

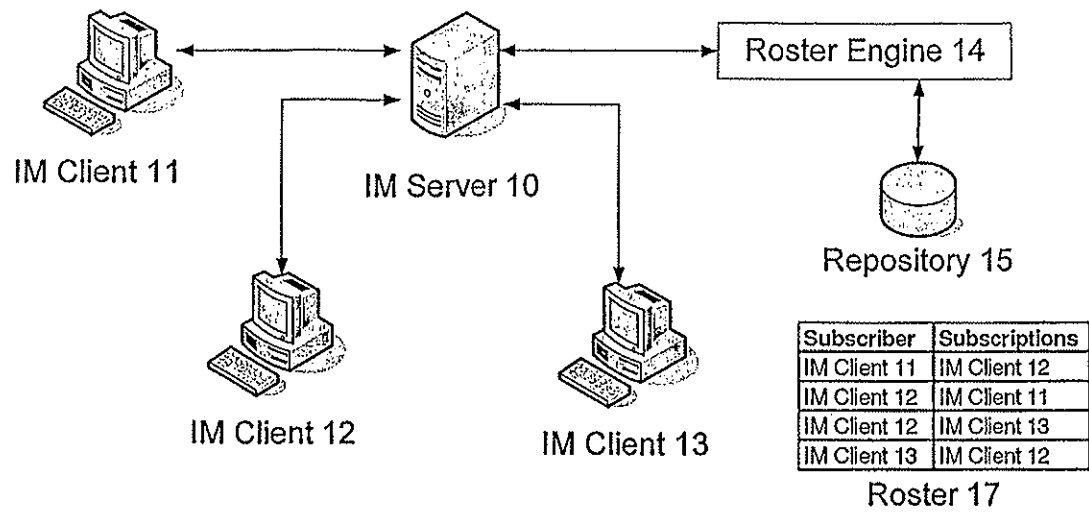


FIG. 1 (prior art)

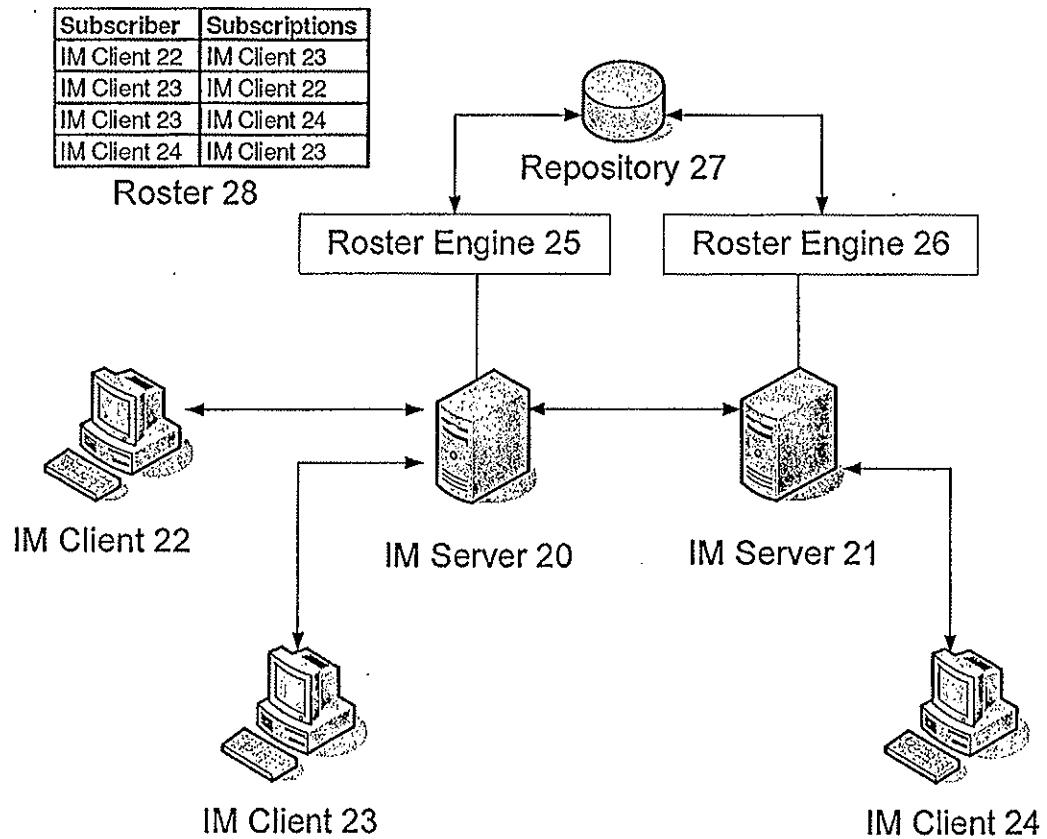


FIG. 2 (prior art)

