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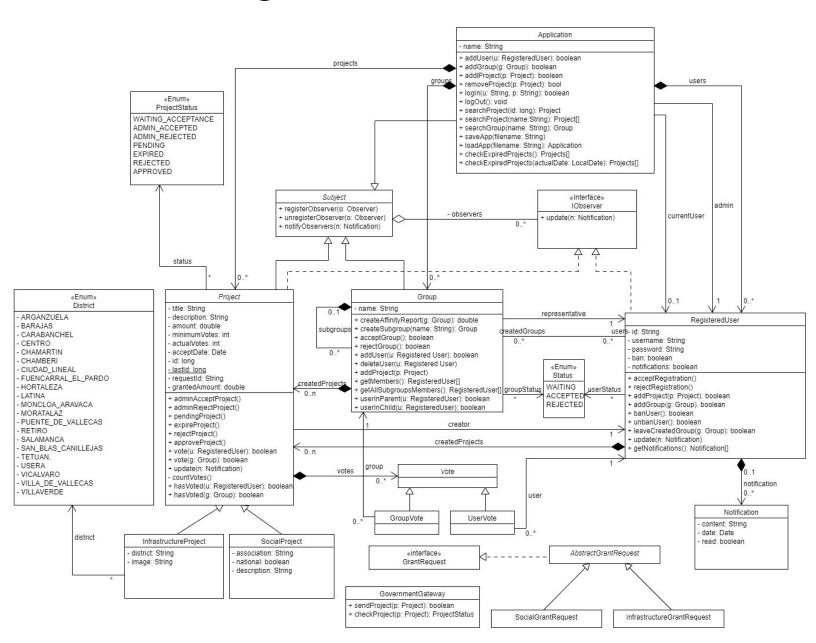
Implementation

Application: Votify

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1. Class Diagram

Application

- name: String

+ addUser(u: RegisteredUser): boolean
+ addGroup(g: Group): boolean
+ addIProject(p: Project): boolean
+ removeProject(p: Project): bool
+ logIn(u: String, p: String): boolean
+ logOut(): void
+ searchProject(id: long): Project
+ searchProject(name:String): Project[]
+ searchGroup(name: String): Group
+ saveApp(filename: String)
+ loadApp(filename: String): Application
+ checkExpiredProjects(): Projects[]
+ checkExpiredProjects(actualDate: LocalDate): Projects[]

«Enum» ProjectStatus

WAITING_ACCEPTANCE
ADMIN_ACCEPTED
ADMIN_REJECTED
PENDING
EXPIRED
REJECTED
APPROVED

Subject

+ registerObserver(o: Observer)
+ unregisterObserver(o: Observer)
+ notifyObservers(n: Notification)

«Interface» IObserver

+ update(n: Notification)

«Enum» District

- ARGANZUELA
- BARAJAS
- CARABANCHEL
- CENTRO
- CHAMARTIN
- CHAMBERI
- CIUDAD_LINEAL
- FUENCARRAL_EL_PARDO
- HORTALEZA
- LATINA
- MONCLOA_ARAVACA
- MORATALAZ
- PUENTE_DE_VALLECAS
- RETIRO
- SALAMANCA
- SAN_BLAS_CANILLEJAS
- TETUAN,
- USERA
- VICALVARO
- VILLA_DE_VALLECAS
- VILLAVERDE

Project

- title: String
- description: String
- amount: double
- minimumVotes: int
- actualVotes: int
- acceptDate: Date
- id: long
- lastId: long
- requestId: String
- grantedAmount: double

+ adminAcceptProject()
+ adminRejectProject()
+ pendingProject()
+ expireProject()
+ rejectProject()
+ approveProject()
+ vote(u: RegisteredUser): boolean
+ vote(g: Group): boolean
+ update(n: Notification)
- countVotes()
+ hasVoted(u: RegisteredUser): boolean
+ hasVoted(g: Group): boolean

Group

- name: String

+ createAffinityReport(g: Group): double
+ createSubgroup(name: String): Group
+ acceptGroup(): boolean
+ rejectGroup(): boolean
+ addUser(u: Registered User): boolean
+ deleteUser(u: Registered User)
+ addProject(p: Project)
+ getMembers(): RegisteredUser[]
+ getAllSubgroupsMembers(): RegisteredUser[]
+ userInParent(u: RegisteredUser): boolean
+ userInChild(u: RegisteredUser): boolean

«Enum» Status

WAITING
ACCEPTED
REJECTED

RegisteredUser

- id: String
- username: String
- password: String
- ban: boolean
- notifications: boolean

+ acceptRegistration()
+ rejectRegistration()
+ addProject(p: Project): boolean
+ addGroup(g: Group). boolean
+ banUser(): boolean
+ unbanUser(): boolean
+ leaveCreatedGroup(g: Group): boolean
+ update(n: Notification)
+ getNotifications(): Notification[]

