

SWE316 PROJECT PHASE 2

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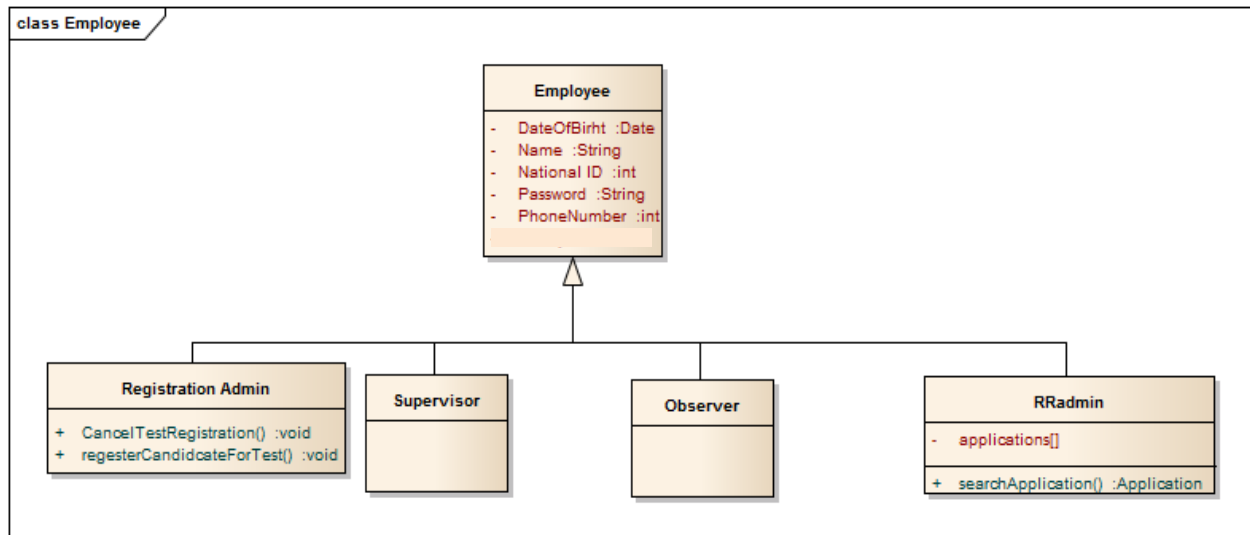
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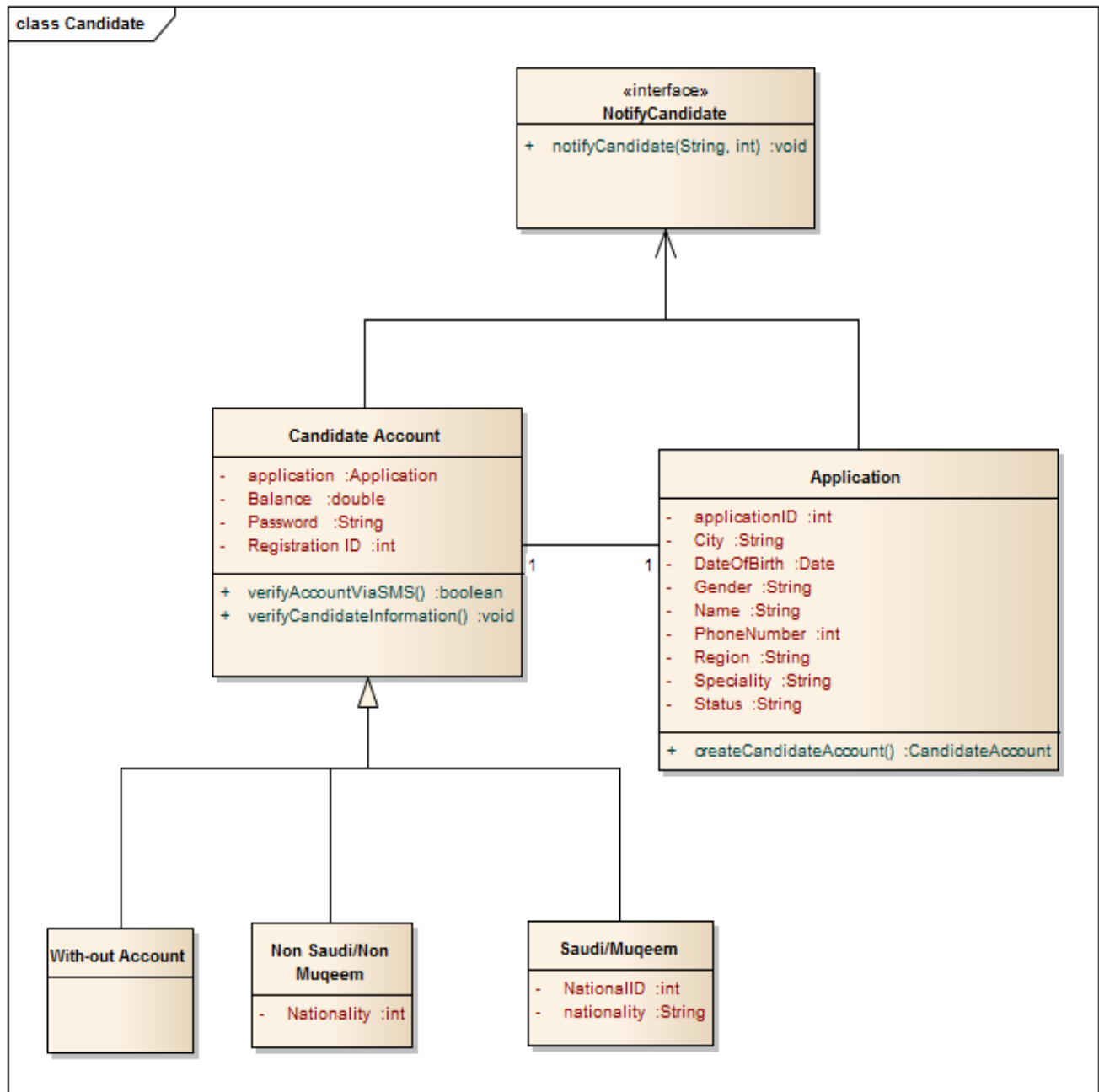
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Class Packages Details

