

UNG Attendance System



Jordan Todd

CIS 4950: Information Systems Capstone Project

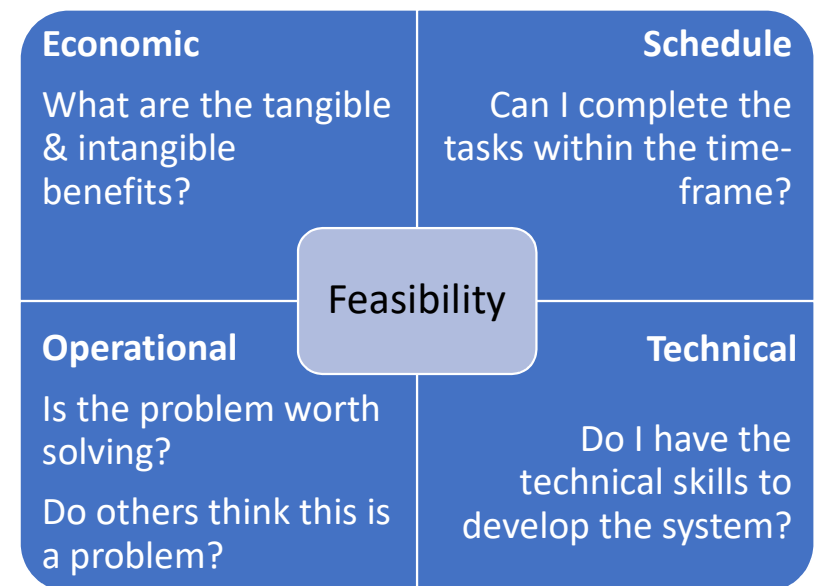
University of North Georgia

Spring 2018

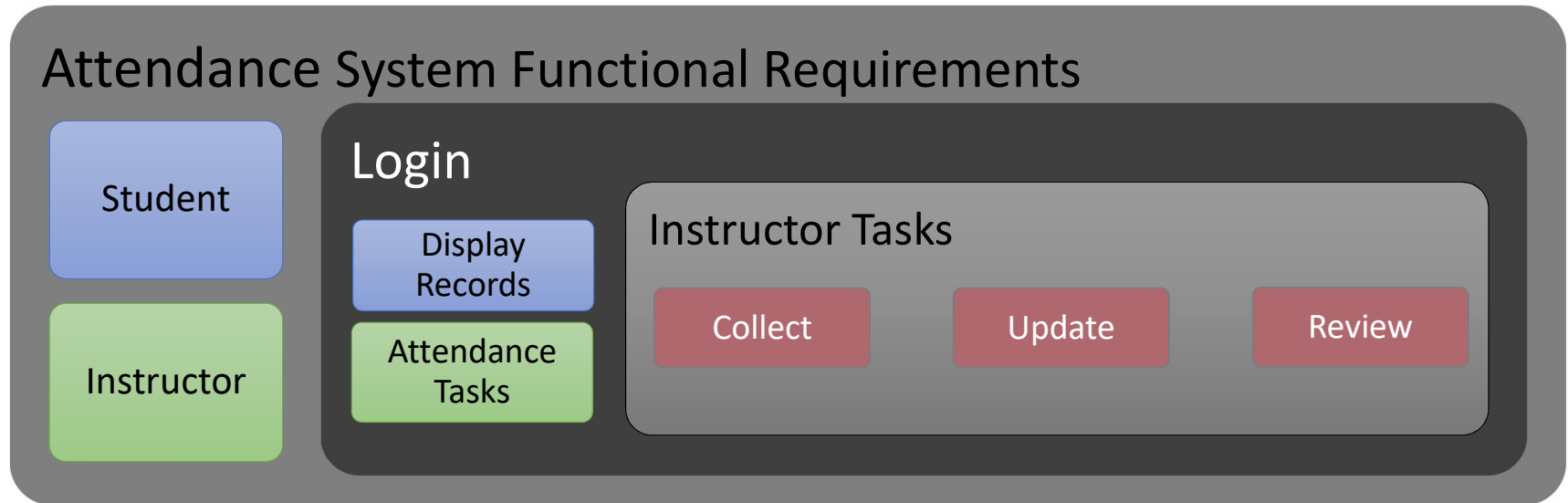
Project Selection

Project Selection
» What problems have been observed?
» What could be improved?