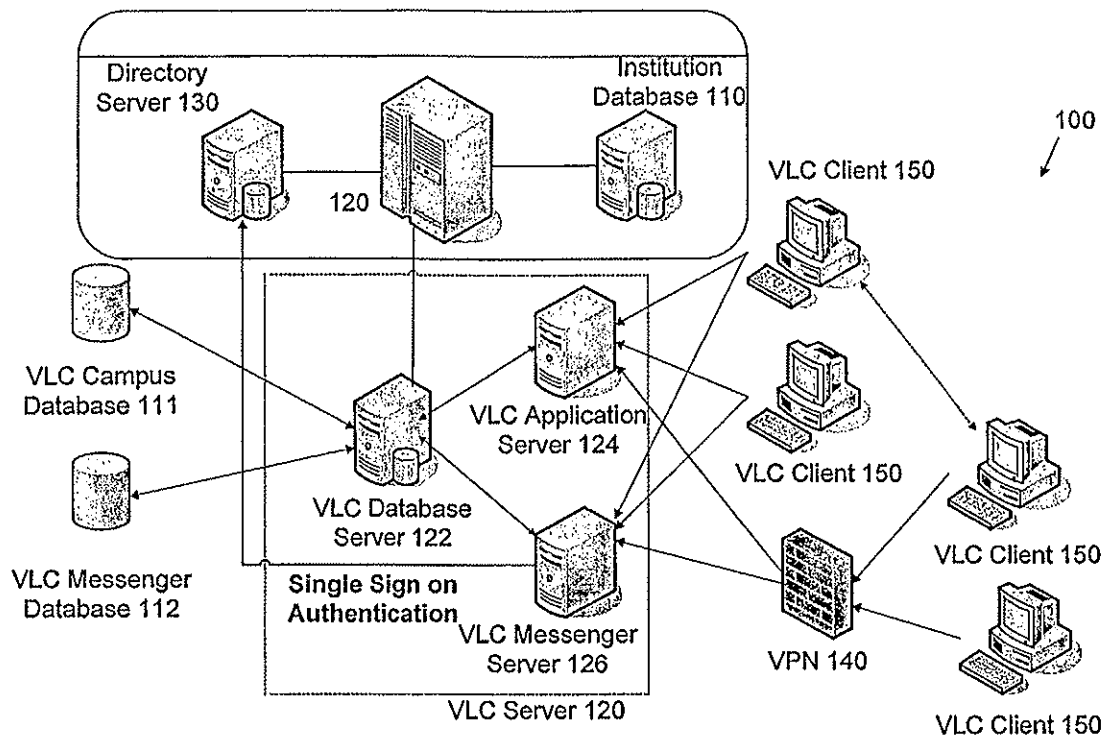


FIG. 3

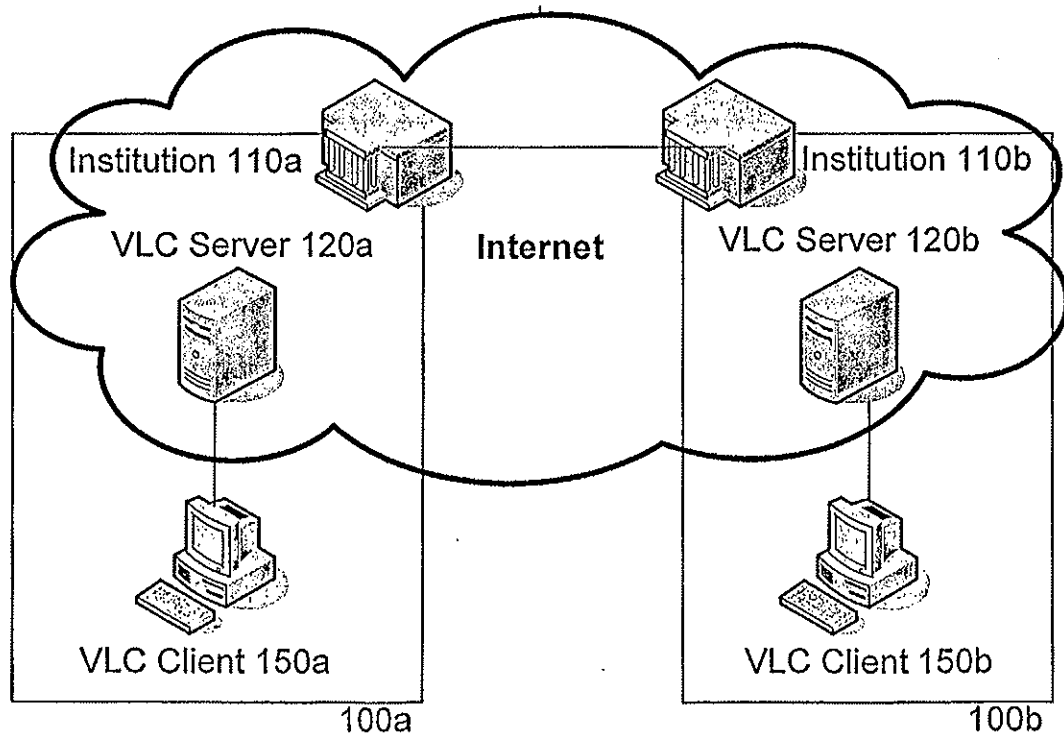


FIG. 4

Table 1: Sample Institution Database 110 Structure

Table 1A: LECTURER_INFO

Description – Stores Lecturer Information

Field	Data Type	Description	Example
lecturer_id	Char	Lecturer Login ID	tanbody
lecturer_fullname	Varchar	Lecturer Name	Professor Anybody
lecturer_email	Varchar	Lecturer Email	anybody@institution.edu.sg
lecturer_photo	Image	Lecturer Photo in Binary Data	{binary data of photo}
lecturer_nickname	Varchar	Lecturer Nickname	Professor Anybody

Table 1B: STUDENT_INFO

Description – Stores Students Information

Field	Data Type	Description	Example
student_id	Char	Student Login ID	s1234567a
student_fullname	Varchar	Student Name	Benjamin Tan
student_email	Varchar	Student Email	benjamin.tan.2002@institution.edu.sg
student_photo	Image	Student Photo in Binary Data	{binary data of photo}
student_nickname	Varchar	Student Nickname	Benjamin Tan

Table 1C: STAFF_INFO

Description – Stores Information about the non-teaching staff

Field	Data Type	Description	Example
staff_id	Char	Staff Login ID	Lim
staff_fullname	Varchar	Staff Name	Linda Lim
staff_email	Varchar	Staff Email	lindalim@institution.edu.sg
staff_photo	Image	Staff Photo in Binary Format	{binary data of photo}
staff_nickname	Varchar	Staff Nickname	Linda Lim

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Table 1D: COURSE_INFO
Description – Store information about course code and name

Field	Data Type	Description	Example
crse_c	Varchar	Course Code	ACCT101
crse_name	Varchar	Course Name	Financial Accounting

Table 1E: LECTURE.Course_INFO
Description – Store the link information between course and lecturer

Field	Data Type	Description	Example
lecturer_id	Char	Lecturer Login ID	Tanybody
crse_c	Varchar	Course Code	ACCT101
crse_grp_c	Varchar	Course Group	G1

Table 1F: STUDENT.Course_INFO
Description – Store the link information between course and students

Field	Data Type	Description	Example
student_id	Char	Student Login ID	s1234567a
crse_c	Varchar	Course Code	ACCT101
crse_grp_c	Varchar	Course Group	G1

FIG. 5 A

FIG. 5A

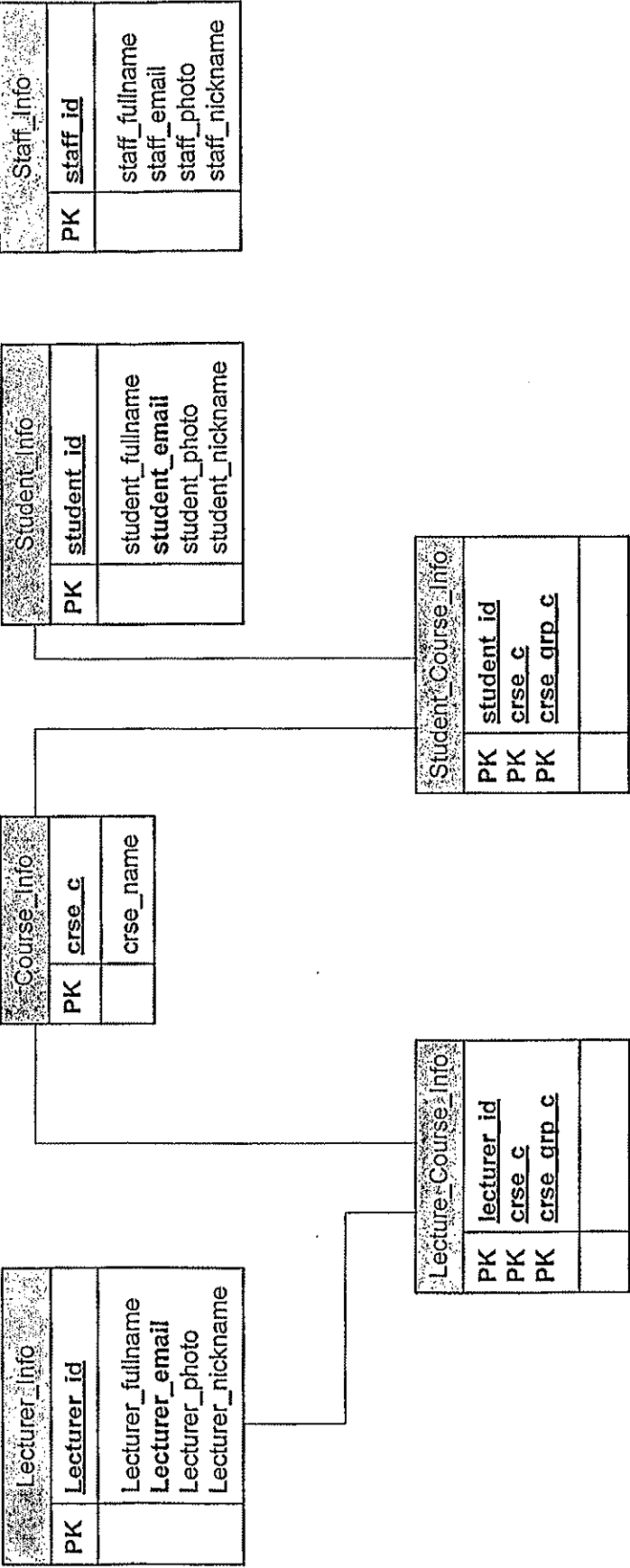


FIG. 5B

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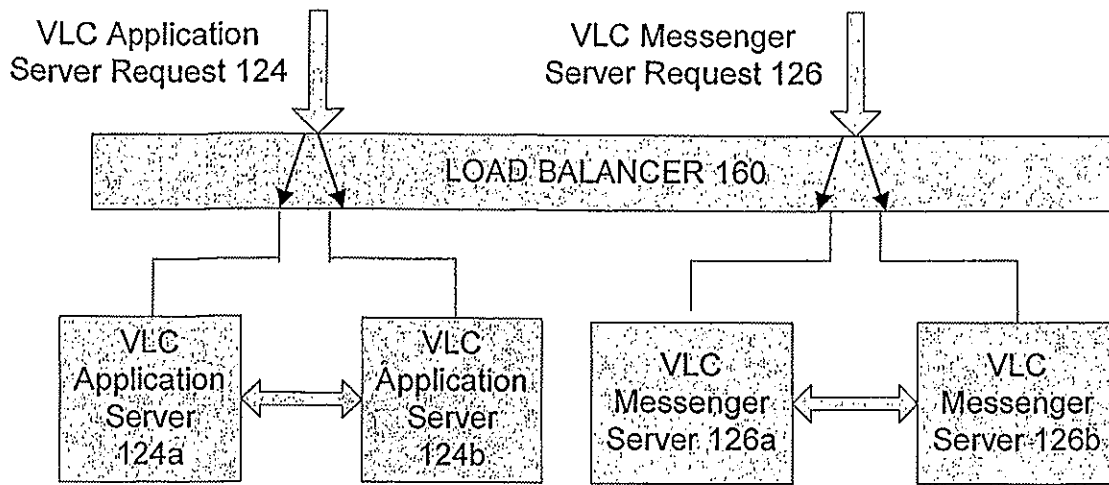


