> # Stratas 1877-1899, 1900-1914, 1920-1939, 1946 - 1974, 1975- 1999, and 2000-2019

>

> library( readr )

> population\_data <- read.csv("./cricktest.csv", header = TRUE )

> #View(population\_data)

>

> #Q2(a)

>

> n=60

> data\_i <- population\_data$Player

> N = length(data\_i)

> N\_1877\_1899 = 0

> N\_1900\_1914 = 0

> N\_1920\_1939 = 0

> N\_1946\_1974 = 0

> N\_1975\_1999 = 0

> N\_2000\_2019 = 0

> for (i in 1:N){

+ year <- population\_data$Start.Year[i]

+ if( year>=1877 & year <= 1899){

+ N\_1877\_1899 = N\_1877\_1899+1

+ }else if( year> .... [TRUNCATED]

> population\_N\_1877\_1899 <- c(-1,N\_1877\_1899)

> x <- 1

> population\_N\_1900\_1914 <- c(-1,N\_1900\_1914)

> y <- 1

> population\_N\_1920\_1939 <- c(-1,N\_1920\_1939)

> z <- 1

> population\_N\_1946\_1974 <- c(-1,N\_1946\_1974)

> a <- 1

> population\_N\_1975\_1999 <- c(-1,N\_1975\_1999)

> b <- 1

> population\_N\_2000\_2019 <- c(-1,N\_2000\_2019)

> c <- 1

> for (i in 1:N){

+ year <- population\_data$Start.Year[i]

+ if( year>=1877 & year <= 1899){

+ population\_N\_1877\_1899[x] = data\_i[i]

+ x = .... [TRUNCATED]

> n\_1877\_1899 = round(N\_1877\_1899/N\*n)

> n\_1900\_1914 = round(N\_1900\_1914/N\*n) +1 #adjust for rounding loss

> n\_1920\_1939 = round(N\_1920\_1939/N\*n)

> n\_1946\_1974 = round(N\_1946\_1974/N\*n)

> n\_1975\_1999 = round(N\_1975\_1999/N\*n)

> n\_2000\_2019 = round(N\_2000\_2019/N\*n)

> sample\_1877\_1899 = sample(population\_N\_1877\_1899, n\_1877\_1899, replace=FALSE)

> print(sample\_1877\_1899)

[1] "F Hearne (ENG/SA)" "C Heseltine (ENG)" "W Gunn (ENG)" "TW Hayward (ENG)" "SP Jones (AUS)"

> sample\_1900\_1914 = sample(population\_N\_1900\_1914, n\_1900\_1914, replace=FALSE)

> print(sample\_1900\_1914)

[1] "GR Hazlitt (AUS)" "SH Emery (AUS)" "NA Knox (ENG)"

> sample\_1920\_1939 = sample(population\_N\_1920\_1939, n\_1920\_1939, replace=FALSE)

> print(sample\_1920\_1939)

[1] "EA Martindale (WI)" "N Betancourt (WI)" "Nawab of Pataudi snr (ENG/INDIA)"

[4] "HLE Promnitz (SA)" "APF Chapman (ENG)" "LEG Ames (ENG)"

[7] "WM Wallace (NZ)"

> sample\_1946\_1974 = sample(population\_N\_1946\_1974, n\_1946\_1974, replace=FALSE)

> print(sample\_1946\_1974)

[1] "FG Mann (ENG)" "Sarfraz Nawaz (PAK)" "R Berry (ENG)" "GD Watson (AUS)"

[5] "W Ferguson (WI)" "KS Indrajitsinhji (INDIA)" "JD Lindsay (SA)" "CV Gadkari (INDIA)"

[9] "RS Modi (INDIA)" "G Noblet (AUS)" "BL Irvine (SA)" "RA Legall (WI)"

[13] "JA Jameson (ENG)" "MLC Foster (WI)"

> sample\_1975\_1999 = sample(population\_N\_1975\_1999, n\_1975\_1999, replace=FALSE)

> print(sample\_1975\_1999)

[1] "ME Waugh (AUS)" "SCG MacGill (AUS)" "SFAF Bacchus (WI)" "MN Lathwell (ENG)"

[5] "DK Morrison (NZ)" "DA Reeve (ENG)" "VP Terry (ENG)" "GE Bradburn (NZ)"

[9] "CDUS Weerasinghe (SL)" "RW Tolchard (ENG)" "GP Howarth (NZ)" "BC Lara (ICC/WI)"

[13] "BC Rose (ENG)" "BM Laird (AUS)" "DJ Nash (NZ)"

> sample\_2000\_2019 = sample(population\_N\_2000\_2019, n\_2000\_2019, replace=FALSE)

> print(sample\_2000\_2019)

[1] "DT Tiripano (ZIM)" "SO Dowrich (WI)" "Nasir Jamshed (PAK)" "MM Ali (ENG)"

[5] "MKGCP Lakshitha (SL)" "MJ North (AUS)" "DM Bess (ENG)" "MJ Santner (NZ)"

[9] "Kabir Ali (ENG)" "JA Rudolph (SA)" "N Wagner (NZ)" "AB Fudadin (WI)"

