A GroupManager RESTful api spec

```
pid = an project name (string)
gid = a group name (string)
uid = a user name (string)
id = An integer uniquely identifying user or group
Keywords:
users, groups, projects, subgroups, direct, indirect, exp, id
Reserved characters:
No users, groups, or projects may be named one of the keywords.
Names should not use HTTP reserved characters.
Users Resource
Create user
POST /users
firstname=brian
lastname=vanklaveren
email_primary=bvan@slac.stanford.edu
work_phone=650-123-4321
institution=SLAC
username=bvan
                                       // optional
projects=SRS,LSST-CAMERA,EXO
                                       // optional
201 CREATED
id=432
Get user from user ID number
GET /users/id/{id}
Get users with name like brian
GET /users?firstname=brian
Get users with name like *ian*
GET /users?firstname=*ian*
Get users with name johnson
GET /users?lastname=johnson
Get all user groups (with projects)
GET /users/{uid}/groups
  {"project":"SRS",
   "groups":[
        "DatacatAdmin",
        "PipelineAdmin"
     ]
  },
  {"project":"EXO",
   "groups":[
        "DatacatAdmin",
        "PipelineAdmin"
     1
  }
]
```

```
Get projects a user belongs to
GET /users/{uid}/projects
[ "SRS", "EXO" ]
Get the groups a user belongs to in a given project.
GET /users/{uid}/{pid}/groups;indirect
["DatacatAdmin", "PipelineAdmin"]
Get a the user list
GET /projects/{pid}/userlist
Creates a group
POST /projects/{pid}/groups
Get an project's groups
GET /projects/{pid}/groups
Create a group in an project
POST /projects/{pid}/groups
name=DatacatAdmin
Get an project's group
GET /projects/{pid}/groups/{gid}
Get an project's group
GET /projects/{pid}/groups/{gid}
Get all users in an project's group
GET /projects/{pid}/groups/{gid}/users
Add a user to a group
POST /projects/{pid}/groups/{gid}/users
name=jim
Check if user is in group
GET /projects/{pid}/groups/{gid}/users/{uid}
                                                                // User in this group directly or indirectly
GET /projects/{pid}/groups/{gid}/users/{uid} // User in this group direct get /projects/{pid}/groups/{gid}/users/{uid};direct // Directly in this group get /projects/{pid}/groups/{gid}/users/{uid};indirect // Indirectly in this group
Add a group to a group (must already exist)
POST /projects/{pid}/groups/{gid}/subgroups
name=DatacatAdmin
Get children of group
["DatacatAdmin", "PipelineAdmin"]
Check if group is in group
GET /projects/{pid}/groups/{gid}/subgroups/{gid} // Group in this group directly or indirectly GET /projects/{pid}/groups/{gid}/subgroups/{gid};direct // Group is directly in this group GET /projects/{pid}/groups/{gid}/subgroups/{gid};indirect // Group is indirectly in this group
NOTE:
/projects/{pid} may be omitted if x-srs-project header set in request.
```