Attendance Tracking	
» How much time is lost?	» Current method accuracy?
» Are grades valid?	» Where are my records?



Scope

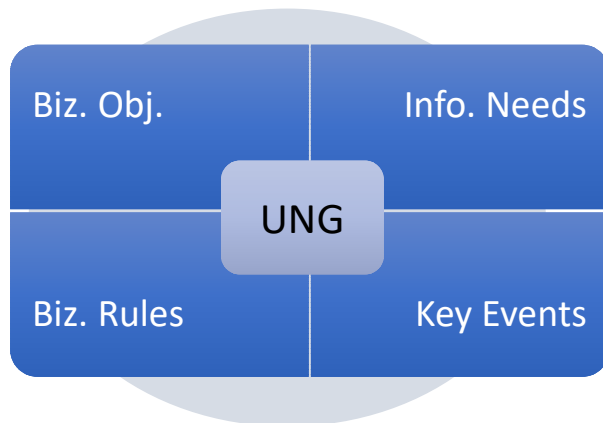


Implementation Plan		
Component	Function	Source
Database	Performs CRUD operations	Developed using SQL Server
App Server	Processes data requests	Developed using C# & ASP.NET
Web App	Provides web interface	Developed using .NET Framework

Analysis: Determining Requirements

Req. Collection: *Traditional Approach*

Business Documents	<ul style="list-style-type: none"> » Discover issues, rules, & directions » See concrete examples of data & info. use
Observation	<ul style="list-style-type: none"> » Observe situations to see how data is handled and what information is significant



3.7.1 Student **Attendance** Policy

<https://ung.edu/...attendance.../3.7.1-student-attendance-policy.php>



3.7.1 Student **Attendance** Policy. University of North Georgia expects s examination. When a student is compelled for any reason to be absent l absence directly to the instructor. The student ...

3.7 Class **Attendance** Policies

<https://ung.edu/academic-affairs/faculty...attendance.../index.php>



... Research and Engagement · Programs Serving Non-Enrolled Minors · acadaffairs@ung.edu 706- 864-1840. Social: a unit of President's Office 3.7 Class **Attendance** Policies. Print Email ...

Costs

<https://ung.edu/financial-aid/costs.php>



The official Cost of **Attendance** is determined each year by the Financi includes tuition, fees, on-campus room and board (or a housing and foo personal expenses. The Cost of ...

Course **attendance** schemes | Desire2Learn Resource Center

<https://web.ung.edu/media/D2L/.../course-attendance-schemes.html>

Course **attendance** schemes are created and managed by child org units. They are **attendance** scheme created in Org Unit A cannot see or use a course **attendance** s

Deleting an **attendance** register | Desire2Learn Resource Center

<https://web.ung.edu/media/D2L/.../deleting-attendance-register.html>

Audience: Instructor · < Editing an **attendance** register up Checking which **attenda** Copyright © 1999-2013 Desire2Learn Incorporated. All rights reserved.

UNG Policy Database - Class **Attendance**

<https://policy.ung.edu/policy/details/1423>

Jul 20, 2016 ... University-Sponsored Activities: Include activities related to perform Government Association, field trips related to academic courses, as well as any other for ...

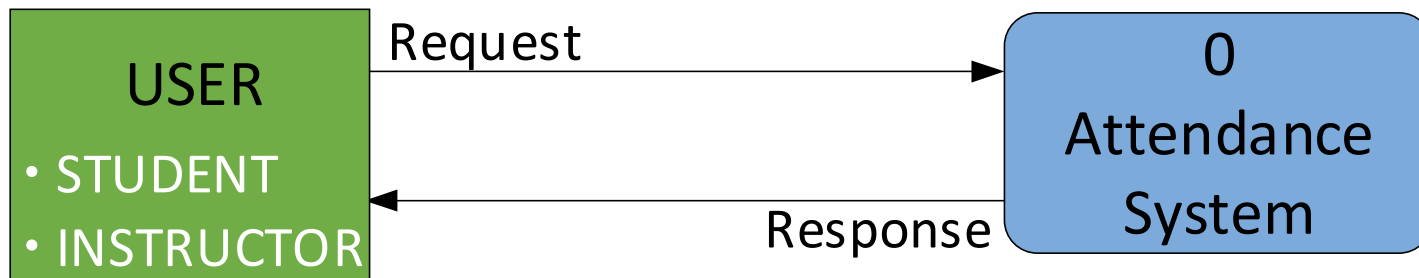
3.8 Roll Verification

<https://ung.edu/academic-affairs/faculty-handbook/.../index.php>

Analysis:

