## Assignment two

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## Function one

This function creates a special "matrix" object that can cache its inverse.

```
makeCacheMatrix <- function(x = matrix()) {
inv <- NULL
  set <- function(y) {
    x <<- y
    inv <<- NULL
  }
  get <- function() x
  setInverse <- function(inverse) inv <<- inverse
  getInverse <- function() inv # Value of the matrix inverse
  list(set = set, # list of the functions
    get = get,
    setInverse = setInverse,
    getInverse = getInverse)
}</pre>
```

## **Function two**

This function computes the inverse of the special "matrix" created by the makeCacheMatrix function above. If the inverse has already been calculated (and the matrix has not changed), the following function retrieves the inverse from the cache.

```
cacheSolve <- function(x, ...) {
         ## Return a matrix that is the inverse of 'x'
inv <- x$getInverse()
    if (!is.null(inv)) {
        message("getting cached data")
        return(inv)
    }
    mat <- x$get()
    inv <- solve(mat, ...)
    x$setInverse(inv)
    inv
}</pre>
```