This is the list of permission defined in the script.

*******************Permission List*******************
PERMISSION_ID   PERMISSION_DESCRIPTION

control_oven   Full Control of Oven
control_window   Full Control of Window
user_admin   Create Update Delete Users
control_thermostat   Full Control of Thermostat
control_door   Full Control of Door
control_light   Full Control of light

This is the list of role defined in the script.

It also show all the entitlements (permission or role) added to this role.

*******************Role List************************
ROLE_ID: admin_role
ROLE_DESCRIPTION: Has all permissions of an administrator
ENTITLEMENTS ASSOCIATED:
        Control Oven
        Control Window
        User Administrator
        Control Thermostat
        Control Door
        Control light

ROLE_ID: adult_resident
ROLE_DESCRIPTION: Has all permissions of an adult resident
ENTITLEMENTS ASSOCIATED:
        Control Oven
        Control Window
        Control Thermostat
        Control Door
        Control light

ROLE_ID: child_resident
ROLE_DESCRIPTION: Has all permissions of a child resident
ENTITLEMENTS ASSOCIATED:
        Control Window
        Control Door

```
*******************User List************************
ID:             debra
NAME:           Debra Smart
CREDENTIAL TYPE:   password
CREDENTIAL VALUE:
vSsar3708Jvp9Szi2NWZZO2Bqp1qRCFpbcTZPdBhnWgs5WtNZKnvCXdhztmeD2cmW192CF5bDuf
KRpayrW/isg==
RESOURCE ROLE:
ENTITLEMENTS ASSOCIATED:
        Control Oven
        Control Window
        User Administrator
        Control Thermostat
        Control Door
        Control light
--------------------------------------------
ID:             jimmy
NAME:           Jimmy
CREDENTIAL TYPE:   voice_print
CREDENTIAL VALUE:
Hmql1a76sF40eSUTG2hkniC2VNgk99GUlQmhHgSo+4MyHE94hvvZA9dvCmszMww0guNBU5Rui
DWR9/KUq8eFKw==
RESOURCE ROLE:
        house1_child_resident
ENTITLEMENTS ASSOCIATED:
        Control Window
        Control Door
--------------------------------------------
ID:              sam
NAME:           Sam
CREDENTIAL TYPE:   voice_print
CREDENTIAL VALUE:
NUus1OFuDq3p1ZjNRQe9yNFQVCKL3LiHxNjXN6V2uXX/XIBXPNBQ53T8EUo1hyox1ly2oauqidrx9
BnMt97Bnw==
RESOURCE ROLE:
        house1_adult_resident
ENTITLEMENTS ASSOCIATED:
```

Control Oven
Control Window
Control Thermostat
Control Door
Control light

****

debra logged in successfully

The temperature of the oven is now 150   *(debra is the admin, no exception showed)*

****

(jimmy is the child, can not use define command, can use limited set appliance command)

jimmy logged in successfully

Exception #20 line:

AccessDeniedException: need user_admin role to access define house

Exception #21 line:

AccessDeniedException: need user_admin role to access define room

Exception #22 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #23 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #24 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #25 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #26 line:

AccessDeniedException: need user_admin role to access define sensor

Exception #27 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #28 line:

AccessDeniedException: need user_admin role to access define appliance

Exception #30 line: AuthenticationException: no control_light access

Exception #31 line: AuthenticationException: no control_thermostat access

Exception #32 line: AuthenticationException: no control_oven access

Exception #33 line: AuthenticationException: no control_oven access

The temperature of the oven is now 150

(here jimmy has the show oven command access)

****
sam logged in successfully
Exception #38 line:
AccessDeniedException: need user_admin role to access define house
Exception #39 line:
AccessDeniedException: need user_admin role to access define room
Exception #40 line:
AccessDeniedException: need user_admin role to access define appliance
Exception #41 line:
AccessDeniedException: need user_admin role to access define appliance
Exception #42 line:
AccessDeniedException: need user_admin role to access define appliance
Exception #43 line:
AccessDeniedException: need user_admin role to access define appliance
Exception #44 line:
AccessDeniedException: need user_admin role to access define sensor
Exception #45 line:
AccessDeniedException: need user_admin role to access define appliance
Exception #46 line:
AccessDeniedException: need user_admin role to access define appliance

(here no set appliance exception because as an adult sam has access to use them)
The temperature of the oven is now 150
(here sam has the show oven command access)