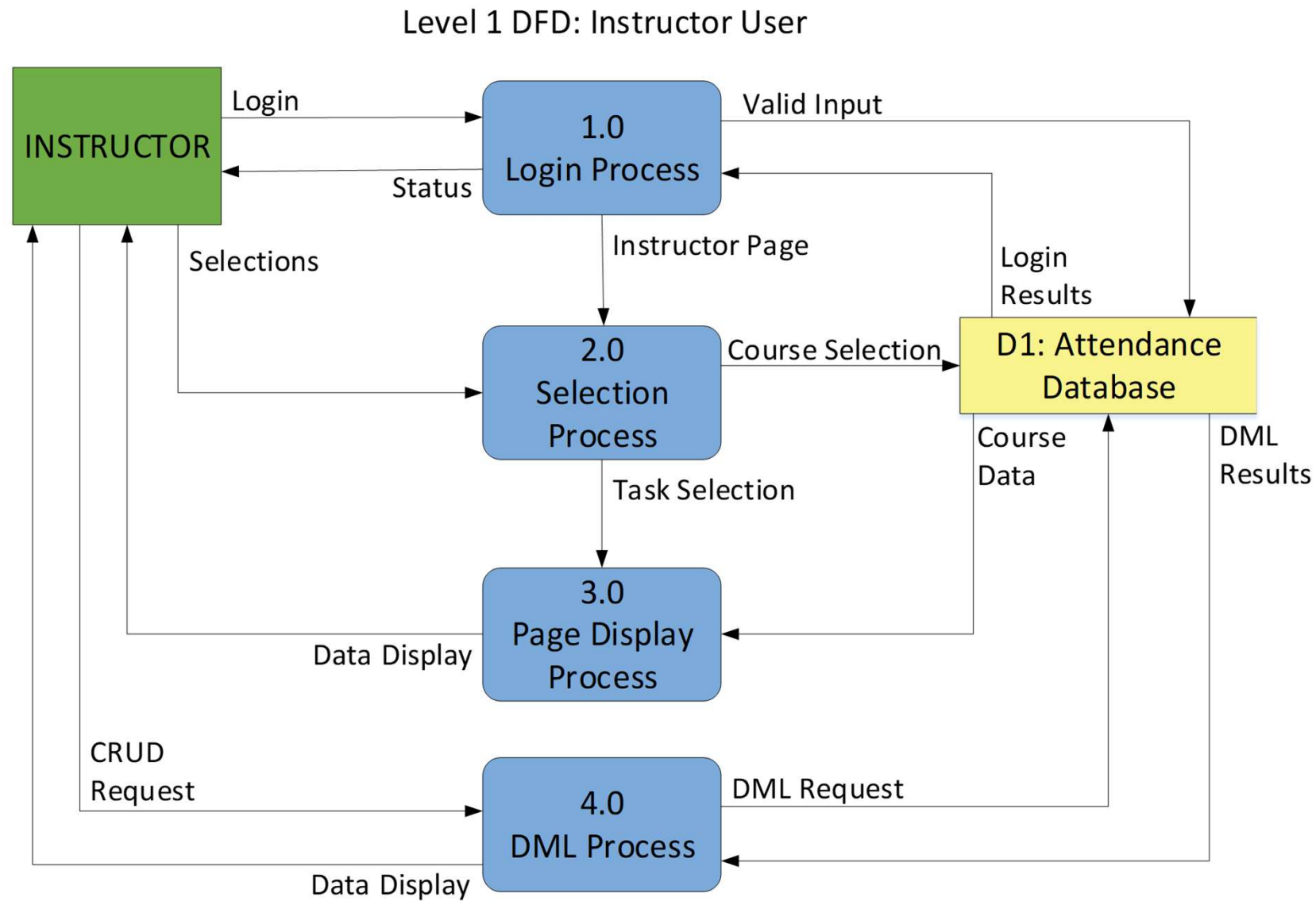
*Structuring
Requirements –*
PROCESS MODELING

Context/Level-0 DFD



Analysis:

