Digital Pink Card
Software Architecture

Submitted to:

Asst. Prof. Ma. Rowena C. Solamo
Faculty Member
Department of Computer Science
College of Engineering
University of the Philippines, Diliman

Submitted by:
Cai, Jann Willem B.
Daroya, Carlos Adrian A.
Ocampo, Pauline L.

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Revision Control

History Revision:

Revision Date	***Person Responsible***	***Version Number***	***Modification***
11/29/17	Carlos Adrian Daroya	1.0	Initial Document; Created Architecture Diagram; Filled out Controller Classes Description
11/30/17	Jann Willem Cai	1.1	Filled out purpose, audience, system description; Filled out UI Design Classes Description
12/01/17	Pauline Ocampo	1.2	Filled out data design classes, minor formatting changes

Purpose:

Consolidation of all classes elaborated on User Interface Design, Data Design and Control classes used in Program Specifications into a single software architecture for Timein, Timeout, and Check Own Usage.

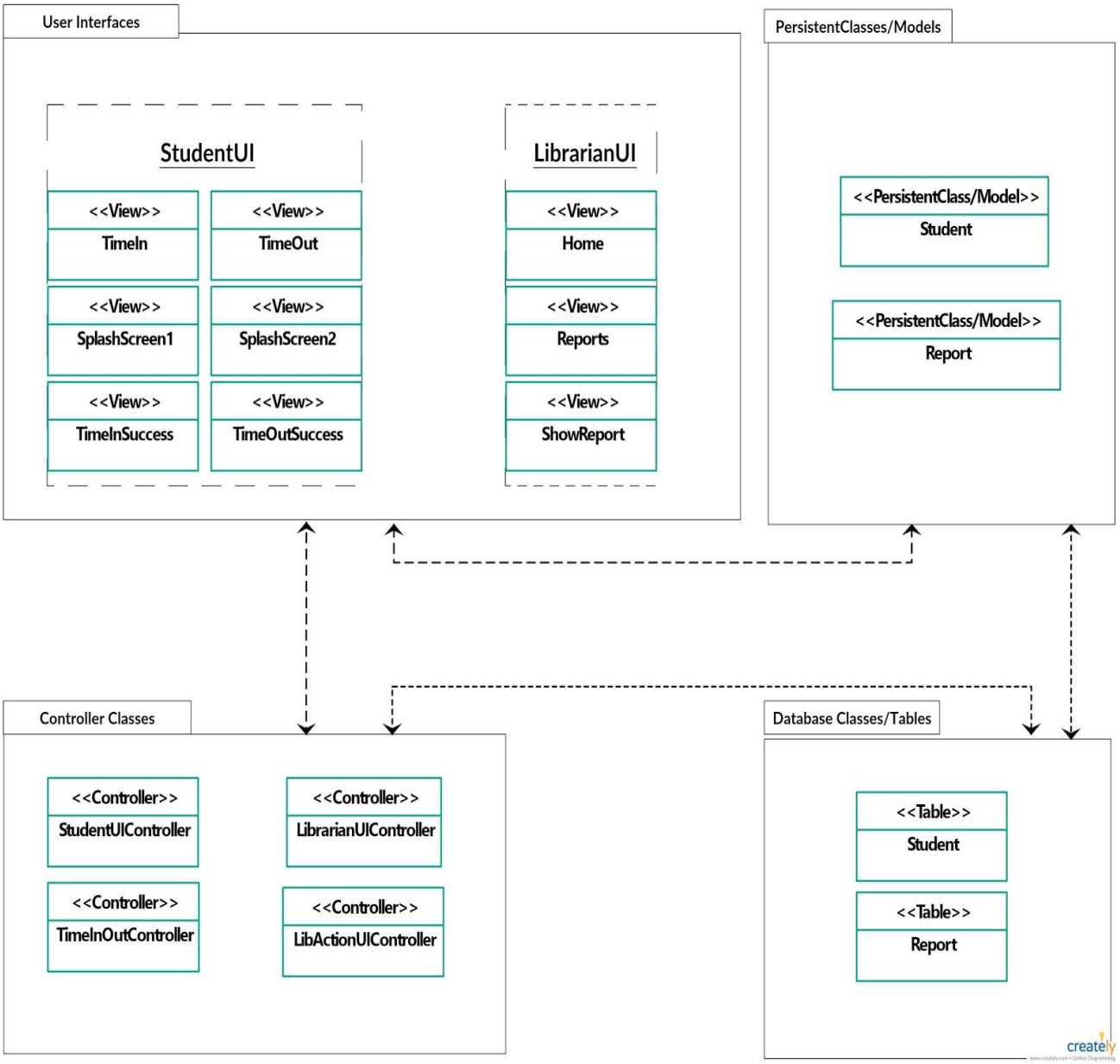
Audience:

