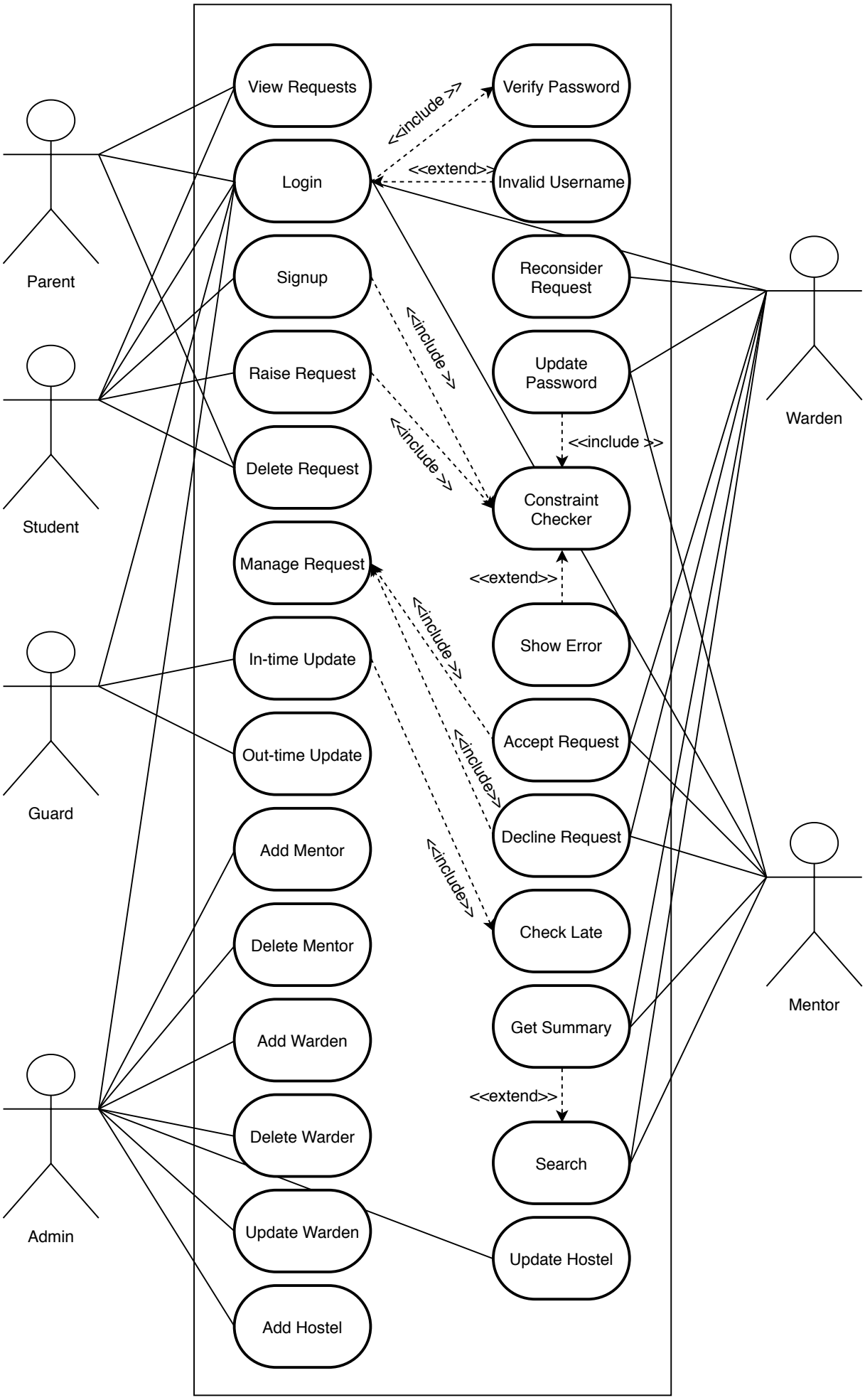
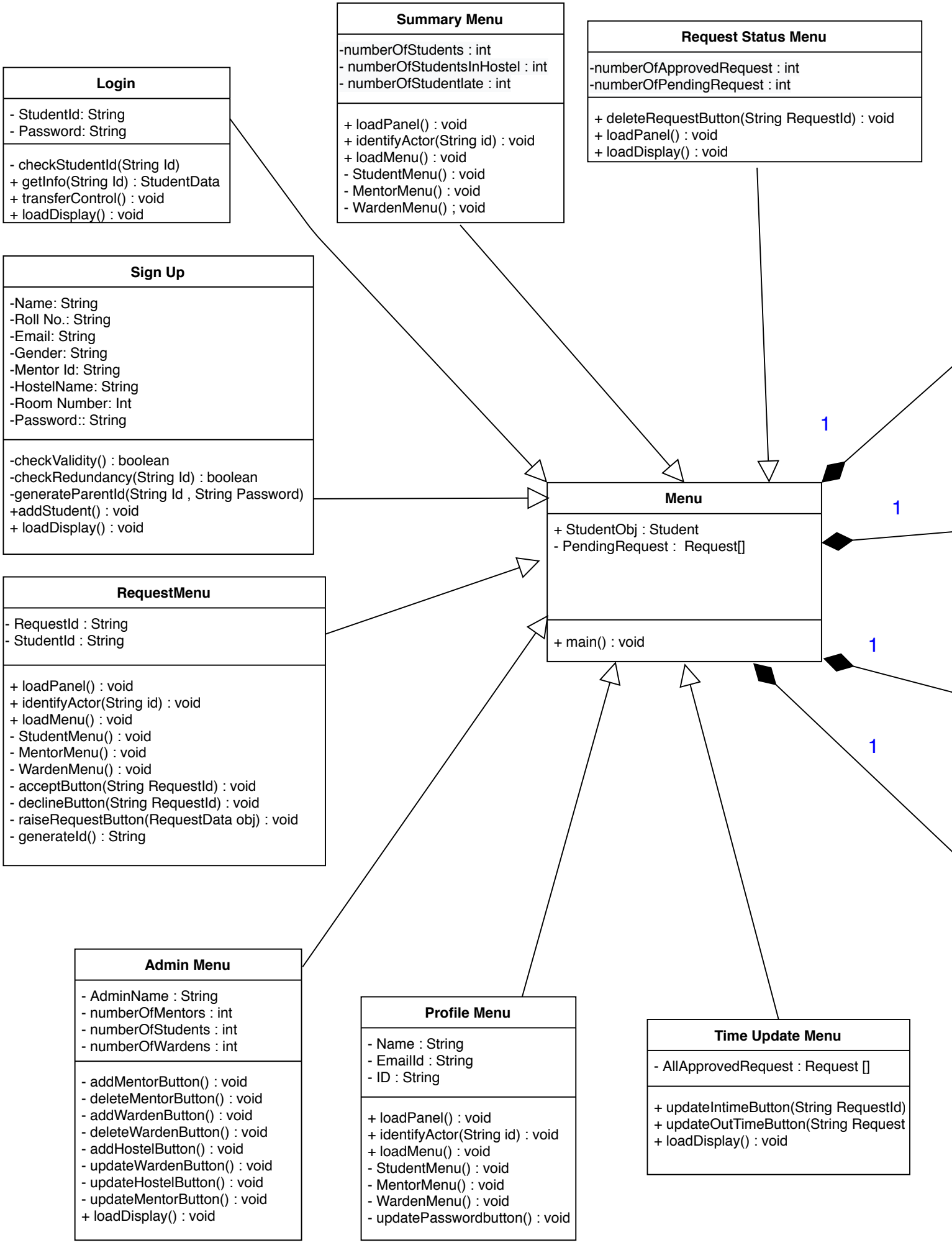