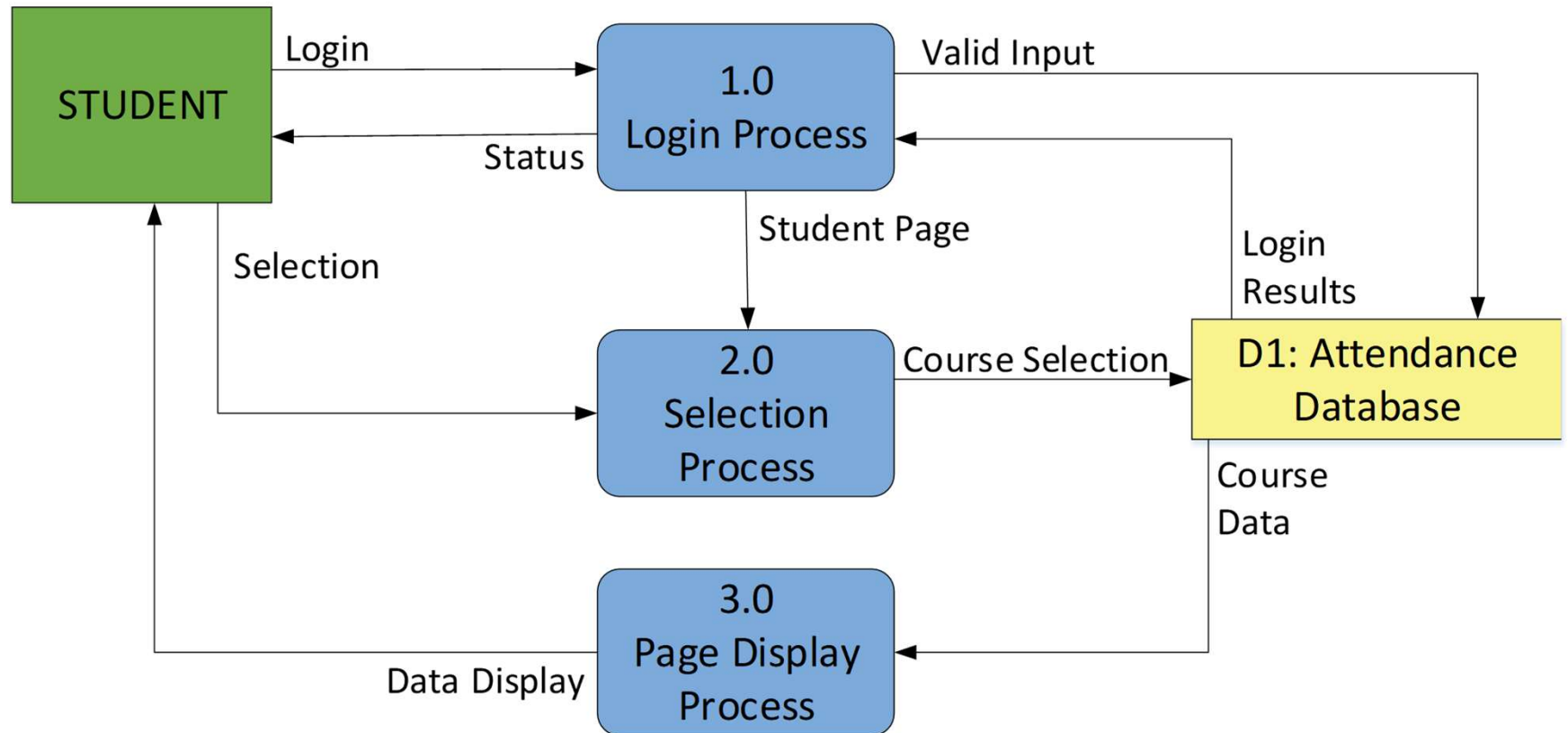
PROCESS MODELING
Cont'd.



Analysis:

PROCESS MODELING
Cont'd.

