Cairo University
Faculty of Computers and Information

CS251

Software Engineering I

CS251: Phase 2 – Pythons
Project: EduGames
Software Design Specification

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Document Purpose and Audience

This document contains all of the information needed to develop the system and the target audience of this document is the implementation and testing team.

Team

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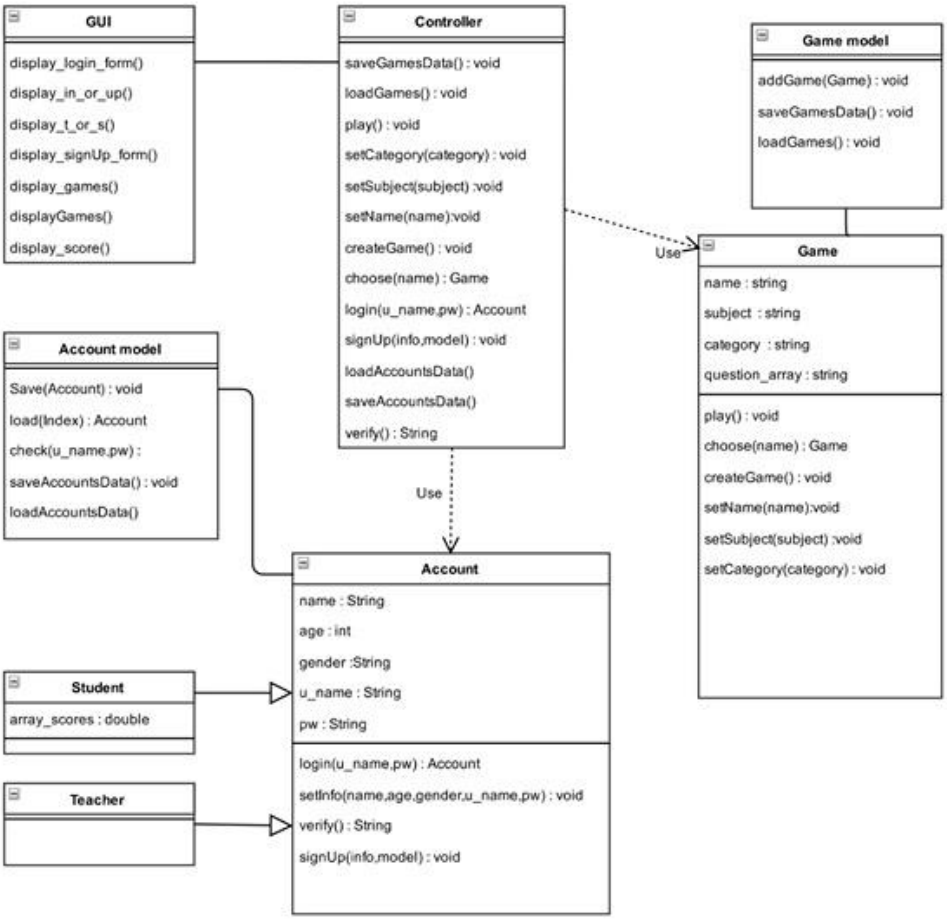
System Models