Vote

GroupVote

UserVote

InfrastructureProject

- district: String
- image: String

SocialProject

- association: String
- national: boolean
- description: String

«interface» GrantRequest

AbstractGrantRequest

GovernmentGateway

+ sendProject(p: Project): boolean
+ checkProject(p: Project): ProjectStatus

SocialGrantRequest

InfrastructureGrantRequest

Notification

- content: String
- date: Date
- read: boolean

projects
groups
users
- observers
0..*
status
representative
createdGroups
createdProjects
subgroups
votes
group
creator
createdProjects
district
notification
user
currentUser
admin
groupStatus
userStatus

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2. Traceability Matrix

Requirements	RegisteredUser.addProject	RegisteredUser.addGroup	RegisteredUser.banUser	RegisteredUser.unbanUser	RegisteredUser.leaveCreatedGroup	RegisteredUser.acceptRegistration	RegisteredUser.rejectRegistration	RegisteredUser.update	RegisteredUser.getNotifications	Project.adminAcceptProject	Project.adminRejectProject
2.1.1.1 . Fill in the registration form											
2.1.2.1 . Logout/login.											
2.1.2.2 . Query groups or projects.											
2.1.2.3 . Subscribe to groups.											
2.1.2.3 . See notifications.									X		
2.1.2.4 . Vote for a project.											
2.1.2.5 . Unsuscribe from a group.					X						
2.1.2.6 . Create a group		X									
2.1.2.7 . Create a project	X										
2.1.2.8 . Create subgroups of a group.											
2.1.2.9 . Seeing the popularity report.											
2.1.2.10 .Show affinity report											
2.1.2.11. Send the project to an external entity for funding.											
2.1.2.12. View the state of a project.											
2.1.3.1 . Authorize or decline a registration.						X	X				
2.1.3.2 . Ban or unban registered users.			X	X							
2.1.3.3 . Approves or not a new group											
2.1.3.4 . Approves or not a project proposed.										X	X
2.1.3.5 . Sets the quantity of votes for a project.											
2.1.3.6 . An administrator does everything a registered user can. *	X	X	X	X	X	X	X		X		
2.1.4.1 . The system assigns an id for each project											
2.1.4.2 . The system checks the expired projects											
2.1.4.3 . The system notifies users								X			
2.1.4.3 . The system removes rejected projects											

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Requirements	Project.getState	Project.getActualVotes	Project.notifyObservers	Project.setMinimumVotes	Project.vote	Group.createAffinityReport	Group.createSubgroup	Group.acceptGroup	Group.rejectGroup	Group.addUser	Group.deleteUser
2.1.1.1 . Fill in the registration form											
2.1.2.1 . Logout/login.											
2.1.2.2 . Query groups or projects.											
2.1.2.3 . Subscribe to groups.										X	
2.1.2.3 . See notifications.											
2.1.2.4 . Vote for a project.					X						
2.1.2.5 . Unsuscribe from a group.											X
2.1.2.6 . Create a group											
2.1.2.7 . Create a project											
2.1.2.8 . Create subgroups of a group.							X				
2.1.2.9 . Seeing the popularity report.		X									
2.1.2.10 .Show affinity report						X					
2.1.2.11. Send the project to an external entity for funding.											
2.1.2.12. View the state of a project.	X										
2.1.3.1 . Authorize or decline a registration.											
2.1.3.2 . Ban or unban registered users.											
2.1.3.3 . Approves or not a new group								X	X		
2.1.3.4 . Approves or not a project proposed.											
2.1.3.5 . Sets the quantity of votes for a project.				X							
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Requirements	Application.addUser	Application.addGroup	Application.addProject	Application.logIn	Application.logOut	Application.searchGroup	Application.searchProject	Application.removeProject	Application.checkExpiredProjects	GovernmentGateway.sendProject	GovernmentGateway.checkProject
2.1.1.1 . Fill in the registration form	X										
2.1.2.1 . Logout/login.				X	X						
2.1.2.2 . Query groups or projects.						X	X				
2.1.2.3 . Subscribe to groups.											
2.1.2.3 . See notifications.											
2.1.2.4 . Vote for a project.											
2.1.2.5 . Unsuscribe from a group.											
2.1.2.6 . Create a group		X									
2.1.2.7 . Create a project			X								
2.1.2.8 . Create subgroups of a group.											
2.1.2.9 . Seeing the popularity report.											
2.1.2.10 .Show affinity report											
2.1.2.11. Send the project to an external entity for funding.										X	
2.1.2.12. View the state of a project.											X
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2.1.4.3 . The system notifies users											
2.1.4.3 . The system removes rejected projects								X			