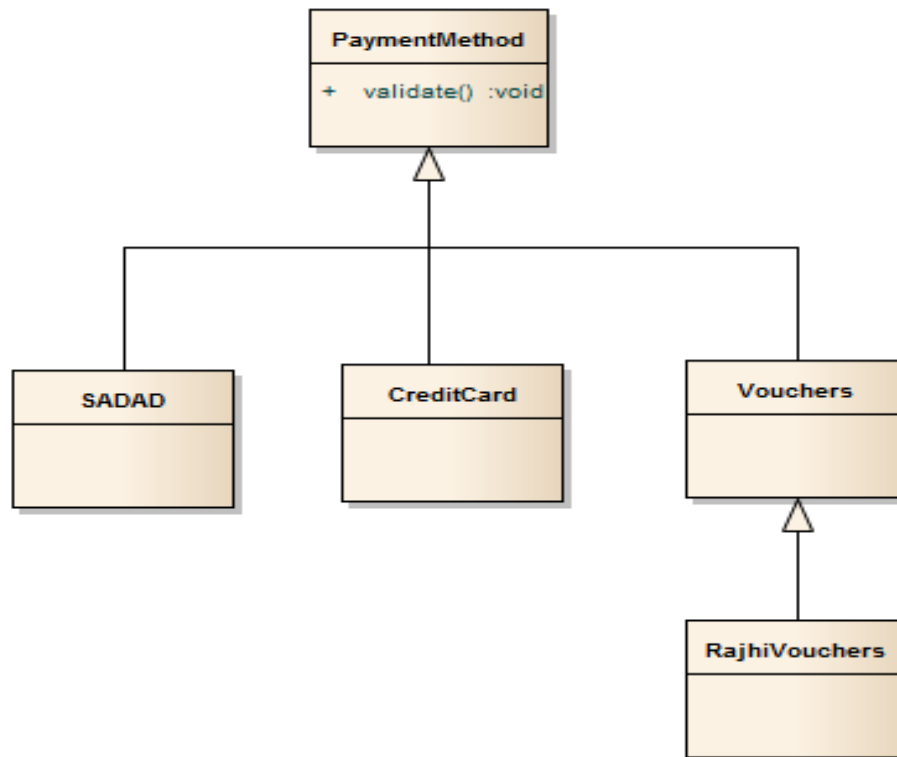
• EMPLOYEE PACKAGE:



