Consider the relationship between access control matrices and UNIX-style file permissions. Consider a UNIX system with only four users: Alice, Chuck, Bob, and Dave. Assume that there is no root principle. These users are assigned to groups as shown in the table below:

|  |  |
| --- | --- |
| **Group** | **Members** |
| Alice | Alice |
| Bob | Bob |
| Chuck | Chuck |
| Dave | Dave |
| g | Alice, Chuck |
| h | Bob, Chuck, Dave |

One possible access control policy for two files *File1* and *File2* is given by the UNIX permissions shown in the table below, where ***r = read, w = write and x = execute***

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Owner | Group | User permission(s) | Group permission(s) | Other permission |
| File1 | Bob | g | r | r, w | x |
| File2 | Alice | Bob | r, x | w | x |

Complete the access control matrix below that corresponds to the UNIX permissions above. The permission set in each entry of the matrix is a subset of *{r, w, x}*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Alice | Bob | Chuck | Dave |
| File 1 |  |  |  |  |
| File2 |  |  |  |  |