EJERCICIO 3: Usar el conjunto de datos Boston y las librerías randomForest y gbm de R.

```
library(randomForest)
```

```
## Warning: package 'randomForest' was built under R version 3.2.5
```

```
## randomForest 4.6-12
```

```
## Type rfNews() to see new features/changes/bug fixes.
```

```
library(MASS)
set.seed(1)
indices_train = sample(1:nrow(Boston),8*nrow(Boston)%/%10)
Boston_train = Boston[indices_train,]
Boston_test = Boston[-indices_train,]
```

```
 boston_bagging = randomForest(medv~.,data=Boston, subset=indices_train,mtry=13,ntree=30,importance =TRU
 predict.bag = predict (boston_bagging , Boston_test)
 mean((predict.bag -Boston_test$medv)^2)
```

```
## [1] 8.248869
```

```
boston_rf= randomForest(medv~.,data=Boston , subset=indices_train , mtry=13/3, ntree=30, importance =TRU
predict.rf = predict(boston_rf , Boston_test)
mean((predict.rf-Boston_test$medv)^2)
```

```
## [1] 9.565819
```

```
library(gbm)
```

```
## Warning: package 'gbm' was built under R version 3.2.5
```

```
## Loading required package: survival
```

```
## Loading required package: lattice
```

```
## Loading required package: splines
```

```
## Loading required package: parallel
```

```
## Loaded gbm 2.1.1
```

```
boston_boosting = gbm(medv~.,data=Boston_train, distribution = "gaussian", n.trees = 4000, interaction.d
predict.boost = predict(boston_boosting, Boston_test, n.trees = 4000)
mean((predict.boost-Boston_test$medv)^2)
```

```
## [1] 8.311803
```