Software Engineers who want to see the consolidated software architecture of the system Digital Pink Card.

System Name: Digital Pink Card

Description: The Digital Pink Card is a system that serves as a digitization of the UP Pink Card. Students who wish to use UP library computers scan the barcode on the back of their IDs upon start of their computer use time, and scan it again when done. The application tracks the student's total computer use, and starts charging the student once he has used more than the 20 free allotted computer hours. A report of each time-in and time-out is sent to the librarian in charge of tracking computer use.

Software Architecture Diagram:



User Interface Design Classes:

Screen Name	Description
TimeIn	Student UI. After a student scans his/her id and it is indicated in the database that the student is not marked as logged into the system, the student will be marked as logged in. Student can then choose an available seat if there is one, and then proceed to TimeInSuccess screen. If there is no available seats or id is invalid or not yet validated, this screen will say so and after a while will go back to SplashScreen1.
TimeOut	Student UI. After a student scans his/her id and it is indicated in the database that the student is marked as logged into the system, the student will be unmarked as logged in. The start time, end time, difference between start and end time is shown on the screen. Also shown on the screen is the amount due of the student if the student has gone over free hrs and has to pay something. If not, the amount of free hrs left is shown. After a few seconds, it will transition to TimeOutSuccess screen.
SplashScreen1	Student UI. Welcome Screen #1 for the student, has some simple instructions on how to use the system written on it. Fades to SplashScreen2 after about a second. If a student scan his/her id, proceed to TimeIn/Timeout screen (depends if student is marked as logged in).
SplashScreen2	Student UI. Welcome Screen #2 for the student, has some simple instructions on how to use the system written on it. Fades back to SplashScreen1 after about a second. If a student scan his/her id, proceed to TimeIn/Timeout screen (depends if student is marked as logged in).
TimeInSuccess	Student UI. Indicates that student has successfully timed in. The start time and seat number is shown in the screen.
TimeOutSuccess	Student UI. Indicates that student have successfully timed out. Details on how to pay the amount due (if student have any dues) can be shown here.
Home	Librarian UI. Has a textfield where librarian can use to search for a particular student's report using his/her student number. After entering a valid id, transition to ShowReport screen.
Reports	Librarian UI. Used to view all the collective reports collected on a specific day.
ShowReport	Librarian UI. Shows all the details about a particular student: a table which consists of students timein, timeout, difference, amount due, etc. Librarian can edit amount due of student (if the student will pay the amount due at the time) and edit free hours of student (in case of forgotten timeout, etc).

Business Logic Classes:

Control	Description
StudentUIController	Controller class that will manage the transition of the following views: SplashScreen1, SplashScreen2.
TimeInOutController	Controller class that will manage the transition of the following views: TimeIn, TimeOut, TimeInSuccess, TimeOutSuccess. It will also take care of managing the persistent class student when timing in and out.
LibrarianUIController	Controller class that will manage static views in the LibrarianUI.
LibActionController	Controller class that will detect Librarian Actions and update persistent classes respectively.

Data Design Classes:

Class Name	Description
Student (Persistent Class)	Represents one student. It contains the data of a given student as retrieved from the Student table.
Report (Persistent Class)	Represents one report. It contains the data of a given report as retrieved from the Report table. One report is equivalent to one record of a session.
Student (Table)	Holds the information of all students in the Digital Pink Card system. One row represents the information of one student.
Report (Table)	Holds all reports in the Digital Pink Card system. One report, or one table row, is equivalent to one record of a session.