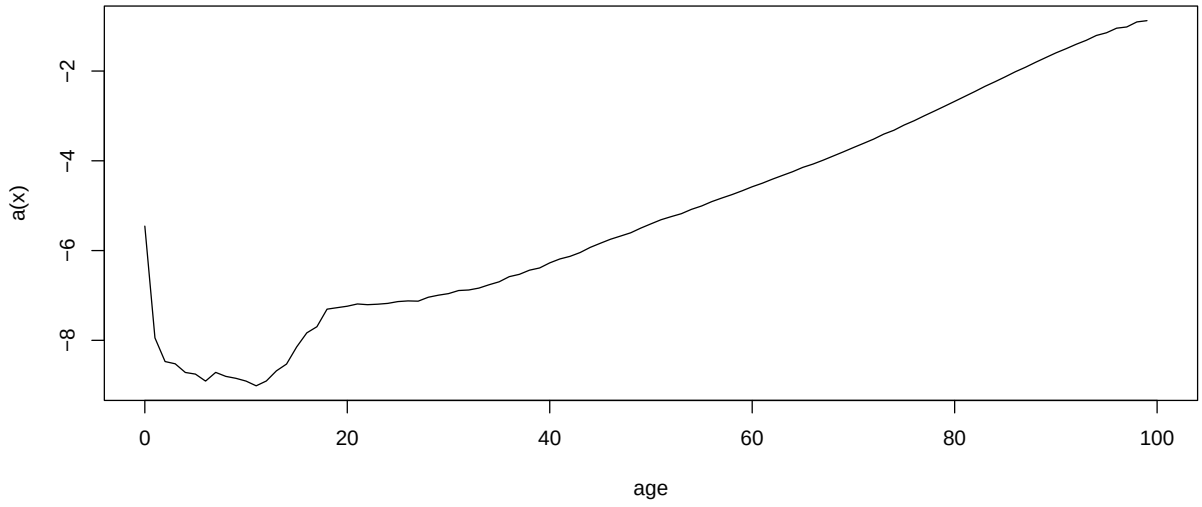
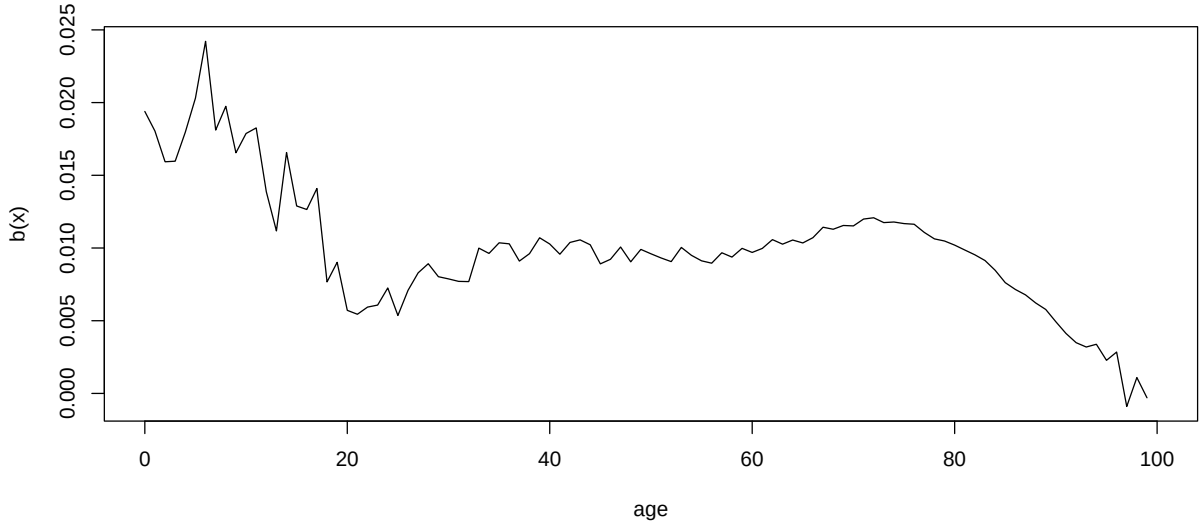
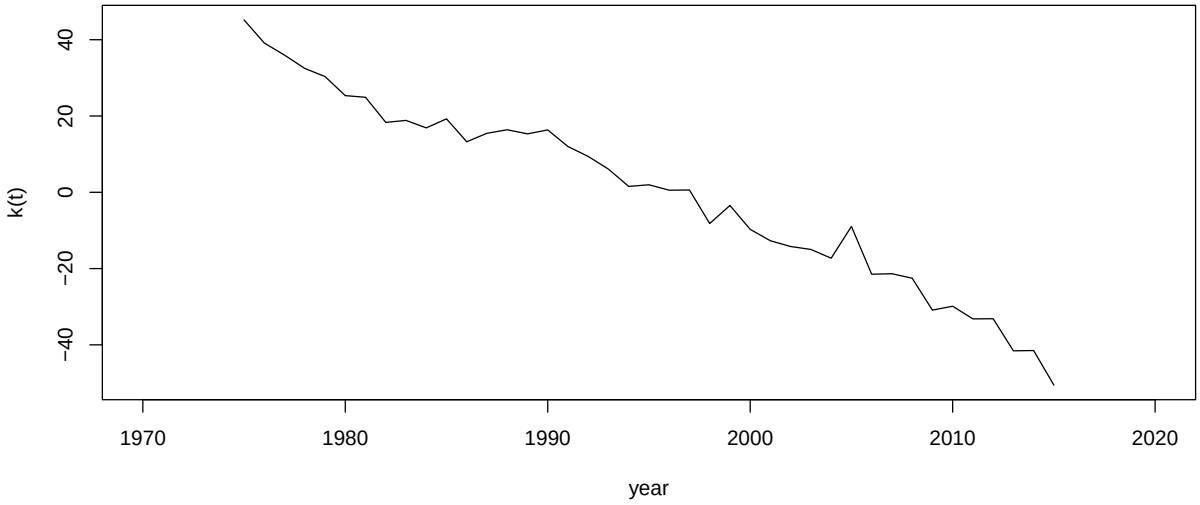
ETC3430 Assignment 2

