Quiz7-6

```r
# Set the seed for reproducibility
set.seed(1)

# Number of observations
n <- 100

# Independent variables
race <- sample(c("White", "Black", "Asian", "Hispanic"), size = n, replace = TRUE)
gender <- sample(c("Male", "Female"), size = n, replace = TRUE)


vote_preference <- vector("character", length = n)

for (i in 1:n) {
  if (race[i] %in% c("White", "Asian")) {

    vote_preference[i] <- ifelse(runif(1) < 0.7, "Candidate_A", "Candidate_B")
  } else {
    # Bias towards Candidate_B
    vote_preference[i] <- ifelse(runif(1) < 0.7, "Candidate_B", "Candidate_A")
  }

  # Gender influence
  if (gender[i] == "Female") {
    if (vote_preference[i] == "Candidate_A" && runif(1) < 0.2) {
      vote_preference[i] <- "Candidate_B"
    }
  } else {
    if (vote_preference[i] == "Candidate_B" && runif(1) < 0.2) {
      vote_preference[i] <- "Candidate_A"
    }
  }
```

```
}

data <- data.frame(race, gender, vote_preference)

head(data)
```

```
      race gender vote_preference
1    White Female     Candidate_A
2 Hispanic Female     Candidate_B
3    Asian Female     Candidate_B
4    White   Male     Candidate_A
5    Black   Male     Candidate_A
6    White   Male     Candidate_A
```