

// PERMISSIONS API

```
func createUser(user)
```

```
func getUserPermissions(user) -> Array<Permission>
```

```
func getUserRoles(user) -> Array<Role>
```

```
//direct action permissions
```

```
func directActionPermissionToUser(user, action, permissions)
```

```
func hasUserActionPermission(user, action, permissions) -> boolean
```

```
//direct access to a resource
```

```
func directUserResourceAccess(user, resource, permissions)
```

```
func hasUserResourceAccess(user, resource, permissions) -> boolean
```

```
//role action permissions
```

```
func registerRole(role, permissions) -> Role
```

```
func assignRoleToUser(user, role)
```

```
//role resource access
```

```
func roleUserResourceAccess(user, role, resource, permissions)
```

```
func hasUserRoleResourceAccess(user) -> boolean
```

```
class User() {  
    var name: String  
    var role: Array<Role>    // user can have more than 1 role  
    var permissions: Array<Permission>  
}
```

```
class Permission() {  
    var action: Boolean?    // if there is action  
    var read: Boolean?      // if there is resource access  
    var write: Boolean?  
    func setPermission()  
    func getPermissions()  
}
```

```

class Action() {
    var name: String
    func someAction()
}

class Resource() {
    var name: String
    var path: String
}

class Role() {
    var role: String
    var permissions: Array<Permission>
    func setPermissions()
}

```

===== **DataBase** =====

```

Table Users {
    UserID,
    FirstName,
    LastName,
    UserPermissions,
    UserRoles
}

```

```

Table Roles {
    Role,
    RolePermissions
}

```

```

Table Files {
    FileName,
    FilePath
}

```