Istanbul Technical University
Faculty of Computer and Informatics
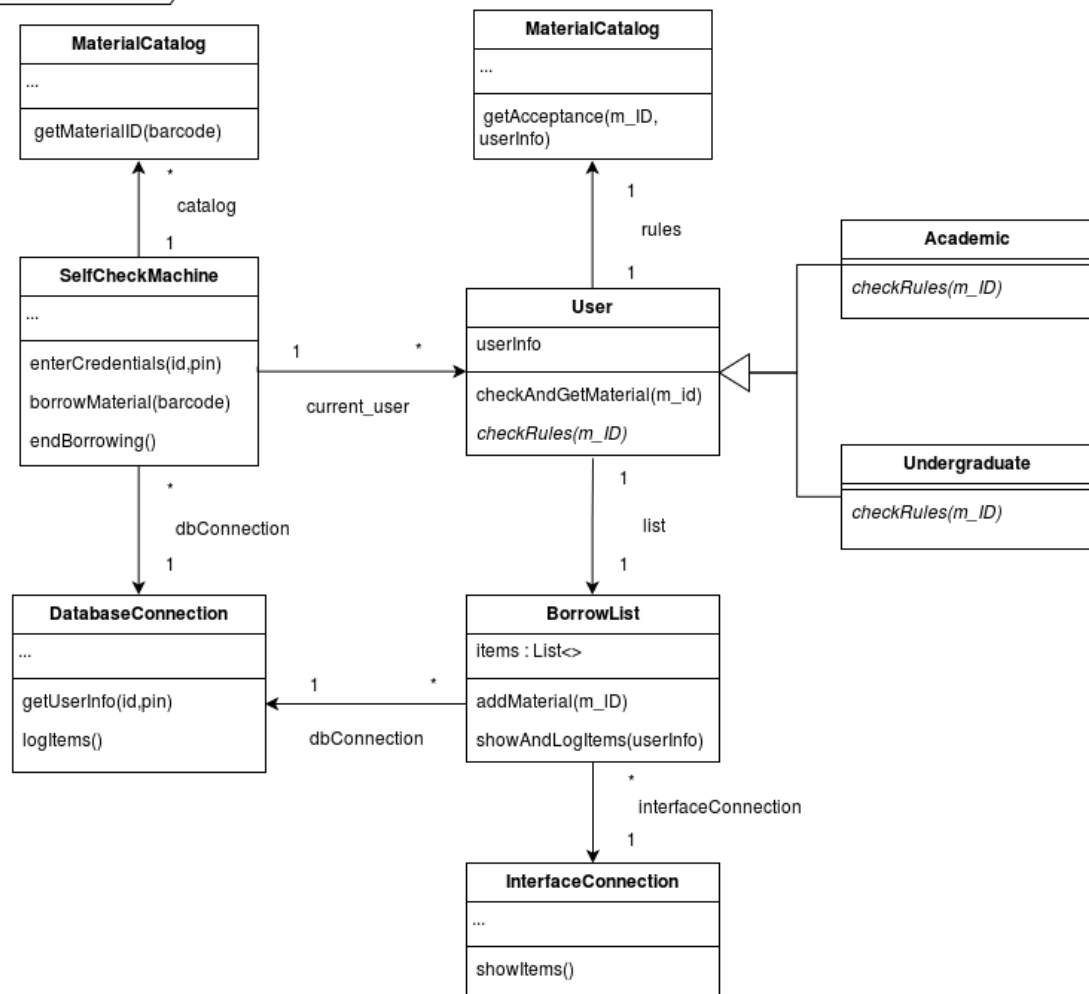
BLG468E Object Oriented Modeling and Design

Assignment 3

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Design Class Diagram

MaterialCatalog

...

getMaterialID(barcode)

MaterialCatalog

...

getAcceptance(m_ID, userInfo)

SelfCheckMachine

...

enterCredentials(id,pin)

borrowMaterial(barcode)

endBorrowing()

catalog 1 *

current_user 1 *

dbConnection * 1

User

userInfo

checkAndGetMaterial(m_id)

checkRules(m_ID)

rules 1 1

list 1 1

Academic

checkRules(m_ID)

Undergraduate

checkRules(m_ID)

DatabaseConnection

...

getUserInfo(id,pin)

logItems()

BorrowList

items : List<>

addMaterial(m_ID)

showAndLogItems(userInfo)

dbConnection 1 *

interfaceConnection * 1

InterfaceConnection

...

showItems()

sequence Borrowing Operation

:Borrower

:System

enterCredentials(id, pin)

loop

borrowMaterial(barcode)

checkRules

endBorrowing()

return list of materials

interaction enterCredentials

Not in the scope

:UI

Interface Layer
- - - - - - - - - - - - - - - -
Application Layer

enterCredentials(id, pin)

:SelfCheckMachine

2: create(userInfo)

:User

2.1: create()

:BorrowList

1:
userInfo:=getUserInfo(id,pin)

:DatabaseConnection

interaction borrowMaterial

Polymorphic function

Interface Layer

:UI

- - - - - - - - - - - - - - - -
Application Layer

2.1: checkRules(m_ID)

borrowMaterial(barcode)

:SelfCheckMachine

:User

:BorrowList

2: checkAndGetMaterial(m_id)

2.3 [valid=true]: addMaterial(m_ID)

1: m_ID:=getMaterialID(barcode)

2.2: valid:=getAcceptance(m_ID, userInfo)

:MaterialCatalog

:LibraryRules

Assuming initialized before

interaction endBorrowing

:UI

Interface Layer

- -

Application Layer

endBorrowing()

:InterfaceConnection

2.1: showItems()

:SelfCheckMachine

1: endOperation()

:User

2:
showAndLogItems(userInfo)

:BorrowList

2.2: logItems()

:DatabaseConnection