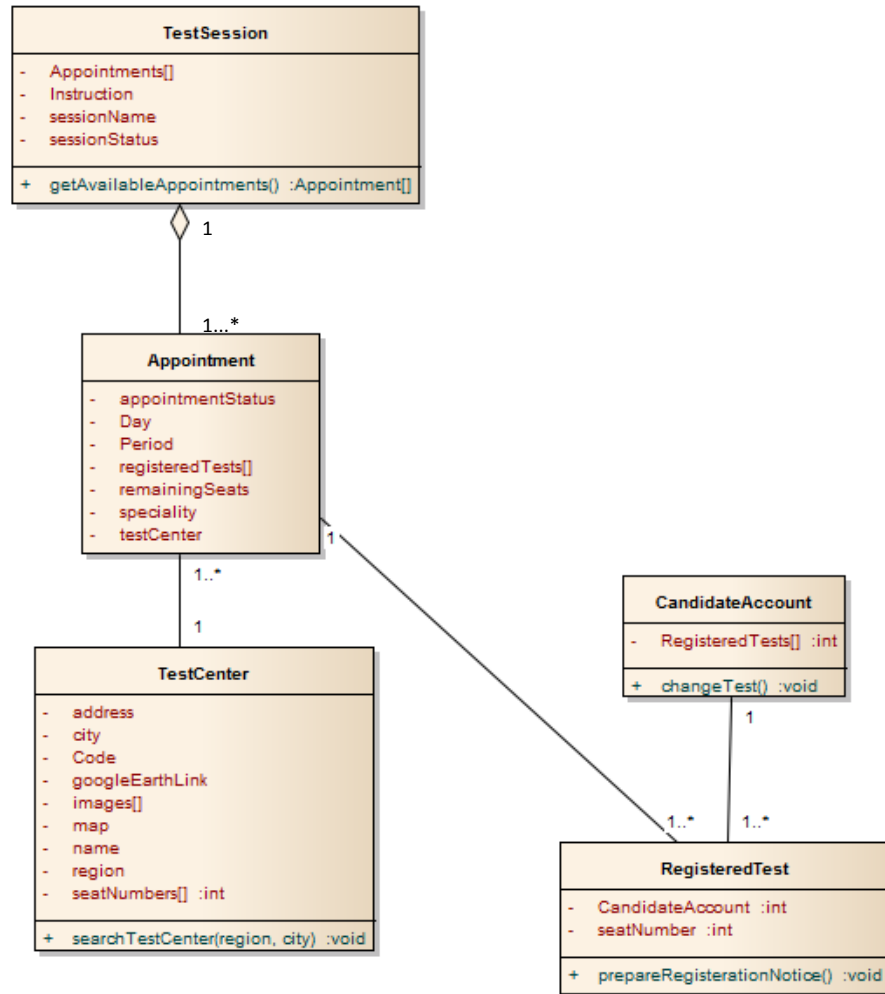
• CANDIDATE PACKAGE:



