

Login :

```
login (userID, password) {  
    u = User.find(userID)  
    if (u != null && u.password == password){  
        upd = u.sessions.update()  
        If ( upd)  
            message("Successful")  
        Else  
            message("Unsuccessful")  
    }  
    else  
        message("UnSuccessful")  
}
```

Logout :

```
logout (userID) {  
    u = User.find(userID)  
    if (u != null){  
        upd = u.sessions.update()  
        If ( upd)  
            message("Successful")  
        Else  
            message("Unsuccessful")  
    }  
}
```

```

        else

            message("UnSuccessful")

    }

```

Search Book :

```

searchBook ( memberID , title ){

    m = Member.find(mamemberID)

    if ( m != null ){

        bookList = Books.Search(title)

        if ( bookList != null)

            Send(bookList)

        else

            Send(null)

    }

    else

        Send(null)

}

```

Borrow Book :

```

borrowBook ( memberID , bookID){

    m = Member.find(memberID)

    b = Books.find(bookID)

    if ( m != null && b != null ){

        br = Borrowed.insert( memberID , bookID , getTime())

        if (br )

```

```

        message("Successful")
    Else
        message("UnSuccessful")
    }
else
    message("UnSuccessful")
}

```

Extend borrow time :

```

extendBorrowTime (memberID, bookID, extendTime){
    m = Member.find(memberID)
    b = Books.find(bookID)
    r = Borrowd.find(memberID, bookID)
    if ( m != null && b != null && r != null ){
        br = Borrowed.setTime( memberID , bookID ,extendTime )
        if (br )
            message("Successful")
        else
            message("UnSuccessful")
    }
    else
        message("UnSuccessful")
}

```

Extend member time :

```

extendMemberTime (memberID, extendTime){

    m = Member.find(memberID)

    if ( m != null ){

        ext = Member.setExpireTime( memberID ,extendTime )

        if (ext )

            message("Successful")

        else

            message("UnSuccessful")

    }

    else

        message("UnSuccessful")

}

```

Return Book :

```

returnBook ( memberID , bookID){

    m = Member.find(memberID)

    b = Books.find(bookID)

    r = Borrowd.find(memberID, bookID)

    if ( m != null && b != null && r != null){

        br = Borrowed.delete( memberID , bookID)

        if (br )

            message("Successful")

        else

            message("UnSuccessful")

    }

}

```

```

    }
    else
        message("UnSuccessful")
}

```

DeleteManager:

```

deleteManager(managerID){
    mng = Manager.find(managerID)
    if (mng != null){
        del = Manager.delete(managerID)
        If (del)
            message("Successful")
        Else
            message("UnSuccessful")
    }
    else
        message("UnSuccessful")
}

```

CreateManager:

```

createManager(managerID, managerName) {
    Status = Manager.insert(managerID , managerName)
    if (status == 1){
        message("Successful")
    }
}

```

```

        else

            message("UnSuccessful")

    }

```

HireLibrarian:

```

hireLibrarian(MngID, LID, name, pass, Email ) {

    mng = User.get(MngID)

    If (mng.password != pass)

        message("Unsuccessful")

    else{

        Res = Librarian.insert(LID , Name , Email);

        If (res)

            message("Successful")

        Else

            message("Unsuccessful")

    }

}

```

FireLibrarian:

```

fireLibrarian(MngID, LID ) {

    lbr = Librarian.get(LID)

    Mng = Manager.get(MngID)

    If (Mng != null && lbr != null){

        res = Librarian.erase(LID)

        If (res)

```

```

        message("Successful")
    Else
        message("Unsuccessful")
    }
else
    message("UnSuccessful")
}

```

Add Book:

```

addBook(BID, LID, Bname, BAuthor, BPub ) {
    lib = Librarian.find(LID)
    If (lib != null){
        bi = Book.insert(BID, Bname, BAuthor, BPub )
        if ( bi )
            message("Successful")
        else
            message("UnSuccessful")
    }
    message("UnSuccessful")
}

```

Delete Book:

```

deleteBook(BID, LID ) {
    lib = Librarian.find(LID)
    If (lib != null){

```

```

        bi = Book.remove(BID )
        if ( bi )
            message("Successful")
        else
            message("UnSuccessful")
    }
    else
        message("UnSuccessful")
}

```

DeleteMember:

```

deleteMember(MID, LID ) {
    m = Member.find(MID)
    l = Librarian.find(LID)
    If (m != null && l != null){
        del = Member.delete(MID)
        If (del)
            message("Successful")
        else
            message("UnSuccessful")
    }
    else
        message("UnSuccessful")
}

```


AddMember:

```
addMember(MID, LID, name, Email ) {  
    lib = Librarian.find(LID)  
    if (lib != null ){  
        res = Member.insert(MID , Name , Email)  
        if (res)  
            message("Successful")  
        else  
            message("UnSuccessful")  
    }  
    else  
        message("UnSuccessful")  
}
```