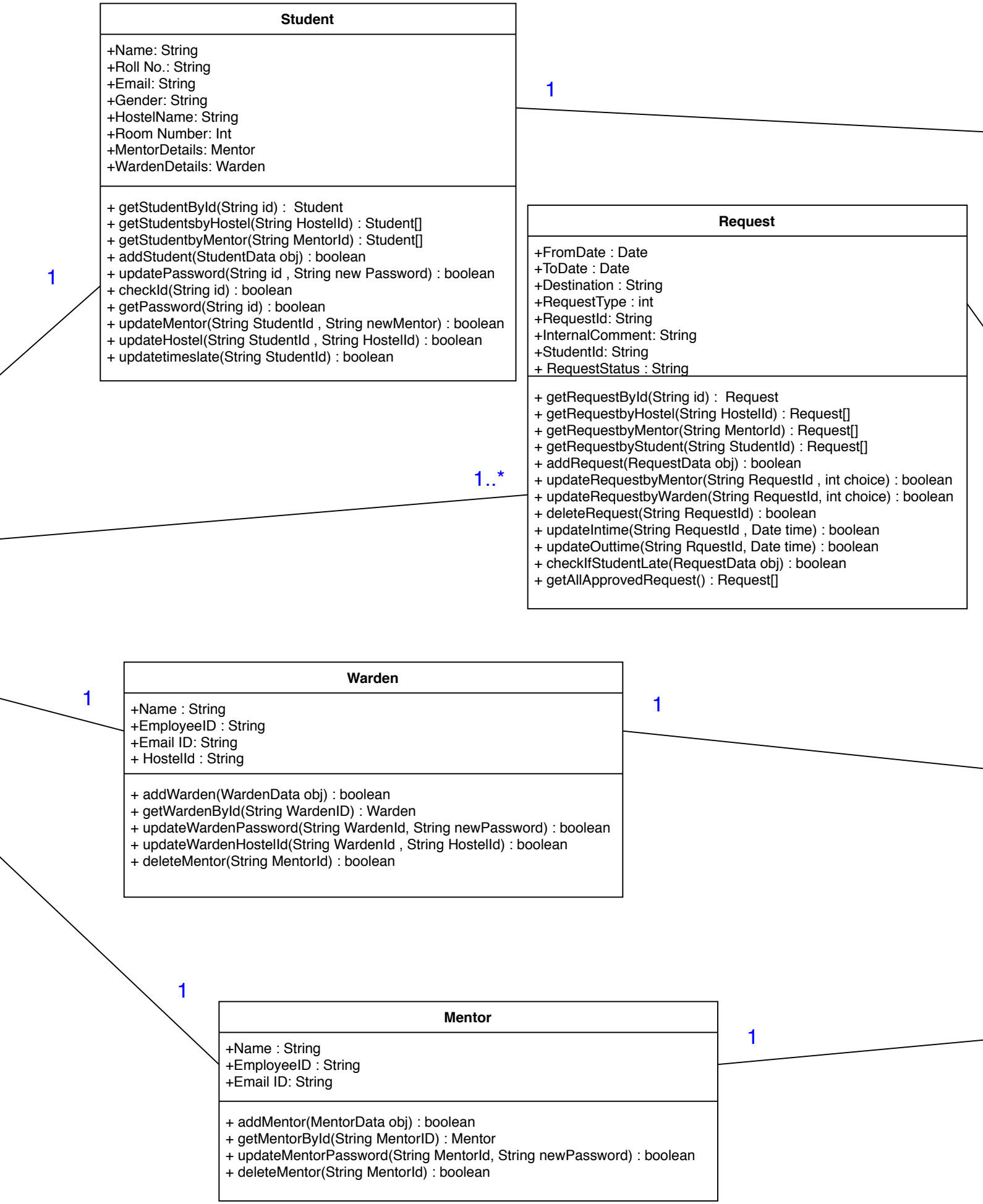
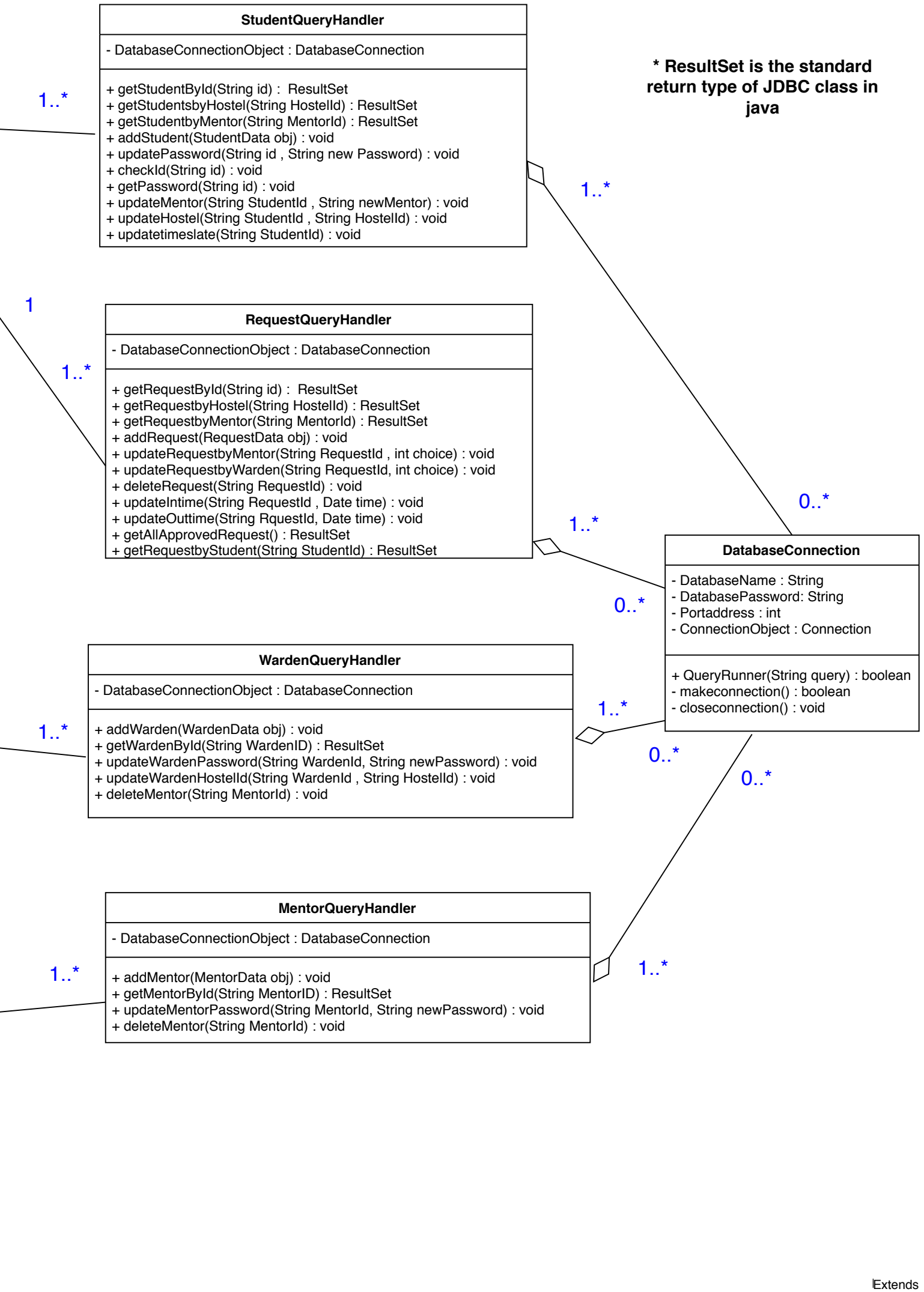
Use Case Diagram