FIG. 6

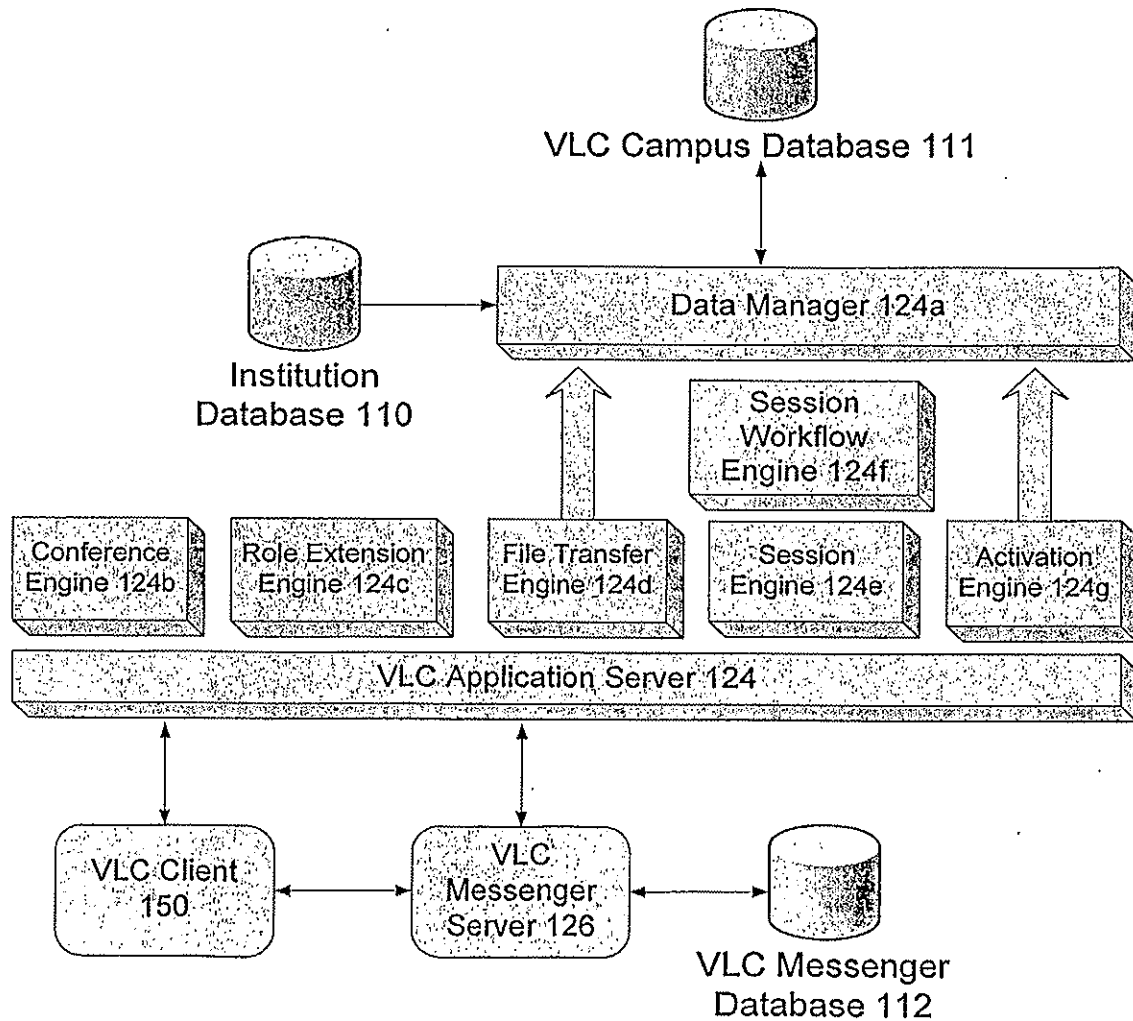


FIG. 7

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Table 2: VLC Campus Database 111 Structure

Table 2A: User

Field	Data Type	Description	Example
JID	varchar(20)	Unique ID of the user	tanybody
NewJID	varchar(20)	Unique ID of the user in the case where the ID changes	tanybody
Password	varchar(20)	Password of the user	password
UserType	varchar(10)	Indication whether the user is a staff or student of the school	teacher
NickName	varchar(30)	Nickname of the user	Them in Suwardy
FullName	varchar(30)	Full Name of the user	Them in Suwardy
Email	varchar(100)	Email of the user	anybody@institution.edu.sg

Table 2B: Photo

Field	Data Type	Description	Example
JID	varchar(10)	Unique ID of user	tanybody
Image	text	Image of the user	{binary data of photo}
CompressRatio	int(11)	Compress Ratio of the photo	50%
OriginalSize	int(11)	Original Size of the photo	-1

Table 2C: Class

Field	Data Type	Description	Example
ID	int(11)	Unique ID of each Class	1
GroupName	varchar(50)	Name of the Class	ACCT101-G1

Table 2D: Groups

Field	Data Type	Description	Example
GroupName	varchar(50)	Name of the Group	ACCT101-G1
JID	varchar(10)	Unique ID of each user	Tanybody
Role	varchar(10)	Role of the user in the Group	Teacher
IsOwner	int(11)	Indication of whether user is owner of the Group	0
IsPublic	int(11)	Indication of whether group is publicly viewable to all users in the Group	1

Table 2E: Active

Field	Data Type	Description	Example
id	int(11)	Id of the user activated	1
JID	varchar(20)	Unique ID of the user who is activated	s8458657c

Table 2F: Session

Field	Data Type	Description	Example
ID	int(11)	Unique ID of the Class Session	1
ClassID	int(11)	ID of the Class - from tclass	1
StartTime	datetime	Starting Time of the Class	10/12/2005 8:54
Comment	text	Comments for the Class Session	Students are more participative today

Table 2G: SessionReport

Field	Data Type	Description	Example
SessionID	int(11)	ID of the Class Session	7
JID	varchar(10)	Unique ID of the user that belongs to the Class Session	s8458657c
Grade	int(11)	Grade of the Teacher for the Class Session	4
Comment	text	Comment of the Teacher for Class Session	Prepared well for today's discussion

Table 2H: TA

Field	Data Type	Description	Example
Id	int(11)	Unique ID of the TA	1
GroupName	varchar(50)	Name of the Class which the TA is assigned to	ACCT101-G1
JID	varchar(30)	ID of the user	s1234567a

Table 2I: TASession

Field	Data Type	Description	Example
SessionID	int(11)	Session ID which the TA report belongs to	19
TaID	varchar(20)	ID of the TA	s1234567a
State	int(11)	Indication whether the report is open, submitted, closed or discarded	0
ID	int(11)	Unique ID of the TA report	1
ClassID	int(11)	ID of the Class	1

Table 2J: TASessionReport

Field	Data Type	Description	Example
ReportID	int(11)	ID of the TA report which this TA Session Report belongs to	1
StudentID	varchar(10)	ID of the student for each this TA report belongs to	s84586657c
Grade	int(11)	Grade of the TA for the student in the Class Session	4
Comment	text	Comments of the TA for the student in the Class Session	Late but prepared.