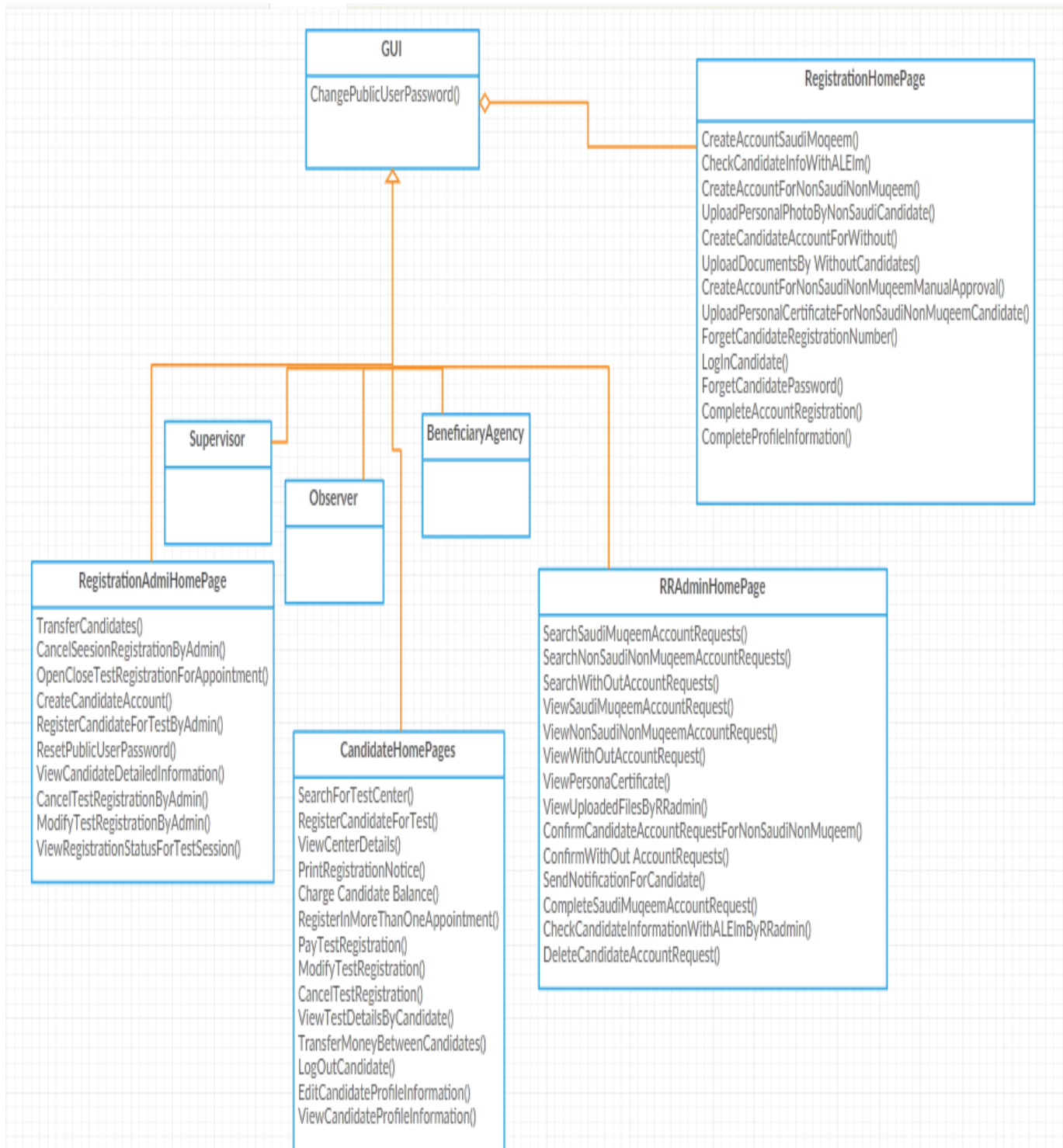
- PAYMENT PACKAGE:



• TEST PACKAGE:



• GUI PACKAGE:



Data Structure of the classes' *attributes*

• TESTCENTRE

Attribute Name	Description
Address	About : it holds the address of the test center Type : String Restriction : it follows the following format (Postal Code)(Street name)
City	About : the city that the test center is located in. Type : String Restriction : length > 1
googleEarthLink	About : link of center location in google earth Type : String Restriction : it should follow the following format < https://[www].(%)s.com/(%)s > Where %s refers to a string
Images[]	About : an array holding pictures of the test center Type : ArrayList of type Image Restriction : none
Map	About : an image showing the center's map Type : Image Restriction : none
name	About : The name of test center Type : String Restriction : length > 5
Region	About : the region that the center is located in Type : String Restriction : length > 2
Code	About :The code of the center which is used as a key to identify the center Type : String Restriction : : it should follow the following format <[Region Code of length = 3]+[integer of length = 3] >
seatNumbers	About : array holds the seat numbers at this test center Type : String Restriction : format will be as follows : “(C)-(R)” Where C is the column number And R is the row number