Level 1 DFD: Student User

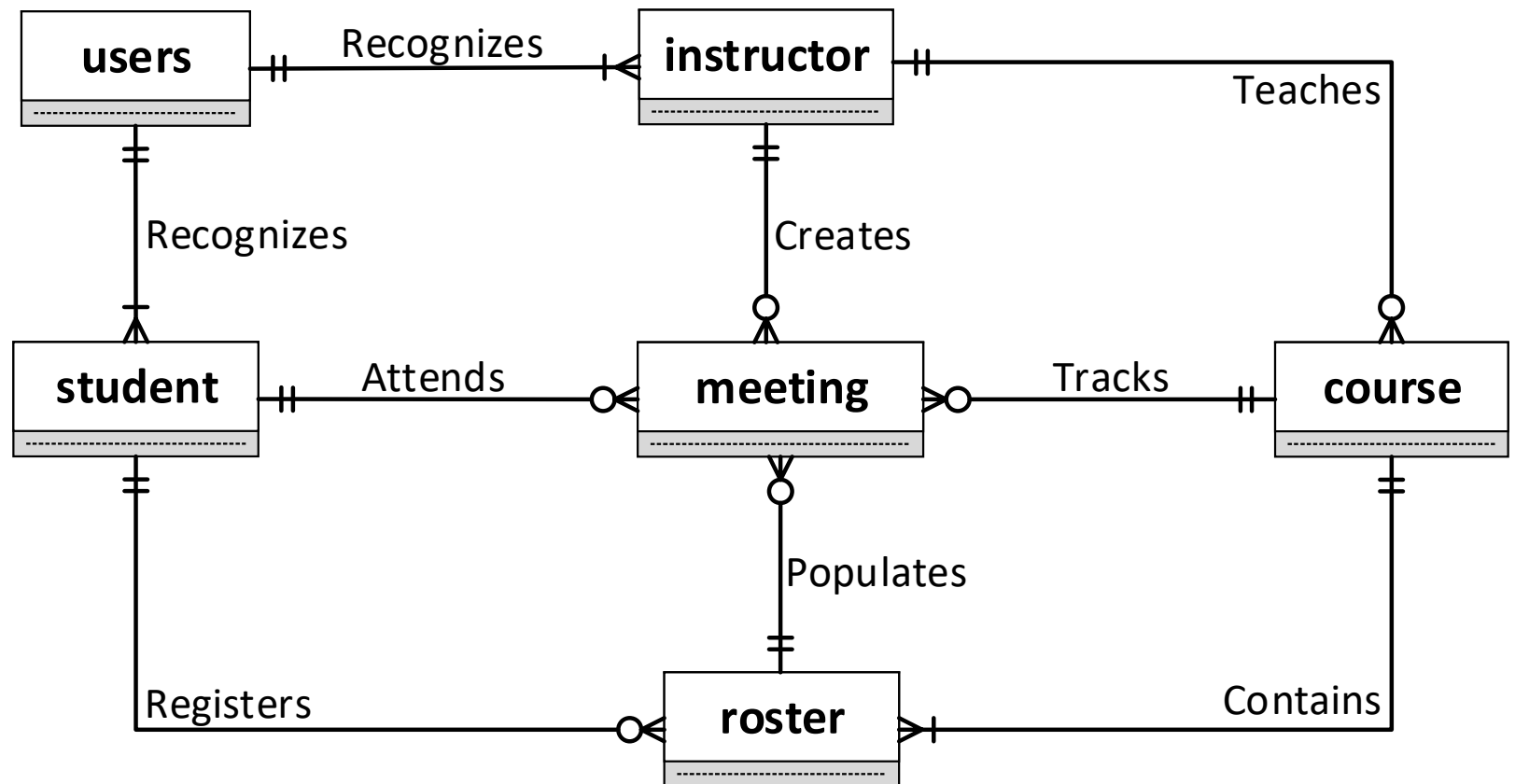


Analysis:

Structuring Requirements

— CONCEPTUAL
DATA MODELING

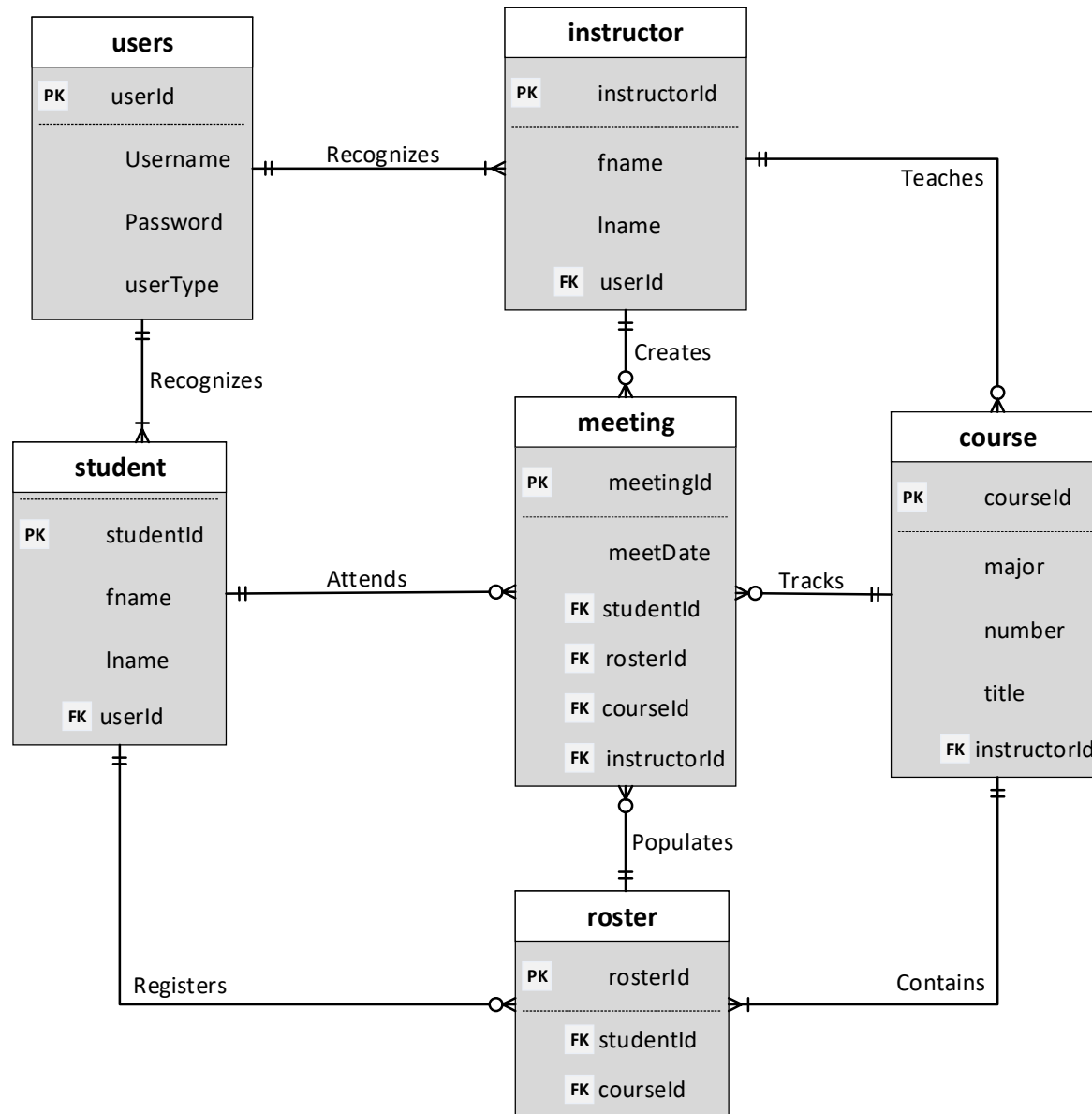
ERD: Conceptual Model



Analysis:

CONCEPTUAL DATA MODELING Cont'd.

ERD: Logical Model



Design:

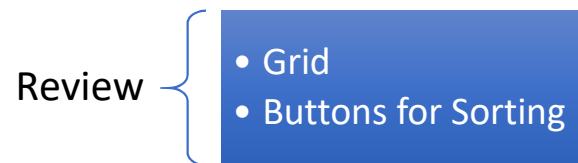
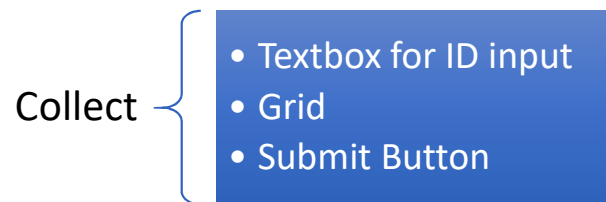
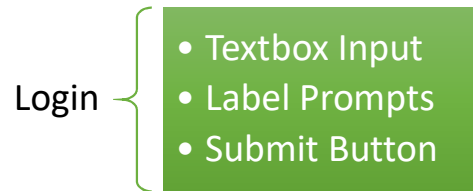
Front-End

Designing Forms & Reports

Who uses?	Purpose?	When are they used?
How many use?	Req. styling?	Where to deliver?