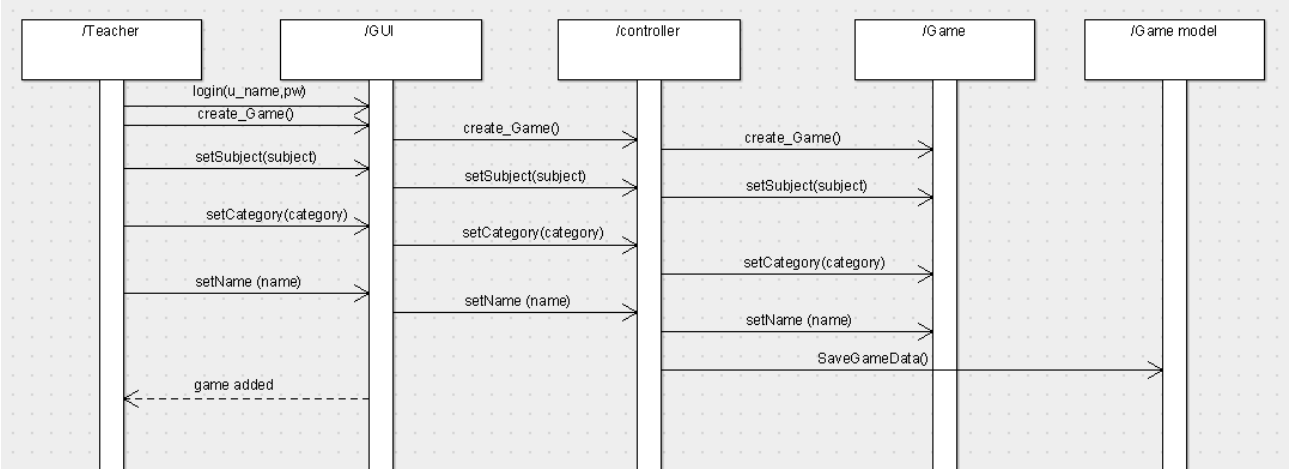
I. Class diagrams



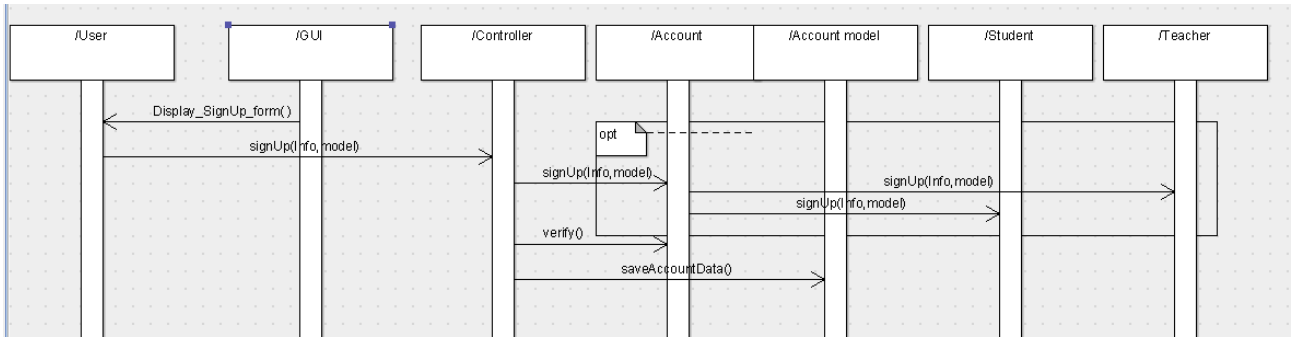
Class ID	Class Name	Description & Responsibility
CD1	GUI	This is the user interface that displays games on the website
CD2	Controller	This is the class responsible for creating objects and limiting access of users
CD3	Game Model	This class saves the data of games and everything related to them
CD4	Account	This class temporarily stores the users' data in memory
CD5	Account Model	This class stores the users' data in the database
CD6	Game	This class controls all the game operations like create, edit and remove
CD7	True/False [Game]	A child of Game class that handles the T/F kind of games
CD8	MCQ [Game]	A child of Game class that handles the MCQ kind of games
CD9	Student [Account]	A child of Account class used by students to save their game scores and it allows access to games through the controller
CD10	Teacher [Account]	A child of Account class used by teachers to allow them to create/edit their own games through the controller

II. Sequence diagrams

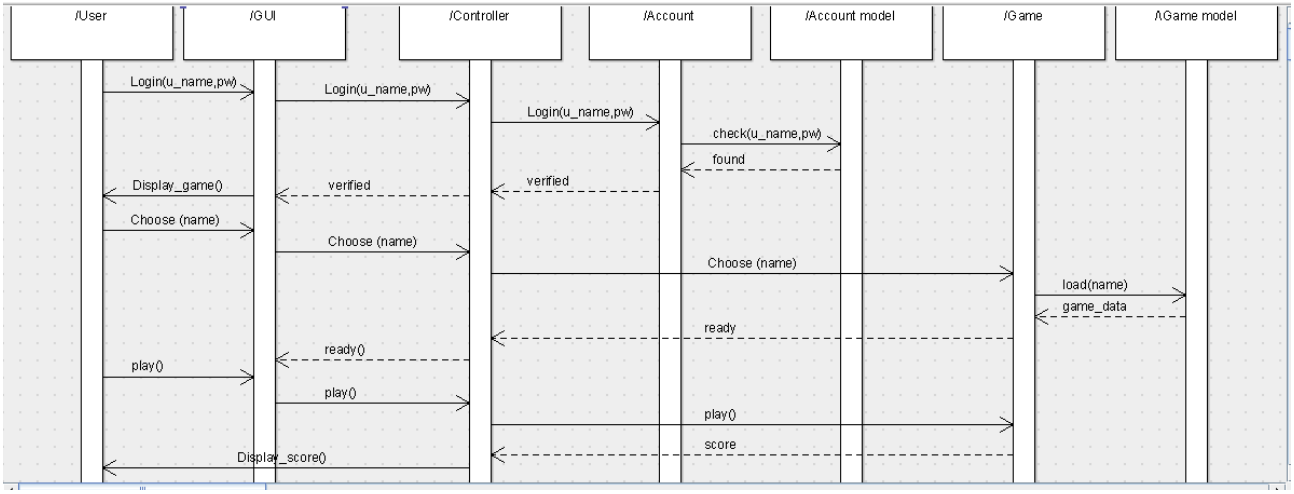
ID: SD1



ID: SD2


/User
/GUI
/Controller
/Account
/Account model
/Student
/Teacher
Display_SignUp_form()
signUp(Info, model)
opt
signUp(Info, model)
signUp(Info, model)
signUp(Info, model)
verify()
saveAccountData()

ID: SD3


/User
/GUI
/Controller
/Account
/Account model
/Game
/Game model
Login(u_name,pw)
Login(u_name,pw)
Login(u_name,pw)
check(u_name,pw)
found
Display_game()
verified
verified
Choose (name)
Choose (name)
Choose (name)
load(name)
game_data
ready
ready()
play()
play()
play()
score
Display_score()

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Class - Sequence Usage Table

Class Name	Sequence Diagrams	Overall used methods
GUI	ALL	Display
Controller	ALL	Api for (game , account)
Teacher	SD1	-
Student	SD2,SD3	-
Account	SD2 , SD 3	Controlling login , verify and set users data .
Game	SD1 ,SD3	save , Handel the game operations
Account model	SD2,SD3	Save and load Accounts data from Database
Game model	SD1	Save and load game data from Database

Ownership Report

Item	Owners
Integration	*Abeer*
Tables , documentation	*Abeer , Mohamed*
Class Diagram	*Mohamed*
SD1	*Yassmen*
SD2	*Hanna*
SD3	*Amal , Mohamed*

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[GIT Repository Link]