● APPOINTMENT

Attribute Name	Description
appointmentStatus	<p>About : shows the status of this appointment Type : String Restriction : it should be one of the following</p> <ul style="list-style-type: none"> - Available. [To be appeared in Green] - Waiting List. [to be appeared in Orange] - Blocked. [to be appeared in Gray without the caption "Blocked"] - Unavailable. [To be Appeared in Black without the caption "Unavailable"] - Full. [to be appeared in Red]
Day	<p>About : The day of appointment Type : String Restrictions : the full name of day should be written</p>
Period	<p>About : holds the period of appointment Type : int Restrictions : > 0</p>
Specialty	<p>About : holds the specialty of the exam to be held in this appointment Type : String Restrictions : length > 2</p>
testCenter	<p>About : the test center that this appointment is in Type : TestCenter Restrictions : none</p>
RegisteredTest	<p>About :Array that holds the test session registered by the candidates in this appointment Type: List of type RegisteredTest Restriction: None</p>
RemaingSeats	<p>About : This will hold the number of the available seats in the test center of this appointment Type : integer Restriction : RemaingSeats < = testCenter.Capacity</p>

● TESTSESSION

Attribute Name	Description
Appointments	About : an array holding the appointments of this test session Type : ArrayList of type Appointment Restrictions : none
Instruction	About : text containing the instructions of this test session Type : String Restrictions : length > 10
SessionName	About : the name of this test session and its start dates Type : String Restrictions : follows the following format <ul style="list-style-type: none"> - (Test Name – MM – YY) Where: <ul style="list-style-type: none"> ▪ Test Name: Test Name in the template details. ▪ MM: Month of the start Registration Date ▪ YY: Year of the Start Registration Date
sessionStatus	About : holds the status of this test session Type : String Restrictions : it should be one of the following <ul style="list-style-type: none"> - Early Registration: Late Registration date is not due. - Late Registration. Late Registration Date is due.

● APPLICATION

Attribute Name	Description
ApplicationID	About : Stores the amount of funds the candidate has Type : double Restriction : The candidate Balance should be greater than or equal the Registration Fees.
city	About : Store the place where the candidate resides Type : String

	Restriction : The system should filter “City” based on the selected Region
dateOfBirth	About : The date when the candidate was born Type : Date Restriction : Date type can be in hijri or Gregorian
name	About : The name of the candidate Type : String Restriction : None
Gender	About : The Gender of the candidate Type : String Restriction : It must be either male or female
phoneNumber	About : Stores the mobile phone number of the candidate Type : int Restriction : Mobile Number should be in a correct format of mobile Number and it should be in two textboxes with the following format. [+ “Country Code”] [“Mobile Number”].
region	About : Stores the region in which the candidate resides. Type : String Restriction : “Region” list should retrieve all regions for all selected test centers in the test schedule
specialty	About :Store the specialty of the candidate Type : String Restriction : علمي ادبي ...الخ.
Status	About : hold the status of the registration request Type : String Restriction : must be one of the following : a. “New” b. “Application modified” c. “Notification Sent”. d. “Approved

● CANDIDATEACCOUNT

Attribute Name	Description
application	About : Stores the candidate's basic registration information Type : Application Restriction : none
Balance	About : Stores the amount of funds the candidate has Type : double Restriction : The candidate Balance should be greater than or equal the Registration Fees
Password	About: Password of the candidate's account Type : String Restriction : Password length must be 6-20 character and it should be a combination of letters and numbers
registrationNumber	About : a unique number generated by the system for each candidate Type : Integer Restriction : format should be as the following: YY – Random Number where: YY: hijiry year (32, 33 ,34) 8 Random Numbers and they should be unique.
RegisteredTest	About :Array that holds the test session registered by this candidate Type: List of type RegisteredTest Restriction: None

● SAUDI/MOQEEM

Attribute name :	Description :
NationalID	About : store the government ID for Saudis and muqem which is used to identify the candidate Type : Integer Restriction : approved by AL-ELM
Nationality	About : The nationality of the candidate Type : String Restriction : none