View Requests
Login
Signup
Raise Request
Delete Request
Manage Request
In-time Update
Out-time Update
Add Mentor
Delete Mentor
Add Warden
Delete Warder
Update Warden
Add Hostel
Verify Password
Invalid Username
Reconsider Request
Update Password
Constraint Checker
Show Error
Accept Request
Decline Request
Check Late
Get Summary
Search
Update Hostel
<<include>>
<<extend>>
Parent
Student
Guard
Admin
Warden
Mentor

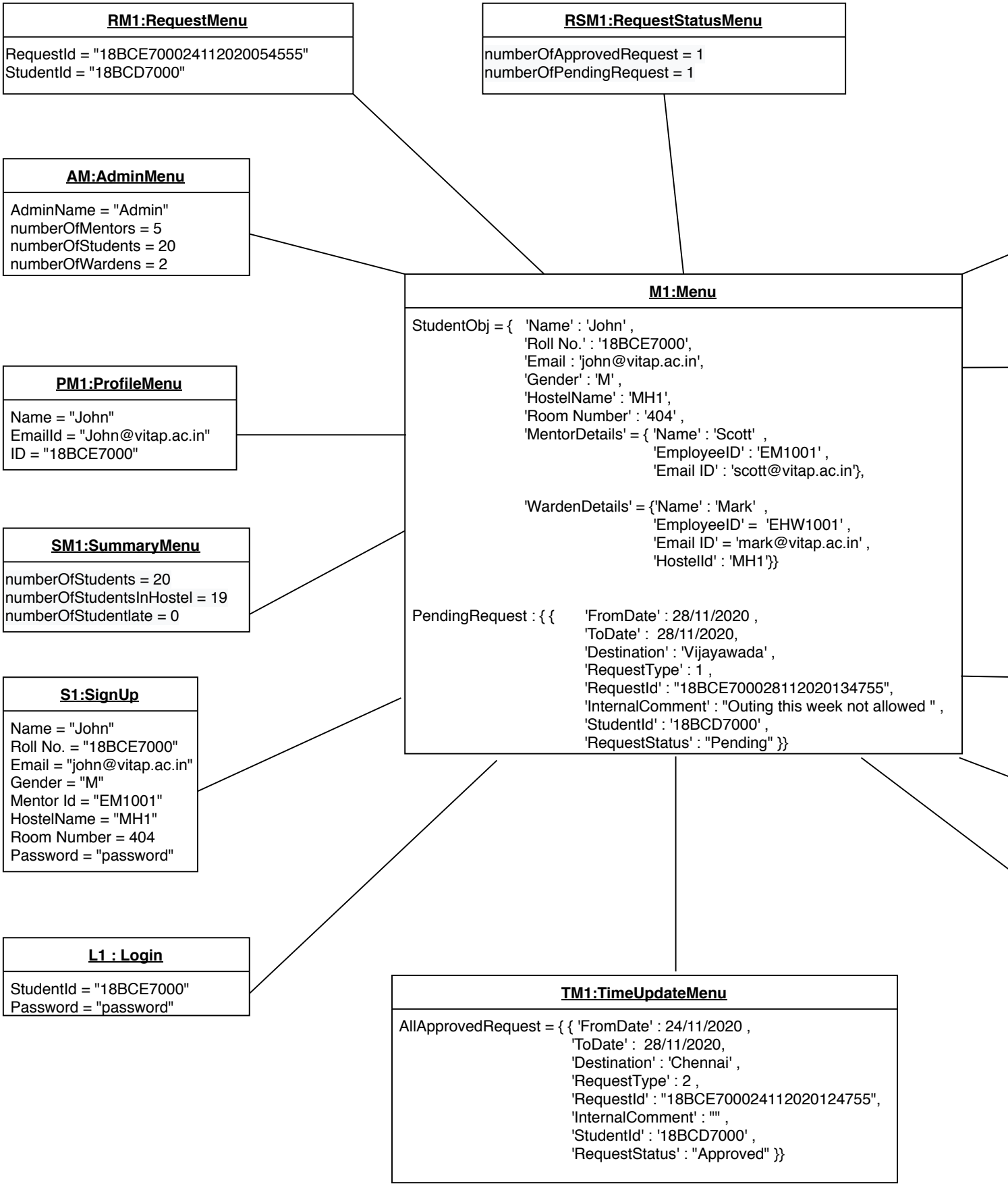
Class Diagram

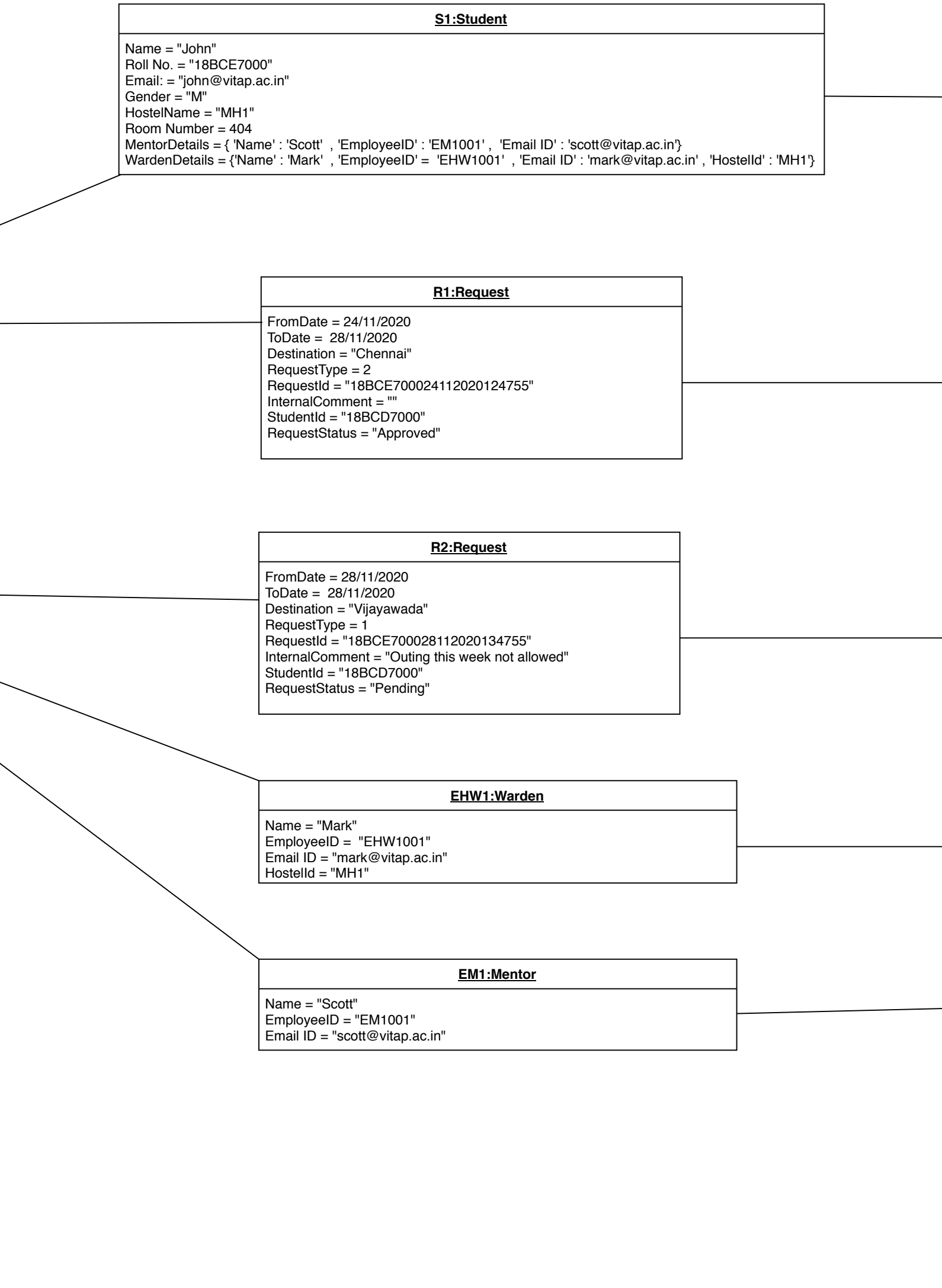

Summary Menu
-numberOfStudents : int
- numberOfStudentsInHostel : int
- numberOfStudentlate : int
+ loadPanel() : void
+ identifyActor(String id) : void
+ loadMenu() : void
- StudentMenu() : void
- MentorMenu() : void
- WardenMenu() ; void
Request Status Menu
-numberOfApprovedRequest : int
-numberOfPendingRequest : int
+ deleteRequestButton(String RequestId) : void
+ loadPanel() : void
+ loadDisplay() : void
Login
- StudentId: String
- Password: String
- checkStudentId(String Id)
+ getInfo(String Id) : StudentData
+ transferControl() : void
+ loadDisplay() : void
Sign Up
-Name: String
-Roll No.: String
-Email: String
-Gender: String
-Mentor Id: String
-HostelName: String
-Room Number: Int
-Password:: String
-checkValidity() : boolean
-checkRedundancy(String Id) : boolean
