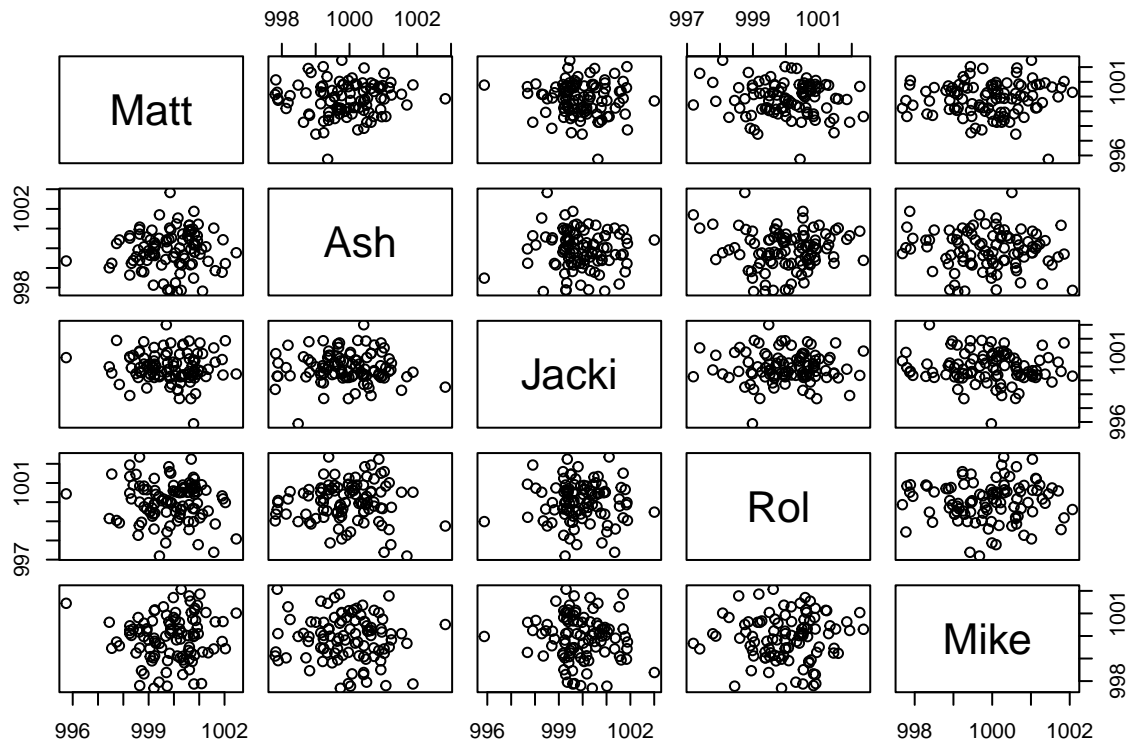


## Quiz5Q2

```
library(mvtnorm)
sigma <- matrix(c(1,0,0,0,0,
                  0,1,0,0,0,
                  0,0,1,0,0,
                  0,0,0,1,0,
                  0,0,0,0,1), ncol=5)
x <- rmvnorm(n=100, mean= rep(1000, 5), sigma=sigma)
colnames(x) <- c('Matt', 'Ash', 'Jacki', 'Rol', 'Mike')
# Test 1: pairs plot
pairs(x)
```



```
# Test 2: correlation
cor(x)
```

```
##           Matt      Ash      Jacki      Rol      Mike
## Matt  1.00000000  0.062348499 -0.06466304 -0.096911034  0.04850879
## Ash   0.06234850  1.000000000 -0.02426299  0.002176224 -0.08010244
## Jacki -0.06466304 -0.024262990  1.000000000 -0.014330141 -0.08999475
## Rol   -0.09691103  0.002176224 -0.01433014  1.000000000  0.03220248
## Mike   0.04850879 -0.080102437 -0.08999475  0.032202476  1.00000000
```

```
# Test 3: Anova
x <- as.data.frame(x)
aov(Matt ~ Ash, data = x)
```

```
## Call:
## aov(formula = Matt ~ Ash, data = x)
##
## Terms:
##                Ash Residuals
## Sum of Squares    0.49018 125.60714
## Deg. of Freedom      1      98
##
## Residual standard error: 1.132124
## Estimated effects may be unbalanced
```

```
# Test 4:
chisq.test(x$Matt, x$Ash)
```

```
## Warning in chisq.test(x$Matt, x$Ash): Chi-squared approximation may be
## incorrect
```

```
##
## Pearson's Chi-squared test
##
## data: x$Matt and x$Ash
## X-squared = 9900, df = 9801, p-value = 0.239
```

```
# Test 5:
lm(Matt ~ Ash, data = x)
```

```
##
## Call:
## lm(formula = Matt ~ Ash, data = x)
##
## Coefficients:
## (Intercept)      Ash
##  926.87895    0.07297
```