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Table 2K: Subject

Field	Data Type	Description	Example
Subject_ID	int(11)	ID of the Subject	2
Subject_Name	varchar(255)	Name of the Subject	English
JID	varchar(20)	ID of the owner of the Subject	tanybody

Table 2L: SubjectCategory

Field	Data Type	Description	Example
Category_ID	int(11)	ID of the Category	0
Category_Name	varchar(255)	Name of the Category	General
Subject_Name	int(11)	Name of the Subject which the category belongs to	English

Table 2M: Question

Field	Data Type	Description	Example
QID	int(11)	ID of the Question	3
QType	smallint(6)	Question Type of the Question	0
UserID	varchar(255)	ID of the owner of the Question	tanybody
isPublic	smallint(6)	Indication of whether the Question is visible to other teachers	0
CategoryID	int(11)	ID of the Category which the Question belongs to	0
Title	text	Title of the Question	Animals
Body	text	Body of the Question	She is ____ a walk with her dog.
Answer	text	Answer to the Question	C
Visible	smallint(6)	Indication of whether the Question is visible to the owner	1
Created	datetime	The date and time which the Question is created	2005-11-25 11:05:07

Table 2N: QuestionOption

Field	Data Type	Description	Example
QID	int(11)	ID of the Question which the Option is associated with	3
QOptionID	smallint(6)	ID of the Option	0
QOption	text	Description of the Option	taking

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Table 2O: QuestionFile

Field	Data Type	Description	Example
QID	int(11)	ID of the Question	3
QFile	text	File path of the file on the client computer	C:\Documents and Settings\Comp1\My Documents\pic.jpg
QFileID	text	GUID of the File on the server	690bb972-ea6e-413f-8efa-8a21b52c8653

Table 2P: Assessment

Field	Data Type	Description	Example
AssessmentID	int(11)	Unique ID of each Assessment	1
SubjectID	int(11)	Subject ID of the subject under which the Assessment belongs to	2
Title	tinytext	Title of the Assessment	Mid-Term Assessment
IsPublic	smallint(6)	Indication of whether the Assessment can be viewed by other teachers	0
UserID	varchar(255)	The owner of the Assessment who must be a teacher	tanybody
Visible	char(10)	Indication of whether the Assessment is visible to the owner	Yes
Created	datetime	The date and time which this Assessment is created	2006-01-04 15:30:59

Table 2Q: AssessmentQuestion

Field	Data Type	Description	Example
AssessmentID	int(11)	ID of the Assessment which the question belongs to	1
RowID	smallint(6)	Unique ID of the entry	0
QuestionID	int(11)	ID of the Question which is attached to the Assessment	3

FIG. 8 A

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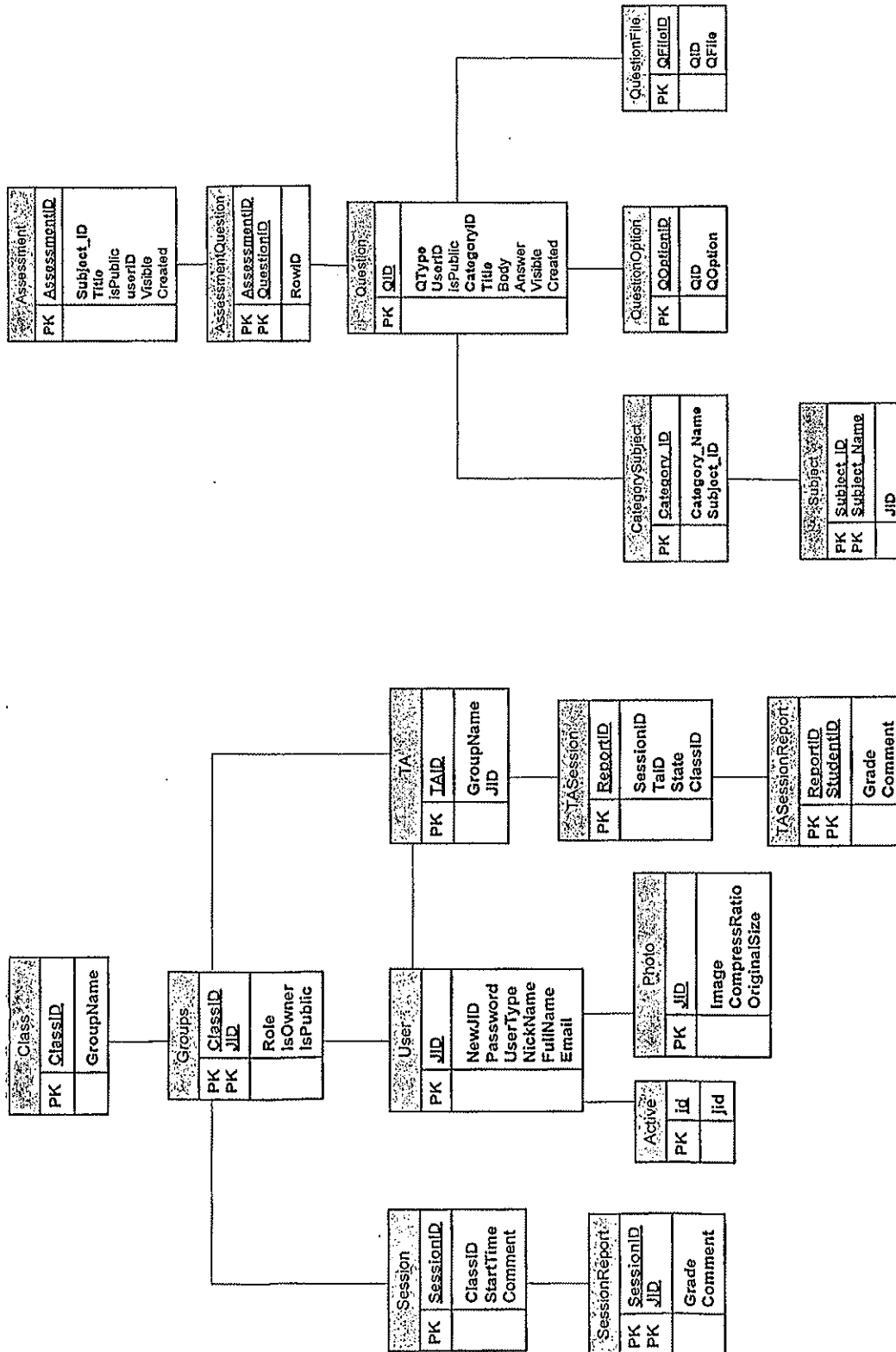


FIG. 8 B

Table 3: VLC Messenger Database 112 Structure

Table 3A: authreg

Field	Data Type	Description	Example
username	text	Unique User name of the user	tanbody
realm	tinytext	The server IP or localhost if the run locally	localhost
password	tinytext	Password of the user	password

Table 3B: vcard

Field	Data Type	Description	Example
collection-owner	text	JID of the owner of the vcard information	johnlee@localhost
object-sequence	text	Unique ID of the vcard entry	1
fn	text	Full Name of the owner	John Lee
nickname	text	Nick-Name of the owner	Johnny
url	text	URL of the website of the owner	www.johnleewebsite.com
tel	text	Telephone number of the owner	12345678
email	text	Email address of the owner	anybody@institution.edu.sg
title	text	Title of the owner	Mr
role	text	Role	Teacher
bday	text	Birthday	10/10/45
desc	text	Description	joined the company since...
n-given	text	Given Name	John
n-family	text	Family Name	Lee
adr-street	text	Street Address	Dunno Road
adr-extadd	text	Extended Address	Unit 10
adr-locality	text	Locality	Locality 1
adr-region	text	Region	Region 1
adr-pcode	text	Postal Code	123456
adr-country	text	Country	USA
org-orgname	text	Name of the Organization	XYZ Institution
org-orgunit	text	Unit of the Organization	HR

Table 3C: roster-groups

Field	Data Type	Description	Example
collection-owner	text	JID of the owner of the roster-group	tanybody@localhost
object-sequence	bigint(20)	Unique ID of the roster-group entry	1
jid	text	JID of the contact in the roster-group	s1234567a@localhost
group	text	Name of the roster-group	ACCT101-G1