-generateParentId(String Id , String Password)
+addStudent() : void
+ loadDisplay() : void
1
1
1
1
Menu
+ StudentObj : Student
- PendingRequest : Request[]
+ main() : void
RequestMenu
- RequestId : String
- StudentId : String
+ loadPanel() : void
+ identifyActor(String id) : void
+ loadMenu() : void
- StudentMenu() : void
- MentorMenu() : void
- WardenMenu() : void
- acceptButton(String RequestId) : void
- declineButton(String RequestId) : void
- raiseRequestButton(RequestData obj) : void
- generateId() : String
Admin Menu
- AdminName : String
- numberOfMentors : int
- numberOfStudents : int
- numberOfWardens : int
- addMentorButton() : void
- deleteMentorButton() : void
- addWardenButton() : void
- deleteWardenButton() : void
- addHostelButton() : void
- updateWardenButton() : void
- updateHostelButton() : void
- updateMentorButton() : void
+ loadDisplay() : void
Profile Menu
- Name : String
- EmailId : String
- ID : String
+ loadPanel() : void
+ identifyActor(String id) : void
+ loadMenu() : void
- StudentMenu() : void
- MentorMenu() : void
- WardenMenu() : void
- updatePasswordbutton() : void
Time Update Menu
- AllApprovedRequest : Request []
+ updateIntimeButton(String RequestId)
+ updateOutTimeButton(String Request
+ loadDisplay() : void