Requirements

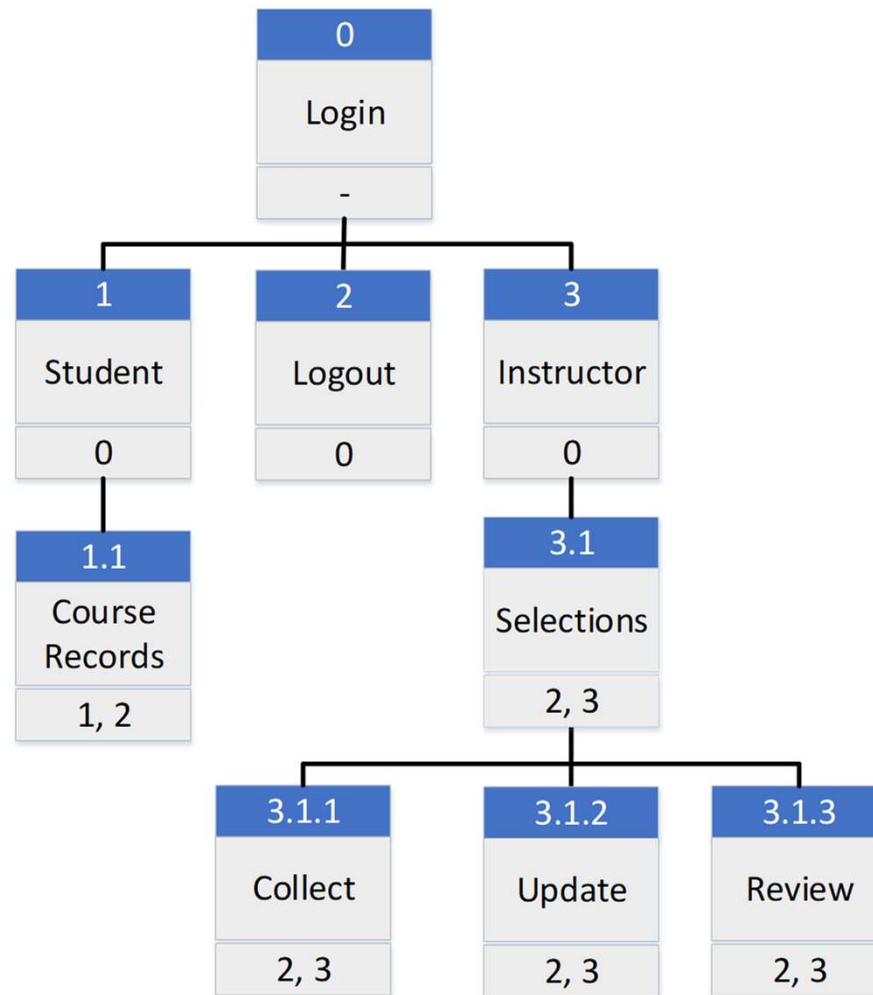
Login	Student Display	Instructor Display
Collect Task	Update Task	Review Task



Design:

Front-End
Cont'd

Dialogue Diagram



Design:

Server Side

Table: USERS

Attribute Name	Data Type	Length	Key	Description	Format	Req?	Constraints	Example
userId	INT	-	PK	Uniquely identifies a users login	Identity	Y	-	22
Username	VARCHAR	20	-	Describes a users login name	Not Null	Y	-	John123
Password	VARCHAR	20	-	Describes a users login password	Not Null	Y	-	password321
userType	CHAR	1	-	Describes a users type	Not Null	Y	-	s

Table: INSTRUCTOR

Attribute Name	Data Type	Length	Key	Description	Format	Req?	Constraints	Example
instructorId	CHAR	9	PK	Uniquely identifies an instructor	Not Null	Y	-	900123456
fname	VARCHAR	20	-	Describes an instructors first name	Not Null	Y	-	Jane
lname	VARCHAR	20	-	Describes an instructors last name	Not Null	Y	-	Doe
userId	INT	-	FK	Uniquely id's an instructors login	Not Null	Y	users.userId	4

Table: STUDENT

Attribute Name	Data Type	Length	Key	Description	Format	Req?	Constraints	Example
studentId	CHAR	9	PK	Uniquely identifies a student	Not Null	Y	-	900756635
fname	VARCHAR	20	-	Describes a students first name	Not Null	Y	-	Jordan
lname	VARCHAR	20	-	Describes a students last name	Not Null	Y	-	Todd
userId	INT	-	FK	Uniquely identifies a students login	Not Null	Y	users.userId	1

