```
> set.seed(1, sample.kind = 'Rounding')
Warning message:
In set.seed(1, sample.kind = "Rounding") :
  non-uniform 'Rounding' sampler used
> Sigma <- matrix(c(1.0, 0.75, 0.75, 0.75, 1.0, 0.95, 0.75, 0.95, 1.0), 3, 3)
> dat <- MASS::mvrnorm(n = 100, c(0, 0, 0), Sigma) %>%
+ data.frame() %>% setNames(c("y", "x_1", "x_2"))
> dim(dat)
[1] 100   3
> head(dat)
           y         x_1         x_2
1  0.2619365  0.67239945  0.80186368
2 -0.1423833 -0.45307181  0.08099682
3  0.3102428  0.75033764  1.25206096
4 -1.3344175 -1.51906614 -1.62370838
5 -0.5982193  0.18453788 -0.53811704
6  1.5540447  0.01574458  0.80557452
> cor(dat)
           y       x_1       x_2
y   1.000000 0.7266480 0.7136810
x_1 0.726648 1.0000000 0.9346253
x_2 0.713681 0.9346253 1.0000000
>
>
> set.seed(1, sample.kind = 'Rounding')
Warning message:
In set.seed(1, sample.kind = "Rounding") :
  non-uniform 'Rounding' sampler used
> test_index <- createDataPartition(dat$y, times = 1, p = 0.5, list = FALSE)
> train_set <- dat %>% slice(-test_index)
> test_set <- dat %>% slice(test_index)
> fit <- lm(y ~ x_1, data = train_set)
> y_hat <- predict(fit, newdata = test_set)
> sqrt(mean((y_hat-test_set$y)^2))
[1] 0.6592608
>
> fit <- lm(y ~ x_2, data = train_set)
> y_hat <- predict(fit, newdata = test_set)
> sqrt(mean((y_hat-test_set$y)^2))
[1] 0.640081
>
> fit <- lm(y ~ x_1 + x_2, data = train_set)
> y_hat <- predict(fit, newdata = test_set)
> sqrt(mean((y_hat-test_set$y)^2))
[1] 0.6597865
>
```