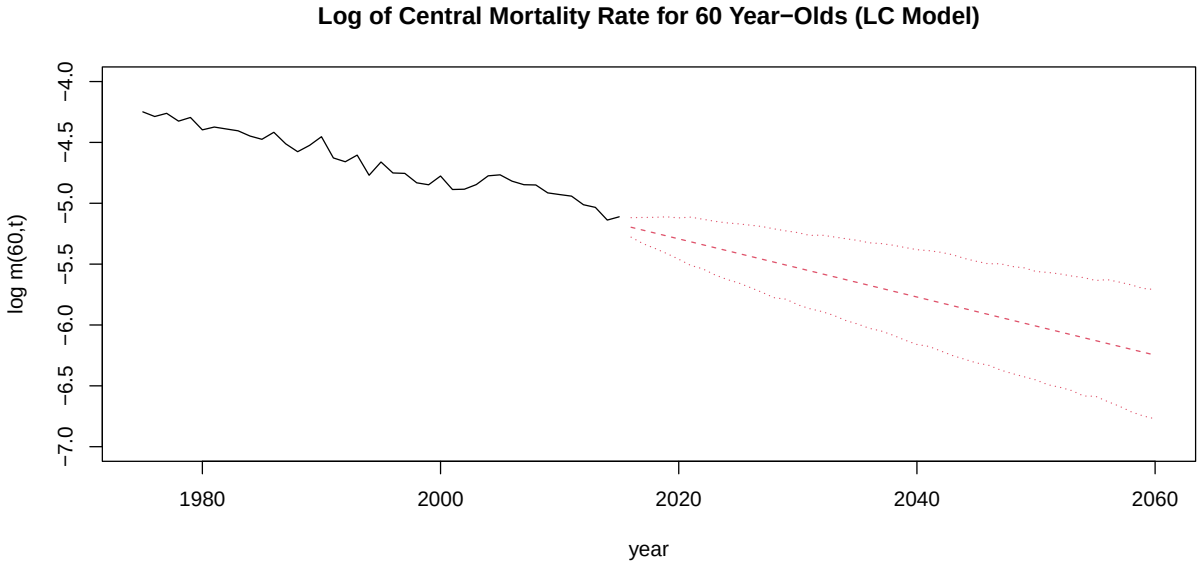
Chelaka Paranahewa

Question 1

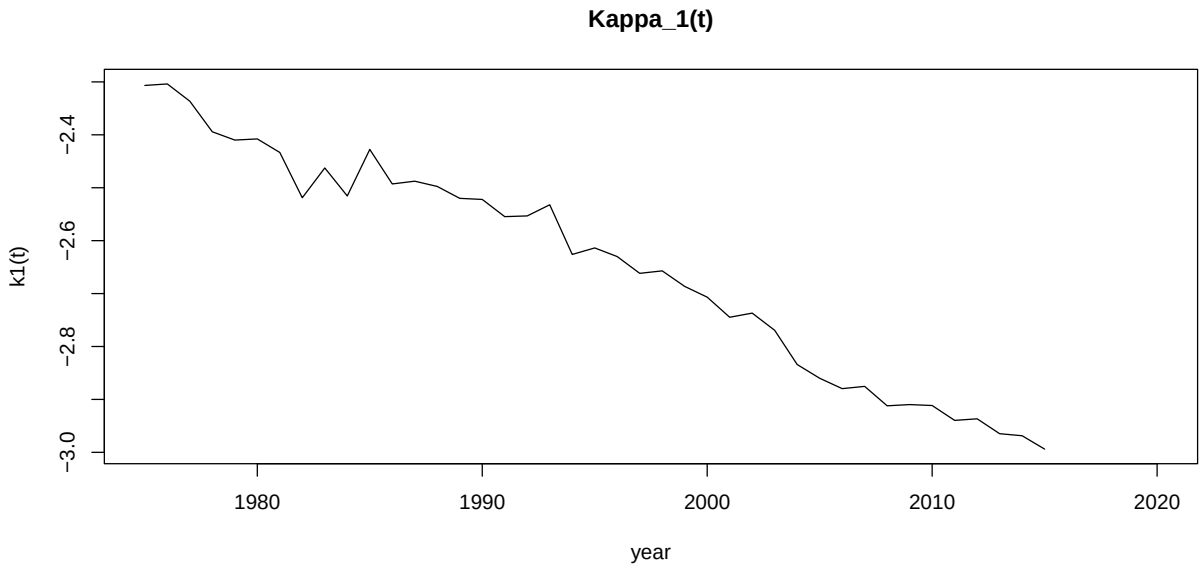


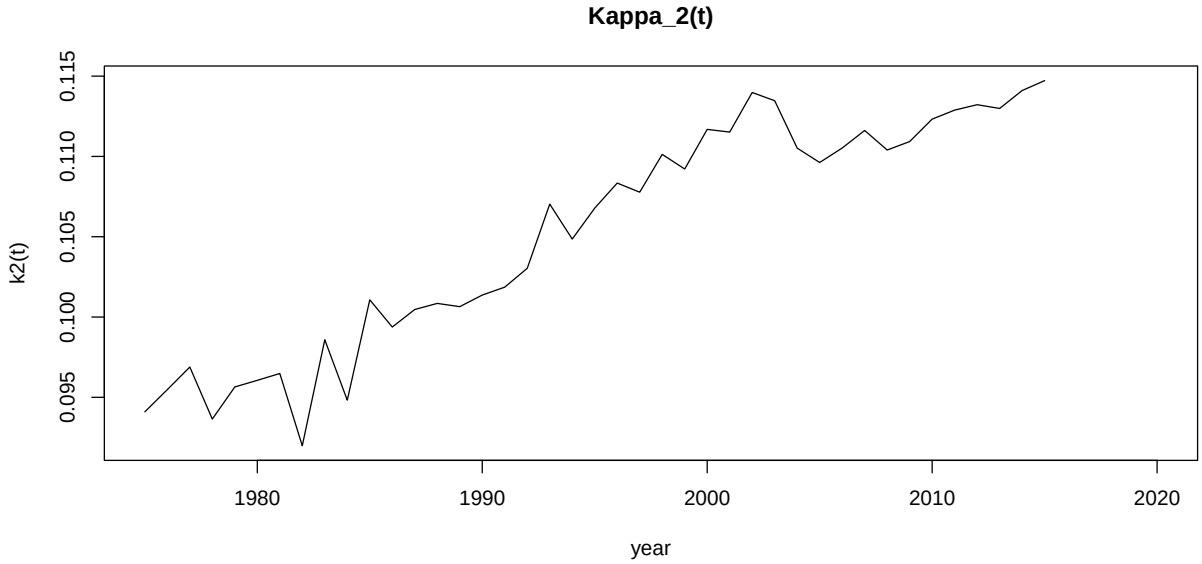


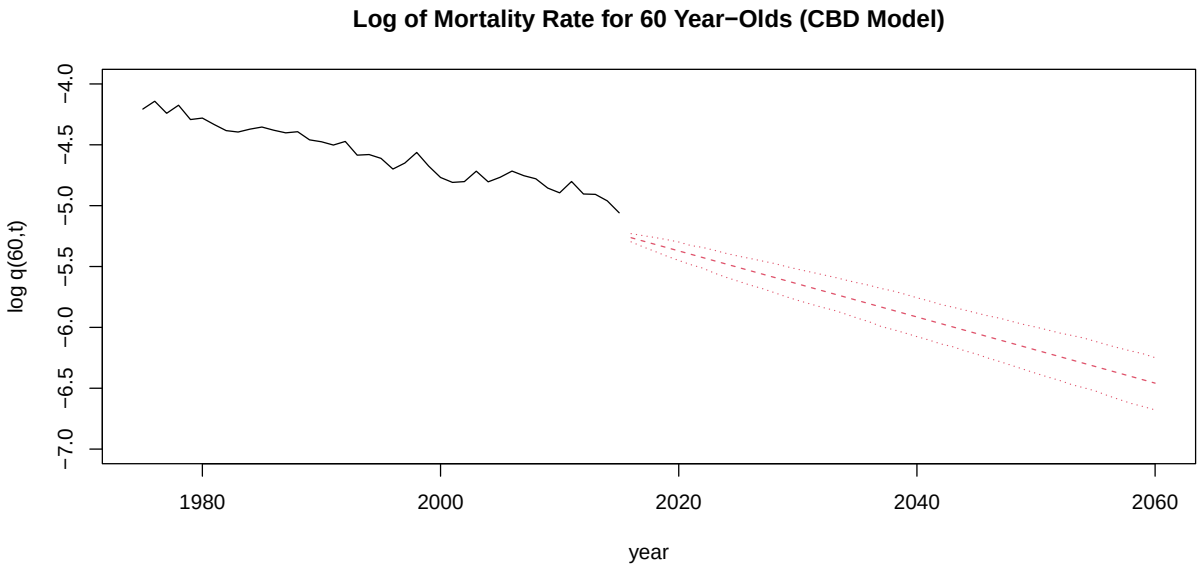




According to the LC Model, the Cohort Life Expectancy of a 60 year old in 2016 will live to 89


Kappa_1(t)
k1(t)
−2.4
−2.6
−2.8
−3.0
1980
1990
2000
2010
2020
year


Kappa_2(t)
k2(t)
0.095
0.100
0.105
0.110
0.115
1980
1990
2000
2010
2020
year