Table 3D: roster-items

Field	Data Type	Description	Example
collection-owner	text	JID of the owner of the roster-item	tanybody@localhost
object-sequence	bigint(20)	Unique ID of the roster-item	1
jid	text	JID of the roster-item	s1234567a@localhost
name	text	Name of the roster-item	Benjamin Tan
to	tinyint(4)	Indication of whether the other party (ie the jid) has approved the addition of the roster-group	1
from	tinyint(4)	Indication of whether the owner has asked for the approval of the addition of the roster-group	1
ask	int(11)	Indication of whether to ask the other party (ie the jid) for approval	0

Table 3E: active

Field	Data Type	Description	Example
collection-owner	text	JID of the active user	tanybody@localhost
object-sequence	bigint(20)	Unique ID of the active entry	1
time	int(11)	Time at which the user becomes active	1111111111

Table 3F: logout

Field	Data Type	Description	Example
collection-owner	text	User who has logged out	tanybody@localhost
object-sequence	bigint(20)	Unique ID of the logout	1
time	int(11)	Time at which the user is logged out	1123225667

Table 3G: motd-message

Field	Data Type	Description	Example
collection-owner	text	User who has sent out the message of the day either for online users only or online and offline users	tanybody@localhost
object-sequence	bigint(20)	Unique ID of the MOTD	1
xml	text	MOTD in XML format	{xml data}

Table 3H: motd-times

Field	Data Type	Description	Example
collection-owner	text	User who has sent out the message of the day	tanybody@localhost
object-sequence	bigint(20)	Unique ID of the MOTD	1
time	int(11)	Time that the message has been sent out	11/11/05

Table 3I: vacation-settings

Field	Data Type	Description	Example
collection-owner	text	JID of the owner of the vacation message	tanybody@localhost
object-sequence	bigint(20)	Unique entry of the vacation-setting	1
start	int(11)	Start date of the vacation	01032006
end	int(11)	End date of the vacation	26032006
message	text	The vacation message	Hey guys, I'm away on a holiday now. I'll be back on Mar 26. Please contact me then. Thanks.

Table 3J: private

Field	Data Type	Description	Example
collection-owner	text	JID of the owner of the private XML	tanybody@localhost
object-sequence	bigint(20)	Unique ID of the private entry	1
ns	text		
xml	mediumtext	Private XML for uses such as user preferences or bookmarks	{xml data}

Table 3K: queue

Field	Data Type	Description	Example
collection-owner	text	JID of the owner of the queue	tanybody@localhost
object-sequence	bigint(20)	Unique ID of the queue entry	1
xml	mediumtext	XML representation of the data which if received from the client	{xml data}

FIG. 9 A

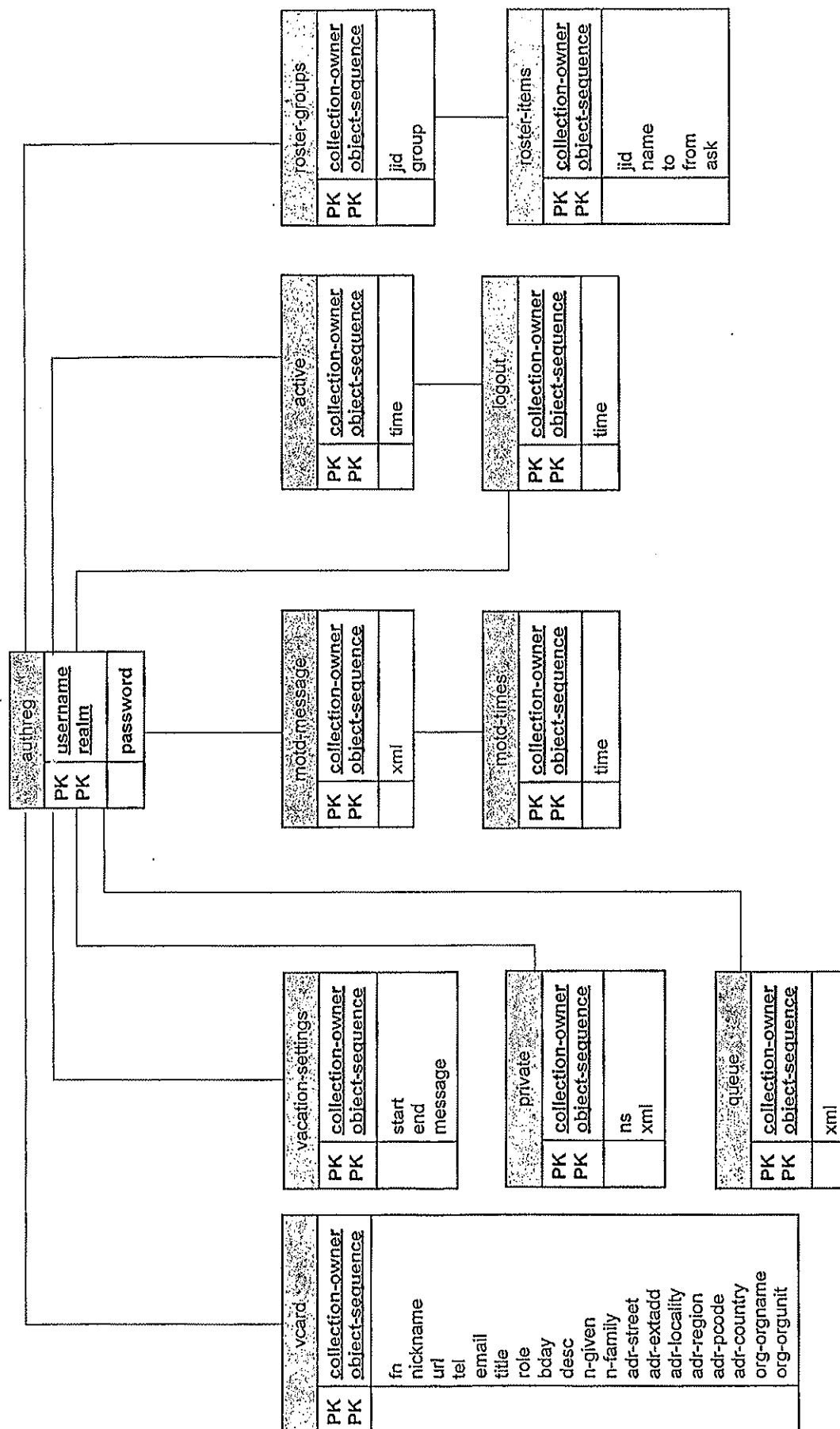


FIG. 9 B

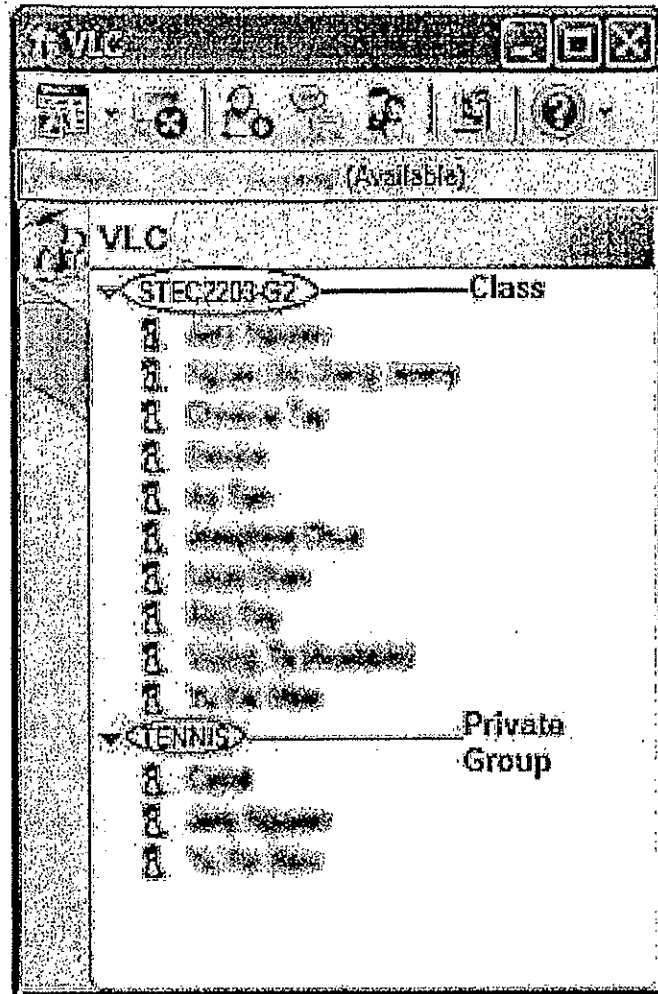
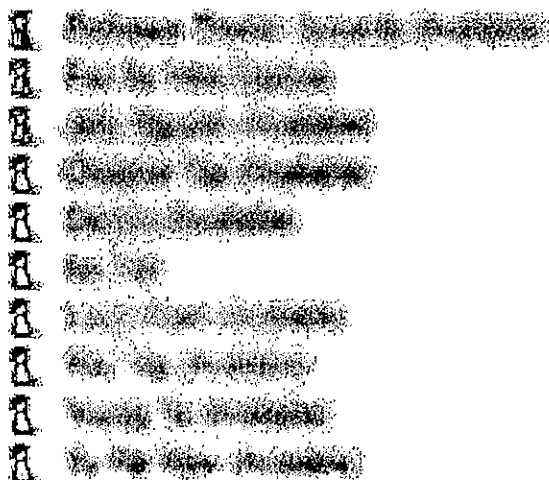


