1. obtain the elements of the union between two character
vectors.
vec1 = c(rownames(mtcars[1:15,]))
vec2 = c(rownames(mtcars[10:32,]))
vec12<-union(vec1,vec2)
the obove helps to return all the element of vec1 and vec12.

```
> vec12
 [1] "Mazda RX4"          "Mazda RX4 Wag"      "Datsun 710"         "Hornet 4 Drive"
 [5] "Hornet Sportabout"  "Valiant"            "Duster 360"         "Merc 240D"
 [9] "Merc 230"           "Merc 280"           "Merc 280C"          "Merc 450SE"
[13] "Merc 450SL"         "Merc 450SLC"        "Cadillac Fleetwood" "Lincoln
Continental"
[17] "Chrysler Imperial"  "Fiat 128"           "Honda Civic"        "Toyota Corolla"
[21] "Toyota Corona"      "Dodge Challenger"   "AMC Javelin"        "Camaro Z28"
[25] "Pontiac Firebird"   "Fiat X1-9"          "Porsche 914-2"      "Lotus Europa"
[29] "Ford Pantera L"     "Ferrari Dino"       "Maserati Bora"      "Volvo 142E"

>
```

2. Get those elements that are common to both vectors
vec1 = c(rownames(mtcars[1:15,]))
vec2 = c(rownames(mtcars[10:32,]))

```
> commonvec12<-vec1%in%vec2
> vec1[commonvec12]
[1] "Merc 280"           "Merc 280C"          "Merc 450SE"         "Merc 450SL"
[5] "Merc 450SLC"        "Cadillac Fleetwood"
```

3. Get the difference of the elements between two
character vectors.
vec1 = c(rownames(mtcars[1:15,]))
vec2 = c(rownames(mtcars[10:32,]))

setdiff(vec1, vec2) # this gives elements of vec1 which are not present in vec2
```
> setdiff(vec1,vec2)
[1] "Mazda RX4"          "Mazda RX4 Wag"      "Datsun 710"         "Hornet 4 Drive"
[5] "Hornet Sportabout"  "Valiant"            "Duster 360"         "Merc 240D"
[9] "Merc 230"
```

Setdiff(vec2, vec1) # this gives element of vec2 which are not present in vec1
```
> setdiff(vec2,vec1)
 [1] "Lincoln Continental" "Chrysler Imperial"  "Fiat 128"           "Honda
Civic"
 [5] "Toyota Corolla"      "Toyota Corona"      "Dodge Challenger"   "AMC
Javelin"
 [9] "Camaro Z28"          "Pontiac Firebird"   "Fiat X1-9"          "Porsche
914-2"
[13] "Lotus Europa"        "Ford Pantera L"     "Ferrari Dino"       "Maserati
Bora"
[17] "Volvo 142E"
```

4. Test the equality of two character vectors
vec1 = c(rownames(mtcars[1:15,]))
vec2 = c(rownames(mtcars[11:25,]))

```
> is.element(vec1,vec2)
 [1] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE  TRUE   TRUE   TRUE
TRUE   TRUE   TRUE
> identical(vec1,vec2)
[1] FALSE
> setequal(vec1,vec2)
[1] FALSE
> vec1 %in% vec2
 [1] FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE FALSE  TRUE   TRUE   TRUE
TRUE   TRUE   TRUE
```