● NONSAUDI/NONMOQEEM

Attribute name :	Description :
NationalID	About : The store the government ID for Saudis and muqem which is used to identify the candidate Type : Integer Restriction : approved by AL-ELM

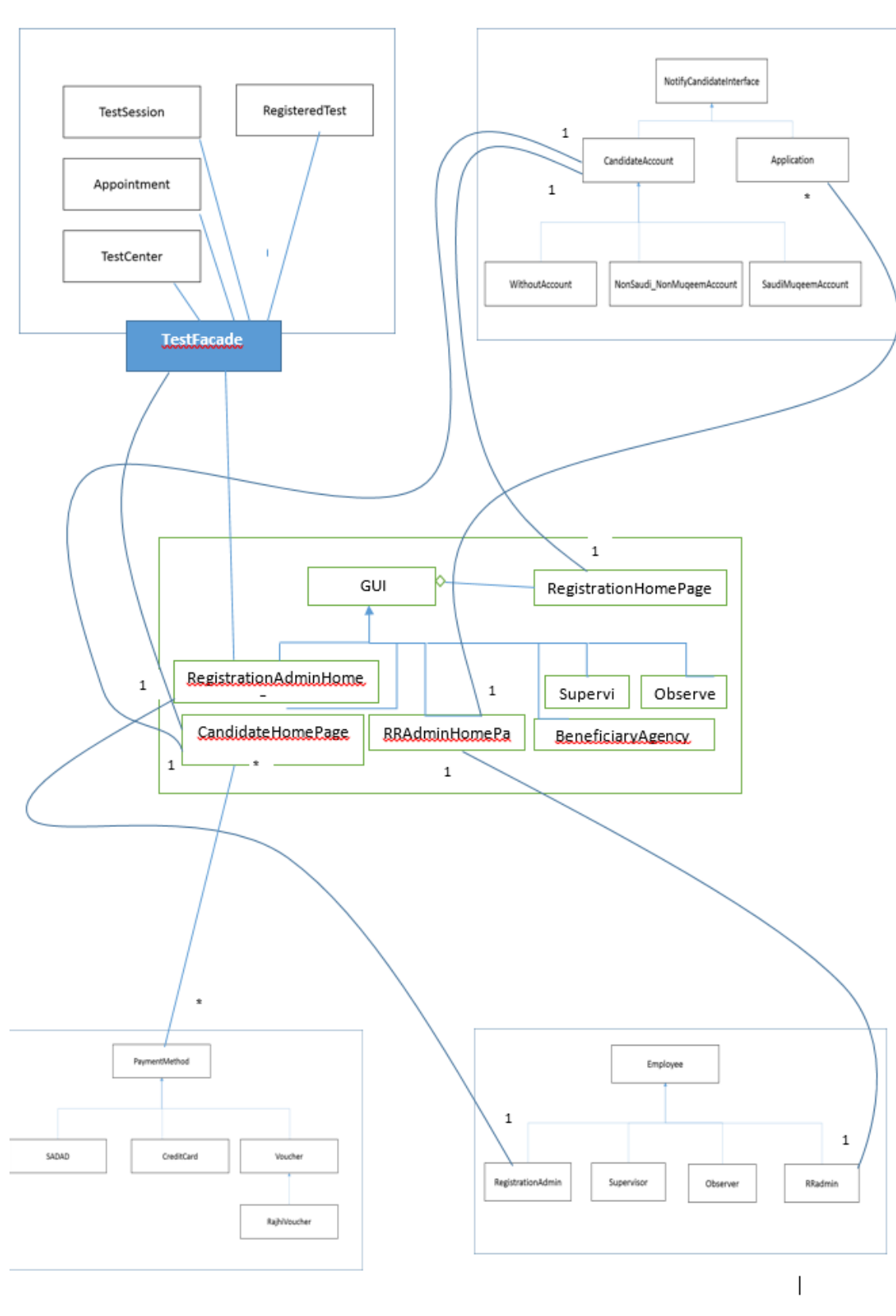
● REGISTEREDTEST

Attribute name :	Description :
CandidateAccount	About : the account of the candidate Type : CandidateAccount Restriction : none
seatNumber	About : holds the seat number for the candidate Type : Integer Restriction : It should be retrieved from the associated TestCenter.