FIG. 10

▼ STEC2203-G2



Legend	
	Professor
	TA
	Student

FIG. 11

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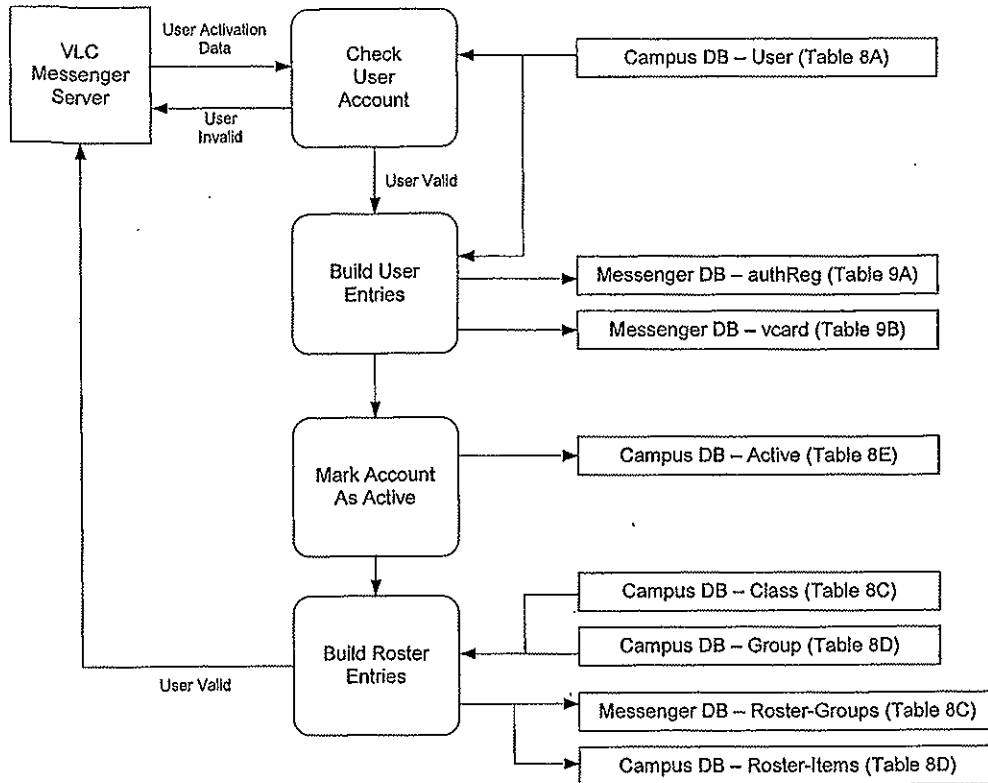