According to the CBD Model, the Cohort Life Expectancy of a 60 year old in 2016 living while live to 86

Comparing LC and CBD Model

The LC model and CBD model appear to reveal the same log(mortality rate) although the CBD model overestimates the rate when it is closer to 2015.

For the futures, the LC model has a linear trend downwards with drop in log(mortality rate) by approximately 1. The CBD model's predictions on the other hand, are lower than the LC model by a small amount (0.2).

The prediction intervals for the two model differ by considerabl amount. The CBD model's prediction interval remains relatively close to the point forecast, while the LC model's prediction interval grows to a sizeable amount compared to the CBD model.

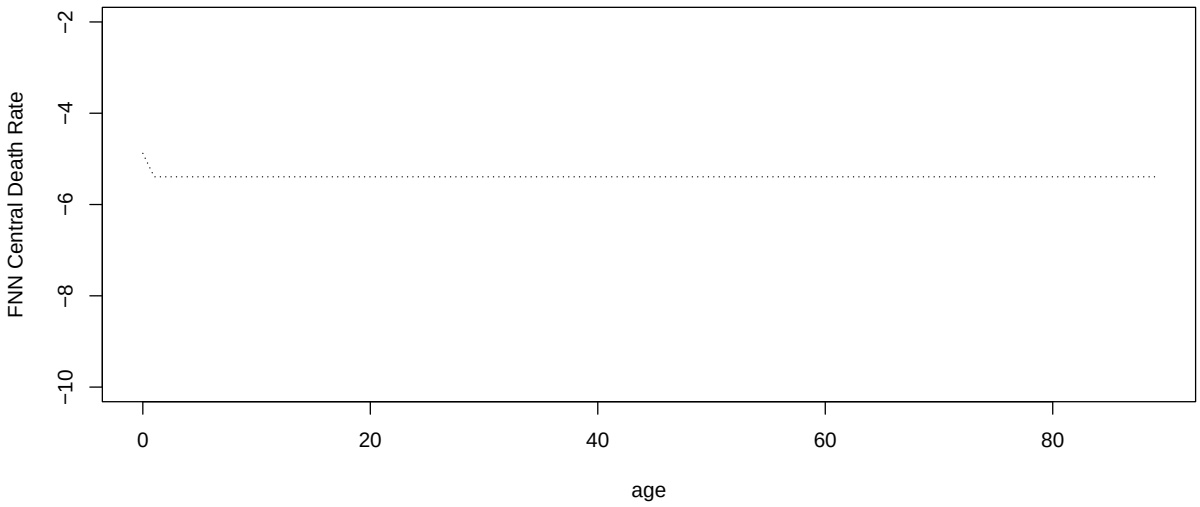
Question 2

Best Epoch: 2×10^5

Training Years 1980, 1990, 2000

Validation Year 2010

Testing Year 2015


FNN Central Death Rate
−2
−4
−6
−8
−10
0
20
40
60
80
age