Table: MEETING

Attribute Name	Data Type	Length	Key	Description	Format	Req?	Constraints	Example
meetingId	INT	-	PK	Uniquely identifies a course meeting	Identity	Y	-	45
meetDate	DATE	-	-	Describes the date for a meeting	Not Null	Y	-	01/01/18
studentId	CHAR	9	FK	Uniquely identifies a student	Not Null	Y	student.studentId	900123456
rosterId	INT	-	FK	Uniquely identifies a roster	Not Null	Y	roster.rosterId	2
courseId	CHAR	4	FK	Uniquely identifies a course	Not Null	Y	course.courseId	2011
instructorId	CHAR	9	FK	Uniquely identifies an instructor	Not Null	Y	instructor.instructorId	900123458

Table: COURSE

Attribute Name	Data Type	Length	Key	Description	Format	Req?	Constraints	Example
courseId	CHAR	4	PK	Uniquely identifies a course	Not Null	Y	-	2011
major	CHAR	4	-	Describes a courses major area	Not Null	Y	-	BUSA
number	CHAR	4	-	Describes a course number	Not Null	Y	-	3900
title	VARCHAR	30	-	Describes the courses title	Not Null	Y	-	Algebra II
instructorId	CHAR	9	FK	Uniquely identifies an instructor	Not Null	Y	instructor.instructorId	900876543

Table: ROSTER

Attribute Name	Data Type	Length	Key	Description	Format	Req?	Constraints	Example
rosterId	INT	-	PK	Uniquely identifies a roster	Identity	Y	-	32
studentId	CHAR	9	FK	Uniquely identifies a student	Not Null	Y	student.studentId	900765532
courseId	CHAR	9	FK	Uniquely identifies a course	Not Null	Y	course.courseId	2046

Design:

Server Side

Cont'd

```
using System.Configuration;
using System.Data;
using System.Data.SqlClient;
```

```
protected void update_attendance()
{
    //db access
    string cncn = ConfigurationManager.ConnectionStrings["hookup"].ConnectionString;
    using (SqlConnection dbhookup = new SqlConnection(cncn))
    {
        dbhookup.Open();
        //execute stored procedure: "change_attendance"
        using (SqlCommand cmd = new SqlCommand("change_attendance", dbhookup))
        {
            cmd.CommandType = CommandType.StoredProcedure;
            //parameters to pass: course from selections; selected student & date for updating to present;
            cmd.Parameters.AddWithValue("@courseId", HiddenField1.Value);
            cmd.Parameters.AddWithValue("@studentId", HiddenField2.Value);
            cmd.Parameters.AddWithValue("@meetDate", HiddenField3.Value);
            //status returns int for "number of rows affected"
            status = cmd.ExecuteNonQuery();
            //1 = good input, good update
            if (status == 1)
            {
                lbl1.Text = "Updated Attendance: " + studentname + " " + "set to present for " + meetdate.ToString("D");
            }
            //status should never be > 1; status < 1 means nothing updated;
            else if (status != 1)
            {
                lbl1.Text = "Failed to update attendance, try again or contact administrator";
            }
        }
    }
}
```

Design:

Server Side Cont'd

```
<!-- gridview -->
<div class="box">
  <asp:GridView ID="GridView1" DataSourceID = "SqlDataSource1"
    asp:GridView>
</div>
```

Databound Col0	Databound Col1	Databound Col2
ABC	0	ABC
ABC	1	ABC
ABC	2	ABC
ABC	3	ABC
ABC	4	ABC
ABC	5	ABC
ABC	6	ABC
ABC	7	ABC
ABC	8	ABC
ABC	9	ABC
1 2		
SqlDataSource - SqlDataSource1		

```
ID="SqlDataSource1" runat="server" ConnectionString="<%$ ConnectionStrings:AttendanceConnectionString %>" SelectCommand="get_student_records"
  Parameter ControlID="course_ddl" DefaultValue="" Name="courseId" PropertyName="SelectedValue" Type="String" />
  Parameter ControlID="HiddenField1" DefaultValue="" Name="studentId" PropertyName="Value" Type="String" />
```

Demo

<http://ungattendancesystem.azurewebsites.net>

<http://ungattendancesystem.azurewebsites.net>

Thank You