● EMPLOYEES

Attribute Name	Description
dateOfBirth	About : The date when the employee was born Type : Date Restriction : Date type can be in hijri or Gregorian
name	About : The name of the employee Type : String Restriction : None
nationalID	About : Unique number given to the employee by the government Type : int Restriction : should be 10 digits and each digit should be in separate text box.
password	About : Password of the employee's account Type : String Restriction : Password length should be between 6-20 and it should be combinations from letters and numbers
phoneNumber	About : Stores the mobile phone number of the candidate Type : int Restriction : Mobile Number should be in a correct format of mobile Number and it should be in two textboxes with the following format. [+ "Country Code"] ["Mobile Number"].

Classes' Relations at package level



Pseudocodes

*** The methods of the GUI package were clarified in the sequence diagram in phase 1...Here we just clarified the methods used in the sequence diagram .

● **Candidate Registers a Test ;**

Start

List < getTestSessions() from TestSession Class

Display As Grid On screen

Prompt User to select one test Session

showTestInstructions

if (don't agree) > exit ; else continue

testSessionSelect.getAppointments()

if ("search for test center" is selected)

Do :

 Prompt User to Enter the following :

 Region , City , Center Name

 SearchTestCenters(region , city , [Center Name])

 displayResultedCenter(s)

if ("view center details" is selected)

Do :

 getCenterDetails() from class TestCenter

Show pop-up Screen with the following details :

 Center Name , Region , City , Center Address , Google Earth link

 Center Images , Center Map

When an appointment is selected :

Do :

Display the selected appointment details with the following details :

Session Name , Day , Period , Test Center Name

When “next step > payment “ is selected :

Do :

getTestFees(selected Test Session) from TestSesison Class ;

display on screen

getPaymentMethods() from class PaymentMethod

display on screen

Switch (methodSelected)

Case = Candidate balance

Do :

getCandidateBalance(this) from CandidateAccount Class

display on screen

if(candidateBalance < testFees)

Do :

deductCandidateBalanceAndUpdate()

prompt user to pay the rest via other payment methods

setTestStatus(“waiting Paymeny”) in CandidateAccount Class

else Do :

deductCandidateBalanceAndUpdate()

display Message “ Paid Successfully “

setTestStatus(“ confirmed “) in CandidateAccount Class

case = Vouchers Alrajhi

Do :


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        Prompt user to enter Voucher Code
        Validate(coded entered) in VoucherRajhi Class
        If ( valid )
            Do:
                If ( testFees < VoucherBalance )
                    Do :
                        Display : Voucher balance is not enough
                    Else Do :
                        deductFeesFromVoucher(testFees) in VoucherRajhi Class
                        display Message " Paid Successfully "
                    Else Do:
                        Display : voucher not valid
                        setTestStatus( "waiting Paymeny" ) in CandidateAccount Class
                case = credit card
                    Do:
                        /* no details mentioned in the requirements document about this part*/
                case = SADAD
                    Do :
                        /* no details mentioned in the requirements document about this part*/
            END switch
        if ( " Identification Verification " is checked AND candidate is female )
            Do :
                prompts the candidate to select the Identity type for attending the test from the following list:
                - National ID.
                - Separate Passport.
                - University ID card with Photo.
                - Qiyas Smart Card.
                - بطاقة دخول الاختبار

```

print the Registration Notice

END

- **Method: Validate candidate account info with AL-ELM:**

Start

The system sends the candidate's information

Check attributes of the information

If (The information matches)

Send a success message

Else

Send a failure message

Prompt the user to fill his information again

End

- **Method: Check the selected personal photo:**

Start

The system retrieves the photo from the user

The system checks the format of the photo

If: The format is not an image format

Display an error message

Else

Display the photo on the candidate's profile page

End

- **Method: Retrieve all search results in the Saudi/Muqem accounts requests grid:**

Start

Get criteria from user

Search database based on criteria

If (No search result)

Display alert message: no records found

Else

Return Account request details

End