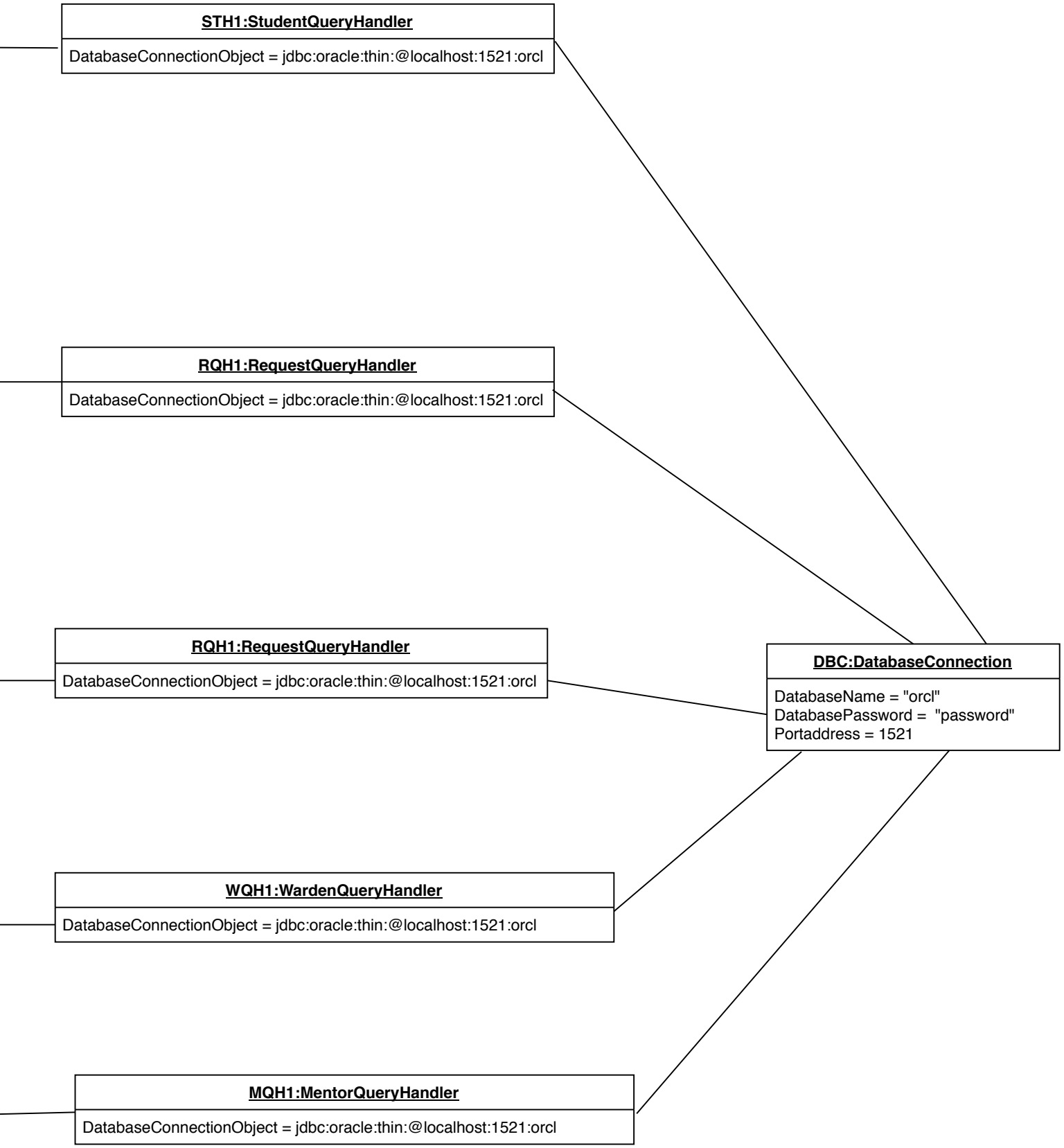

Student
+Name: String
+Roll No.: String
+Email: String
+Gender: String
+HostelName: String
+Room Number: Int
+MentorDetails: Mentor
+WardenDetails: Warden
+ getStudentById(String id) : Student
+ getStudentsbyHostel(String HostelId) : Student[]
+ getStudentbyMentor(String MentorId) : Student[]
+ addStudent(StudentData obj) : boolean
+ updatePassword(String id , String new Password) : boolean
+ checkId(String id) : boolean
+ getPassword(String id) : boolean
+ updateMentor(String StudentId , String newMentor) : boolean
+ updateHostel(String StudentId , String HostelId) : boolean
+ updatetimeslate(String StudentId) : boolean
1
1
Request
+FromDate : Date
+ToDate : Date
+Destination : String
+RequestType : int
+RequestId: String
+InternalComment: String
+StudentId: String
+ RequestStatus : String
+ getRequestById(String id) : Request
+ getRequestbyHostel(String HostelId) : Request[]
+ getRequestbyMentor(String MentorId) : Request[]
+ getRequestbyStudent(String StudentId) : Request[]
+ addRequest(RequestData obj) : boolean
+ updateRequestbyMentor(String RequestId , int choice) : boolean
+ updateRequestbyWarden(String RequestId, int choice) : boolean
+ deleteRequest(String RequestId) : boolean
+ updateIntime(String RequestId , Date time) : boolean
+ updateOuttime(String RquestId, Date time) : boolean
+ checkIfStudentLate(RequestData obj) : boolean
+ getAllApprovedRequest() : Request[]
1..*
1
Warden
+Name : String
+EmployeeID : String
+Email ID: String
+ HostelId : String
+ addWarden(WardenData obj) : boolean
+ getWardenById(String WardenID) : Warden
+ updateWardenPassword(String WardenId, String newPassword) : boolean
+ updateWardenHostelId(String WardenId , String HostelId) : boolean
+ deleteMentor(String MentorId) : boolean
1
1
1
Mentor
+Name : String
+EmployeeID : String
+Email ID: String
+ addMentor(MentorData obj) : boolean
+ getMentorById(String MentorID) : Mentor
+ updateMentorPassword(String MentorId, String newPassword) : boolean
+ deleteMentor(String MentorId) : boolean
1


StudentQueryHandler
- DatabaseConnectionObject : DatabaseConnection
+ getStudentById(String id) : ResultSet
+ getStudentsbyHostel(String HostelId) : ResultSet
+ getStudentbyMentor(String MentorId) : ResultSet
+ addStudent(StudentData obj) : void
+ updatePassword(String id , String new Password) : void
+ checkId(String id) : void
+ getPassword(String id) : void
+ updateMentor(String StudentId , String newMentor) : void
+ updateHostel(String StudentId , String HostelId) : void
+ updatetimeslate(String StudentId) : void
* ResultSet is the standard return type of JDBC class in java
RequestQueryHandler
- DatabaseConnectionObject : DatabaseConnection
+ getRequestById(String id) : ResultSet
+ getRequestbyHostel(String HostelId) : ResultSet
+ getRequestbyMentor(String MentorId) : ResultSet
+ addRequest(RequestData obj) : void
+ updateRequestbyMentor(String RequestId , int choice) : void
+ updateRequestbyWarden(String RequestId, int choice) : void
+ deleteRequest(String RequestId) : void
+ updateIntime(String RequestId , Date time) : void
+ updateOuttime(String RquestId, Date time) : void
+ getAllApprovedRequest() : ResultSet
+ getRequestbyStudent(String StudentId) : ResultSet
DatabaseConnection
- DatabaseName : String
- DatabasePassword: String
- Portaddress : int
- ConnectionObject : Connection
+ QueryRunner(String query) : boolean
- makeconnection() : boolean
- closeconnection() : void
WardenQueryHandler
- DatabaseConnectionObject : DatabaseConnection
+ addWarden(WardenData obj) : void
+ getWardenById(String WardenID) : ResultSet
+ updateWardenPassword(String WardenId, String newPassword) : void
+ updateWardenHostelId(String WardenId , String HostelId) : void
+ deleteMentor(String MentorId) : void
MentorQueryHandler
- DatabaseConnectionObject : DatabaseConnection
+ addMentor(MentorData obj) : void
+ getMentorById(String MentorID) : ResultSet
+ updateMentorPassword(String MentorId, String newPassword) : void
+ deleteMentor(String MentorId) : void
1..*
1
0..*
Extends