FIG. 12 A

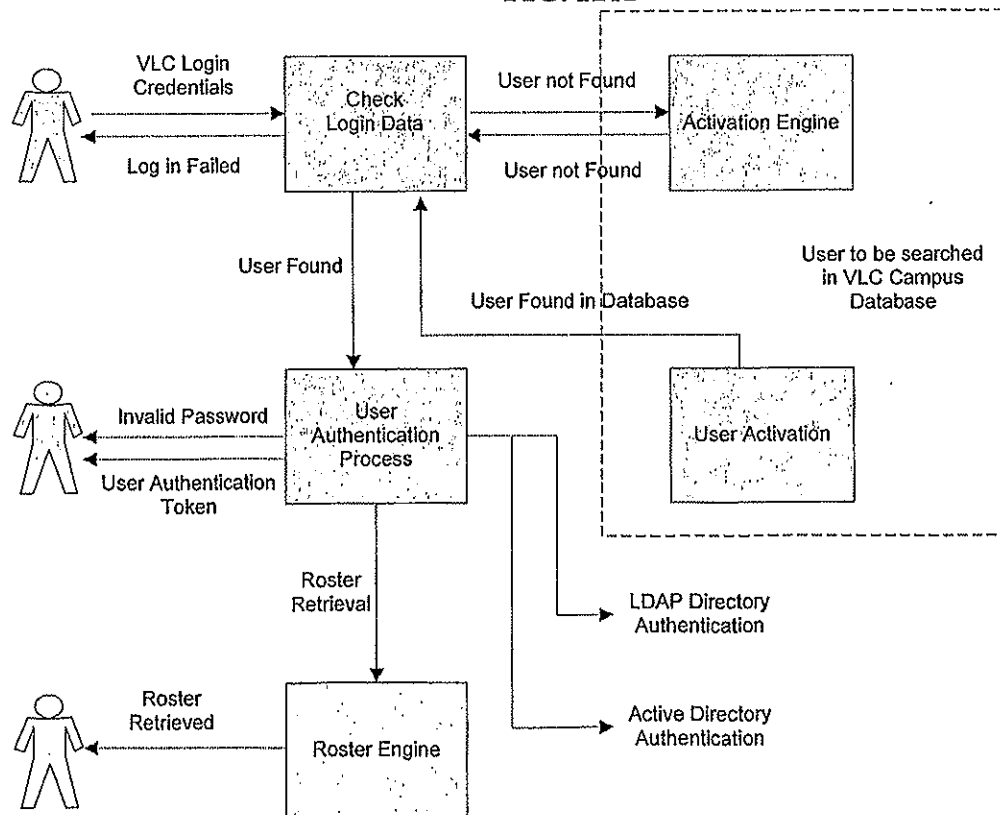


FIG. 12 B

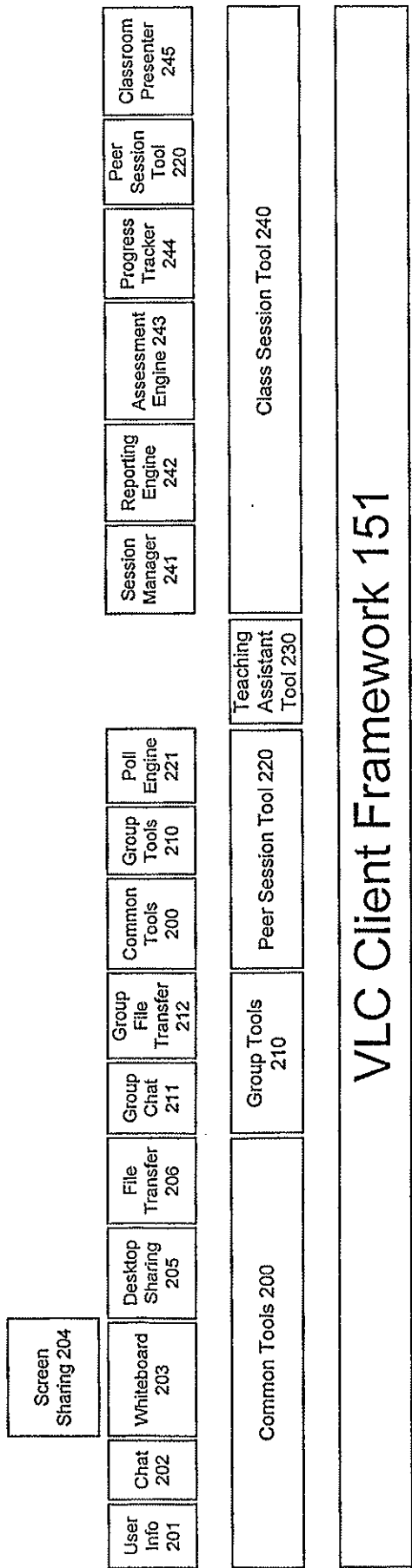


FIG. 13

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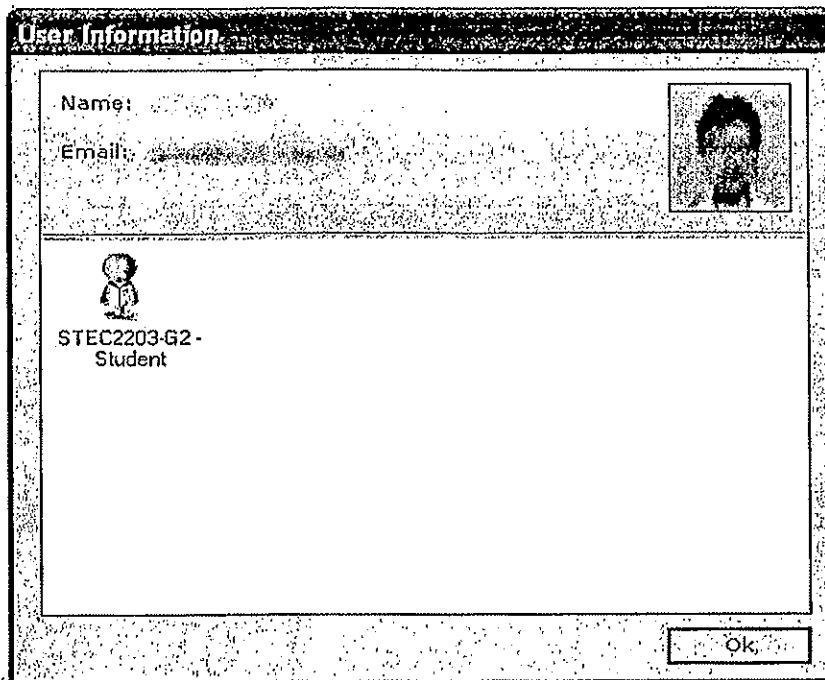


FIG. 14

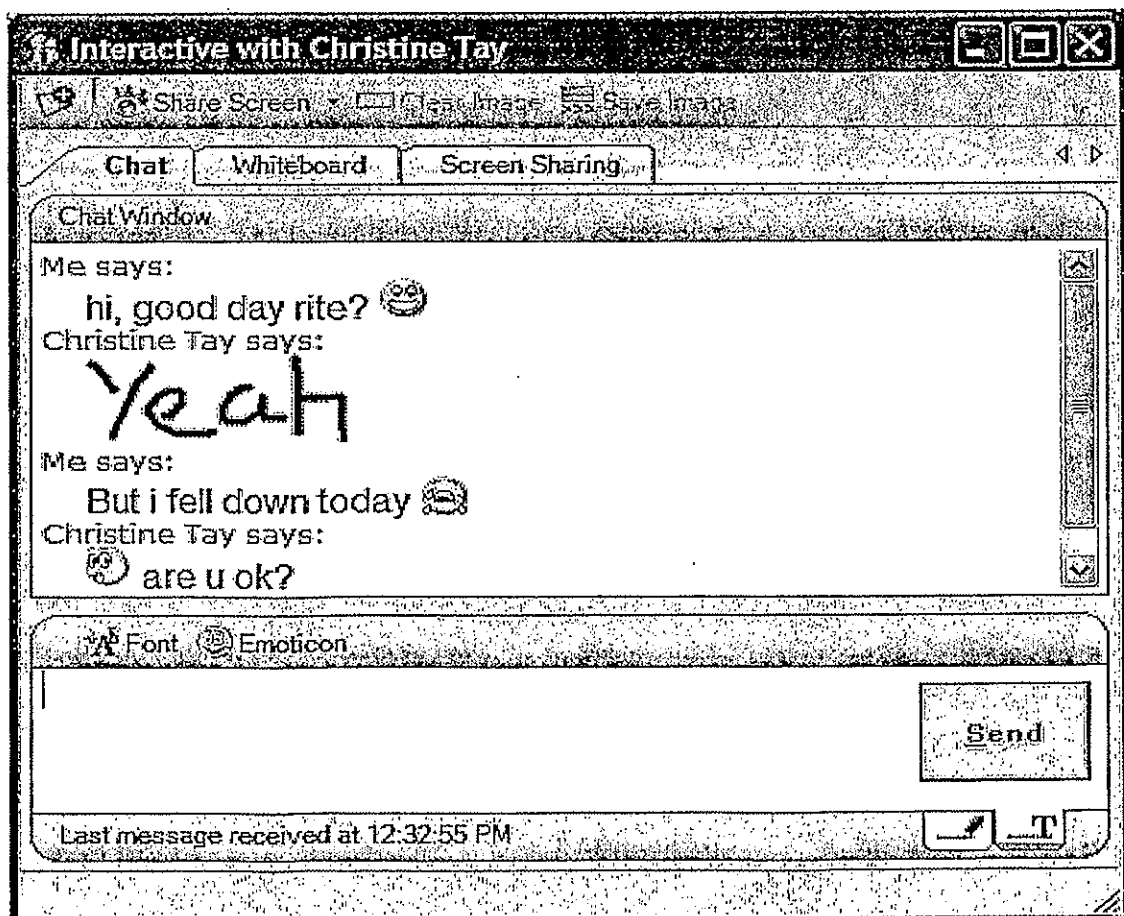


FIG. 15

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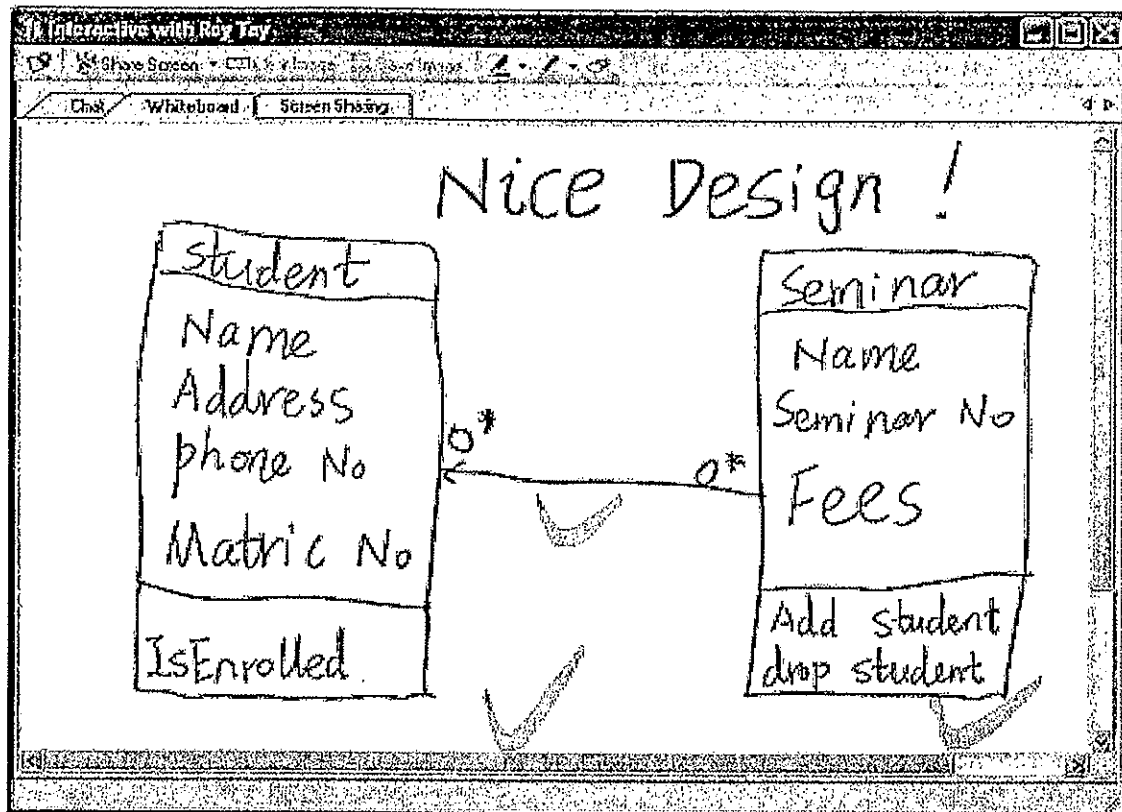