[13] "UWMBCA Welegedara (SL)" "NR Ferreira (ZIM)" "TP Kamungozi (ZIM)" "RL Sanghvi (INDIA)"

> #Q2(d) Systematic Sampling

> ni = 10

> k <- ceiling(N\_1877\_1899/ni)

> sample\_1877\_1899 = c(-1,ni)

> start <- sample(k,1,replace=FALSE)

> for (i in 1:ni){

+ sample\_1877\_1899[i] = population\_N\_1877\_1899[start]

+ start = (start+k)

+ if(start>N\_1877\_1899){

+ start = start - N\_18 .... [TRUNCATED]

> print(sample\_1877\_1899)

[1] "H Jupp (ENG)" "AN Hornby (ENG)" "E Evans (AUS)" "S Morris (AUS)" "GHS Trott (AUS)"

[6] "JE Barrett (AUS)" "GG Hearne (ENG)" "C Hill (AUS)" "AR Richards (SA)" "F Kuys (SA)"

> k <- ceiling(N\_1900\_1914/ni)

> sample\_1900\_1914 = c(-1,ni)

> start <- sample(k,1,replace=FALSE)

> for (i in 1:ni){

+ sample\_1900\_1914[i] = population\_N\_1900\_1914[start]

+ start = (start+k)

+ if(start>N\_1900\_1914){

+ start = start - N\_19 .... [TRUNCATED]

> print(sample\_1900\_1914)

[1] "RA Duff (AUS)" "JJ Kotze (SA)" "W Brearley (ENG)" "JC Hartley (ENG)" "JDA O'Connor (AUS)"

[6] "JMM Commaille (SA)" "JWHT Douglas (ENG)" "TJ Matthews (AUS)" "C Newberry (SA)" "JR Gunn (ENG)"

> k <- ceiling(N\_1920\_1939/ni)

> sample\_1920\_1939 = c(-1,ni)

> start <- sample(k,1,replace=FALSE)

> for (i in 1:ni){

+ sample\_1920\_1939[i] = population\_N\_1920\_1939[start]

+ start = (start+k)

+ if(start>N\_1920\_1939){

+ start = start - N\_19 .... [TRUNCATED]

> print(sample\_1920\_1939)

[1] "NE Haig (ENG)" "AP Freeman (ENG)" "EL a'Beckett (AUS)" "EA van der Merwe (SA)"

[5] "IM Barrow (WI)" "Naoomal Jaoomal (INDIA)" "CA Merry (WI)" "JM Neblett (WI)"

[9] "WA Hadlee (NZ)" "CAG Russell (ENG)"

> k <- ceiling(N\_1946\_1974/ni)

> sample\_1946\_1974 = c(-1,ni)

> start <- sample(k,1,replace=FALSE)

> for (i in 1:ni){

+ sample\_1946\_1974[i] = population\_N\_1946\_1974[start]

+ start = (start+k)

+ if(start>N\_1946\_1974){

+ start = start - N\_19 .... [TRUNCATED]

> print(sample\_1946\_1974)

[1] "KD Meuleman (AUS)" "A Coxon (ENG)" "PNF Mansell (SA)" "AHP Scott (WI)" "RB Simpson (AUS)"

[6] "SM Nurse (WI)" "LJ Coldwell (ENG)" "MJ Macaulay (SA)" "JH Hampshire (ENG)" "JR Watkins (AUS)"

> k <- ceiling(N\_1975\_1999/ni)

> sample\_1975\_1999 = c(-1,ni)

> start <- sample(k,1,replace=FALSE)

> for (i in 1:ni){

+ sample\_1975\_1999[i] = population\_N\_1975\_1999[start]

+ start = (start+k)

+ if(start>N\_1975\_1999){

+ start = start - N\_19 .... [TRUNCATED]

> print(sample\_1975\_1999)

[1] "WW Daniel (WI)" "KJ Wright (AUS)" "ALF de Mel (SL)" "KR Rutherford (NZ)"

[5] "RH Vance (NZ)" "MR Ramprakash (ENG)" "GJ Whittall (ZIM)" "CM Spearman (NZ)"

[9] "RP Arnold (SL)" "HH Dippenaar (SA)"

> k <- ceiling(N\_2000\_2019/ni)

> sample\_2000\_2019 = c(-1,ni)

> start <- sample(k,1,replace=FALSE)

> for (i in 1:ni){

+ sample\_2000\_2019[i] = population\_N\_2000\_2019[start]

+ start = (start+k)

+ if(start>N\_2000\_2019){

+ start = start - N\_2 .... [TRUNCATED]

> print(sample\_2000\_2019)

[1] "MI Black (WI)" "Naved Latif (PAK)" "GO Jones (ENG)"

[4] "Yasir Arafat (PAK)" "G Onions (ENG)" "NLTC Perera (SL)"

[7] "Mohammed Shami (INDIA)" "Mustafizur Rahman (BDESH)" "Kuldeep Yadav (INDIA)"

[10] "JD Campbell (WI)"

>