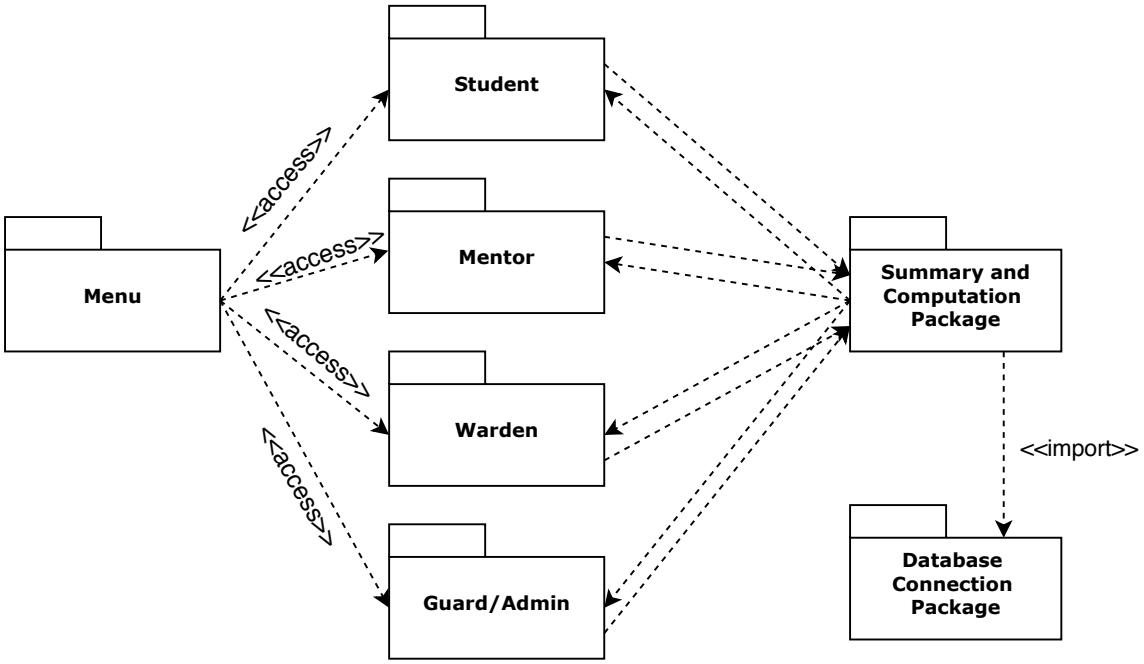
Object Diagram


RM1:RequestMenu
RequestId = "18BCE7000241120200545555"
StudentId = "18BCD7000"
RSM1:RequestStatusMenu
numberOfApprovedRequest = 1
numberOfPendingRequest = 1
AM:AdminMenu
AdminName = "Admin"
numberOfMentors = 5
numberOfStudents = 20
numberOfWardens = 2
M1:Menu
StudentObj = { 'Name' : 'John' ,
'Roll No.' : '18BCE7000',
'Email : 'john@vitap.ac.in',
'Gender' : 'M' ,
'HostelName' : 'MH1',
'Room Number' : '404' ,
'MentorDetails' = { 'Name' : 'Scott' ,
'EmployeeID' : 'EM1001' ,
'Email ID' : 'scott@vitap.ac.in'},
'WardenDetails' = {'Name' : 'Mark' ,
'EmployeeID' = 'EHW1001' ,
'Email ID' = 'mark@vitap.ac.in' ,
'HostelId' : 'MH1'}}
PendingRequest : { { 'FromDate' : 28/11/2020 ,
'ToDate' : 28/11/2020,
'Destination' : 'Vijayawada' ,
'RequestType' : 1 ,
'RequestId' : "18BCE700028112020134755",
'InternalComment' : "Outing this week not allowed " ,
'StudentId' : '18BCD7000' ,
'RequestStatus' : "Pending" }}
PM1:ProfileMenu
Name = "John"
EmailId = "John@vitap.ac.in"
ID = "18BCE7000"
SM1:SummaryMenu
numberOfStudents = 20
numberOfStudentsInHostel = 19
numberOfStudentlate = 0
S1:SignUp
Name = "John"
Roll No. = "18BCE7000"
Email = "john@vitap.ac.in"
Gender = "M"
Mentor Id = "EM1001"
HostelName = "MH1"
Room Number = 404
Password = "password"
L1 : Login
StudentId = "18BCE7000"
Password = "password"
TM1:TimeUpdateMenu
AllApprovedRequest = { { 'FromDate' : 24/11/2020 ,
'ToDate' : 28/11/2020,
'Destination' : 'Chennai' ,
'RequestType' : 2 ,
'RequestId' : "18BCE700024112020124755",
'InternalComment' : "" ,
'StudentId' : '18BCD7000' ,
'RequestStatus' : "Approved" }}

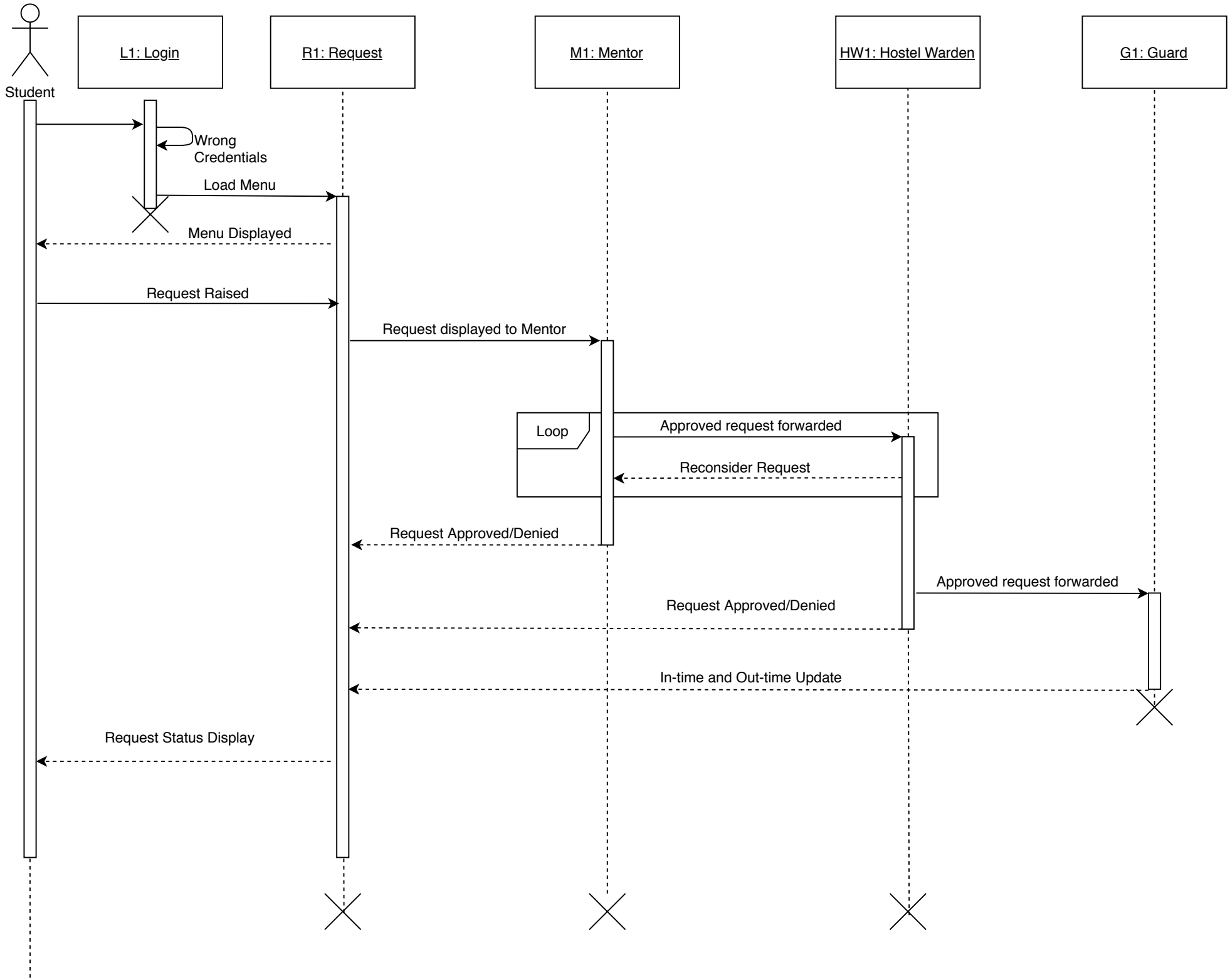

S1:Student
Name = "John"
Roll No. = "18BCE7000"
Email: = "john@vitap.ac.in"
Gender = "M"
HostelName = "MH1"
Room Number = 404
MentorDetails = { 'Name' : 'Scott' , 'EmployeeID' : 'EM1001' , 'Email ID' : 'scott@vitap.ac.in'}
WardenDetails = {'Name' : 'Mark' , 'EmployeeID' = 'EHW1001' , 'Email ID' : 'mark@vitap.ac.in' , 'HostelId' : 'MH1'}
R1:Request
FromDate = 24/11/2020
ToDate = 28/11/2020
Destination = "Chennai"
RequestType = 2
RequestId = "18BCE700024112020124755"
InternalComment = ""
StudentId = "18BCD7000"
RequestStatus = "Approved"
R2:Request
FromDate = 28/11/2020
ToDate = 28/11/2020
Destination = "Vijayawada"
RequestType = 1
RequestId = "18BCE700028112020134755"
InternalComment = "Outing this week not allowed"
StudentId = "18BCD7000"
RequestStatus = "Pending"
EHW1:Warden
Name = "Mark"
EmployeeID = "EHW1001"
Email ID = "mark@vitap.ac.in"
HostelId = "MH1"
EM1:Mentor
Name = "Scott"
EmployeeID = "EM1001"
Email ID = "scott@vitap.ac.in"


