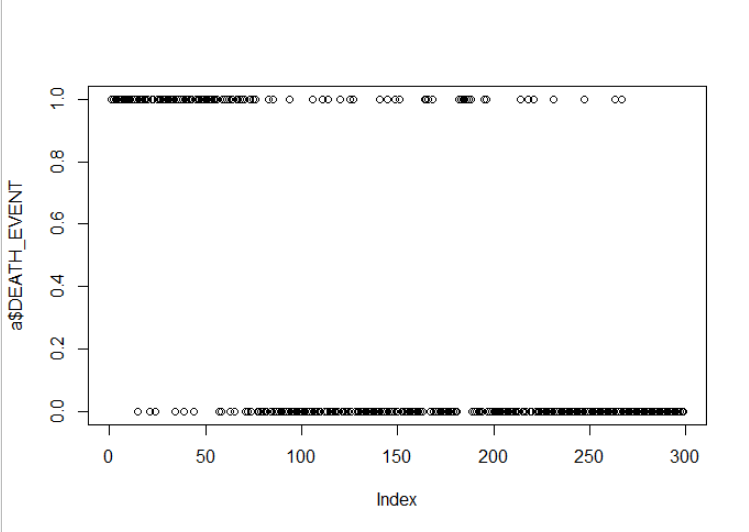
plot(a$smoking)



plot(a$time)



plot(a$DEATH\_EVENT)

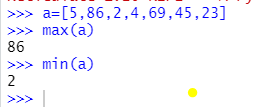


Write a Python program to find the minimum and maximum value in a given 1Darray

a=[5,86,2,4,69,45,23]

max(a)

min(a)



Write a NumPy program to get the minimum and maximum value of a given arraalong the second axis. Note: use arrange and shape functions

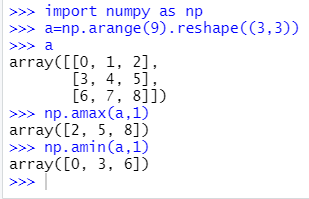
import numpy as np

a=np.arange(9).reshape((3,3))

a

np.amax(a,1)

np.amin(a,1)



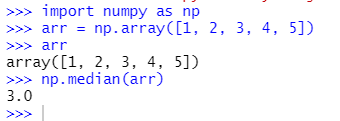
Write a NumPy program to compute the median of a given 1D-array

import numpy as np

arr = np.array([1, 2, 3, 4, 5])

arr

np.median(arr)



Write a NumPy program to compute the mean, standard deviation, and variance of a

given array.

import numpy as np

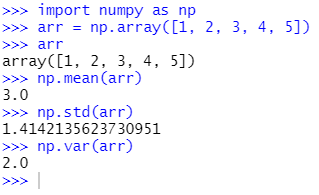
arr = np.array([1, 2, 3, 4, 5])

arr

np.mean(arr)

np.std(arr)

np.var(arr)



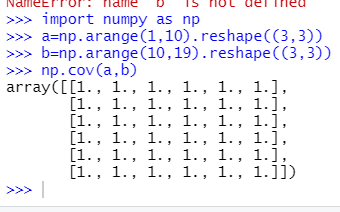
Write a NumPy program to compute the covariance matrix of two given arrays

import numpy as np

a=np.arange(1,10).reshape((3,3))

b=np.arange(10,19).reshape((3,3))

np.cov(a,b)



Write a Python program to count number of occurrences of each value in a given

Array

import numpy as np

a=np.array([2,4,4,5,8,6,6,7,7,7,9,6,4,2,3])

np.bincount(a)