STH1:StudentQueryHandler
DatabaseConnectionObject = jdbc:oracle:thin:@localhost:1521:orcl
RQH1:RequestQueryHandler
DatabaseConnectionObject = jdbc:oracle:thin:@localhost:1521:orcl
RQH1:RequestQueryHandler
DatabaseConnectionObject = jdbc:oracle:thin:@localhost:1521:orcl
DBC:DatabaseConnection
DatabaseName = "orcl"
DatabasePassword = "password"
Portaddress = 1521
WQH1:WardenQueryHandler
DatabaseConnectionObject = jdbc:oracle:thin:@localhost:1521:orcl
MQH1:MentorQueryHandler
DatabaseConnectionObject = jdbc:oracle:thin:@localhost:1521:orcl

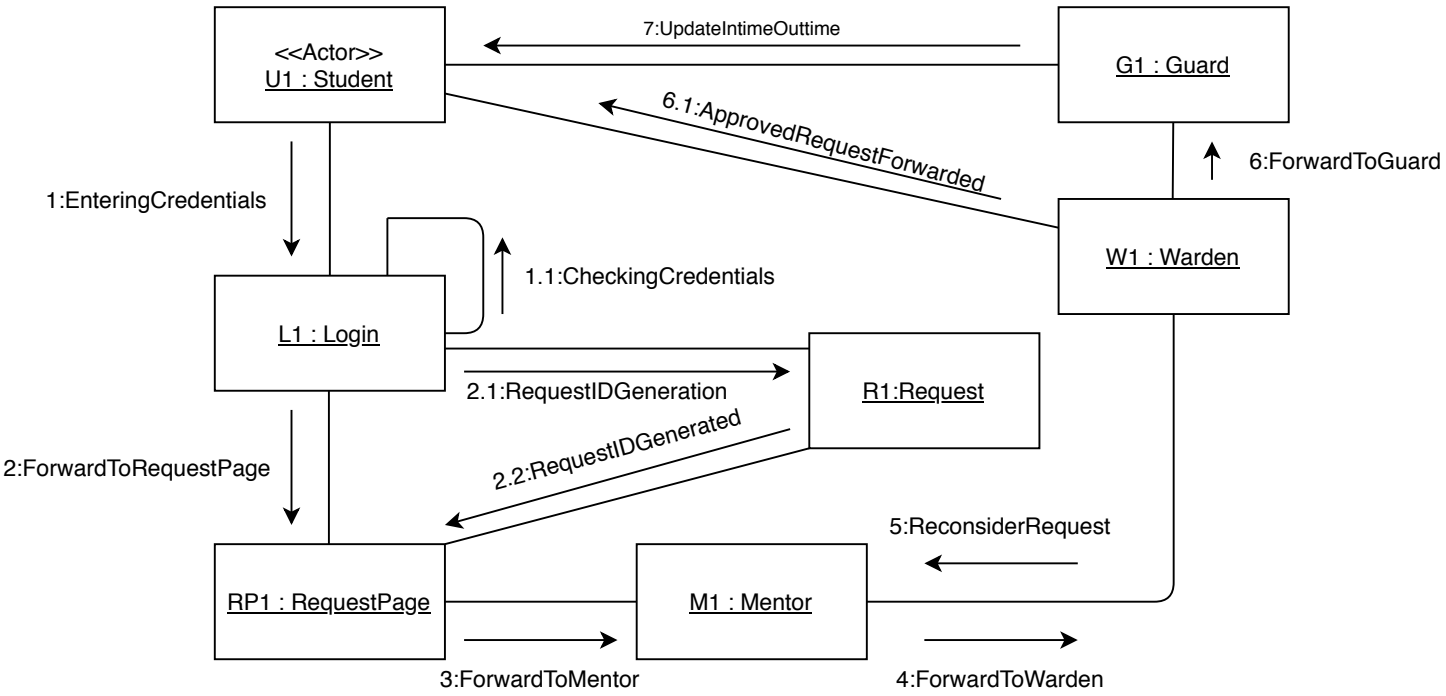
Package Diagram


Student
Mentor
Warden
Guard/Admin
Menu
Summary and Computation Package
Database Connection Package
<<access>>
<<access>>
<<access>>
<<access>>
<<import>>

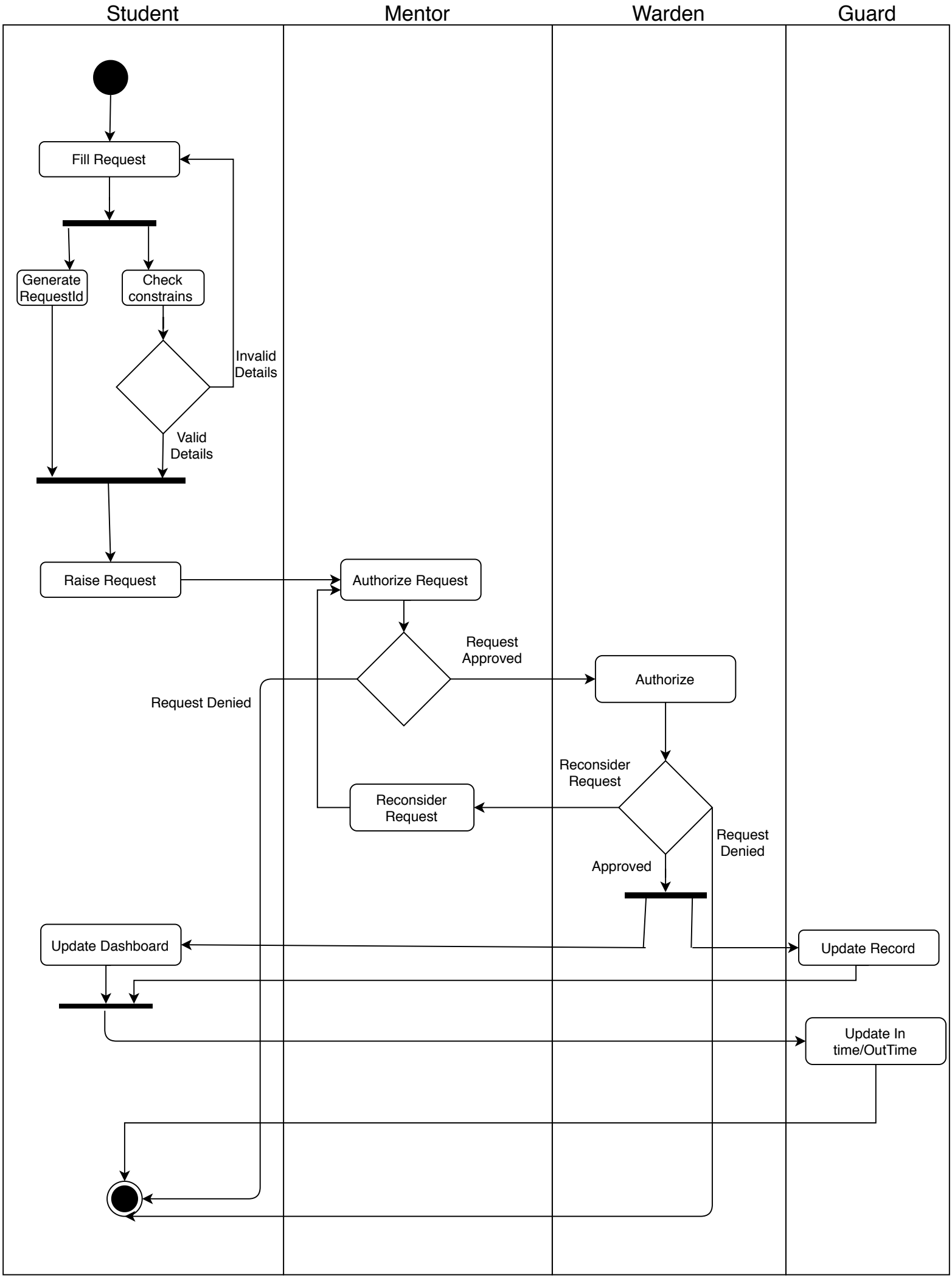
Sequence Diagram


Student
L1: Login
R1: Request
M1: Mentor
HW1: Hostel Warden
G1: Guard
Wrong Credentials
Load Menu
Menu Displayed
Request Raised
Request displayed to Mentor
Loop
Approved request forwarded
Reconsider Request
Request Approved/Denied
Approved request forwarded
Request Approved/Denied
In-time and Out-time Update
Request Status Display

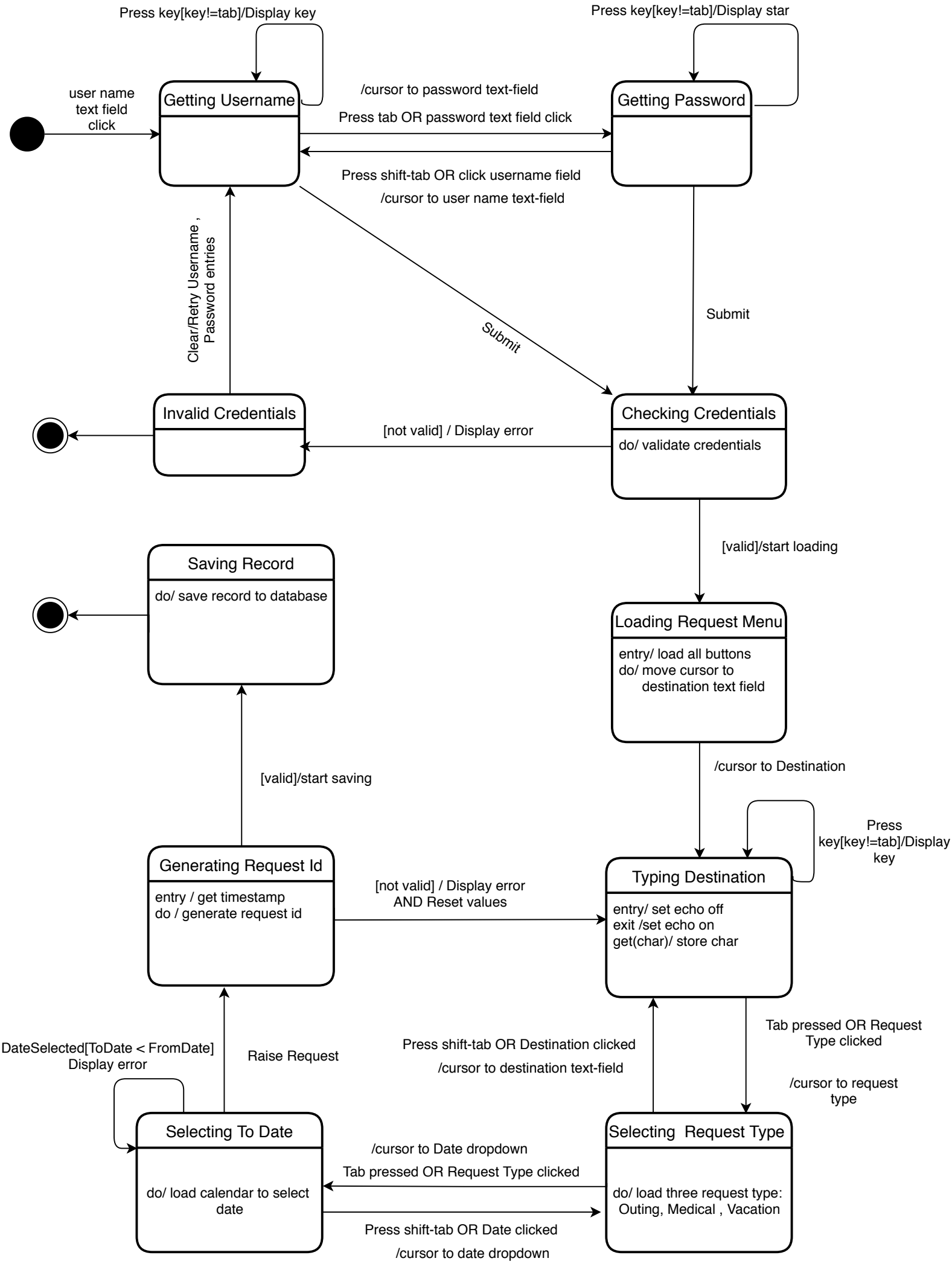
Collaboration Diagram


<<Actor>>
U1 : Student
7:UpdateIntimeOuttime
G1 : Guard
6.1:ApprovedRequestForwarded
6:ForwardToGuard
1:EnteringCredentials
W1 : Warden
1.1:CheckingCredentials
L1 : Login
2.1:RequestIDGeneration
R1:Request
2:ForwardToRequestPage
2.2:RequestIDGenerated
5:ReconsiderRequest
RP1 : RequestPage
M1 : Mentor
3:ForwardToMentor
4:ForwardToWarden

Activity Diagram


Student
Mentor
Warden
Guard
Fill Request
Generate RequestId
Check constrains
Invalid Details
Valid Details
Raise Request
Authorize Request
Request Approved
Request Denied
Authorize
Reconsider Request
Reconsider Request
Request Denied
Approved
Update Dashboard
Update Record
Update In time/OutTime

State Diagram


Press key[key!=tab]/Display key
Press key[key!=tab]/Display star
user name text field click
Getting Username
/cursor to password text-field
Press tab OR password text field click
Getting Password
Press shift-tab OR click username field
/cursor to user name text-field
Clear/Retry Username , Password entries
Submit
Submit
Invalid Credentials
[not valid] / Display error
Checking Credentials
do/ validate credentials
[valid]/start loading
Saving Record
do/ save record to database
Loading Request Menu
entry/ load all buttons
do/ move cursor to destination text field
/cursor to Destination
[valid]/start saving
Press key[key!=tab]/Display key
Generating Request Id
entry / get timestamp
do / generate request id
[not valid] / Display error AND Reset values
Typing Destination
entry/ set echo off
exit /set echo on
get(char)/ store char
Tab pressed OR Request Type clicked
DateSelected[ToDate < FromDate] Display error
Raise Request
Press shift-tab OR Destination clicked
/cursor to destination text-field
/cursor to request type
Selecting To Date
do/ load calendar to select date
Selecting Request Type
do/ load three request type: Outing, Medical , Vacation
/cursor to Date dropdown
Tab pressed OR Request Type clicked
Press shift-tab OR Date clicked
/cursor to date dropdown