FIG. 16

Account - Advanced Financial Accounting

Conceptual Basis

- The substance of all inter-company transactions are internal transactions from the perspective consolidated financial statements
- Since consolidated financial statements show the results of transactions with outsiders, all transactions must be eliminated

FIG. 17

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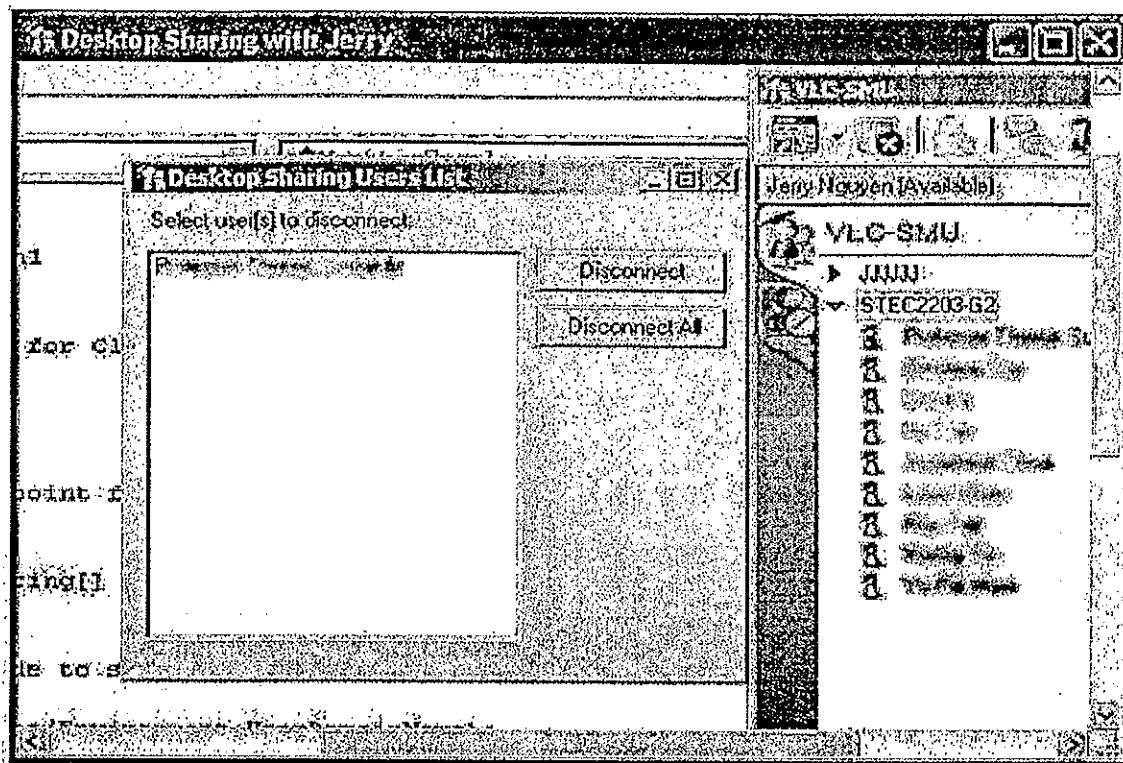


FIG. 18

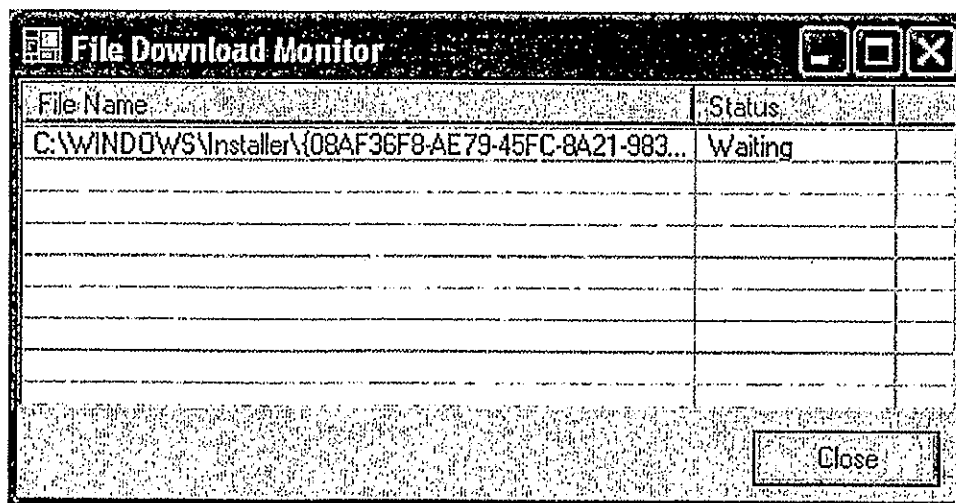


FIG. 19

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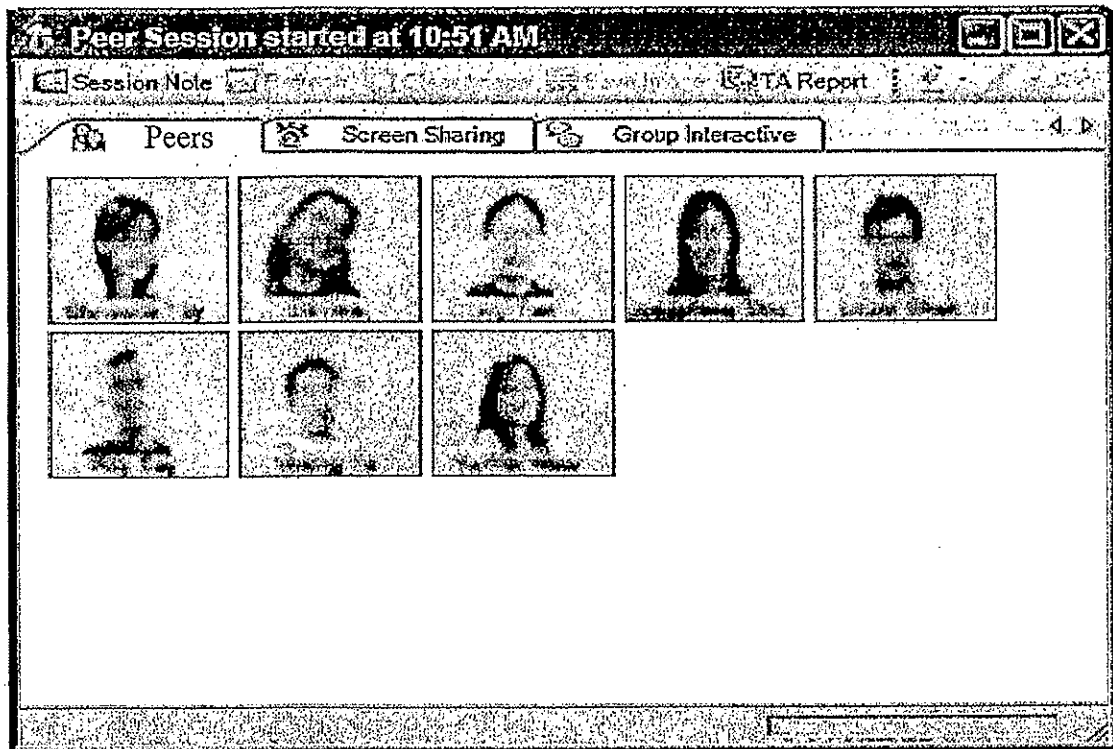


FIG. 20

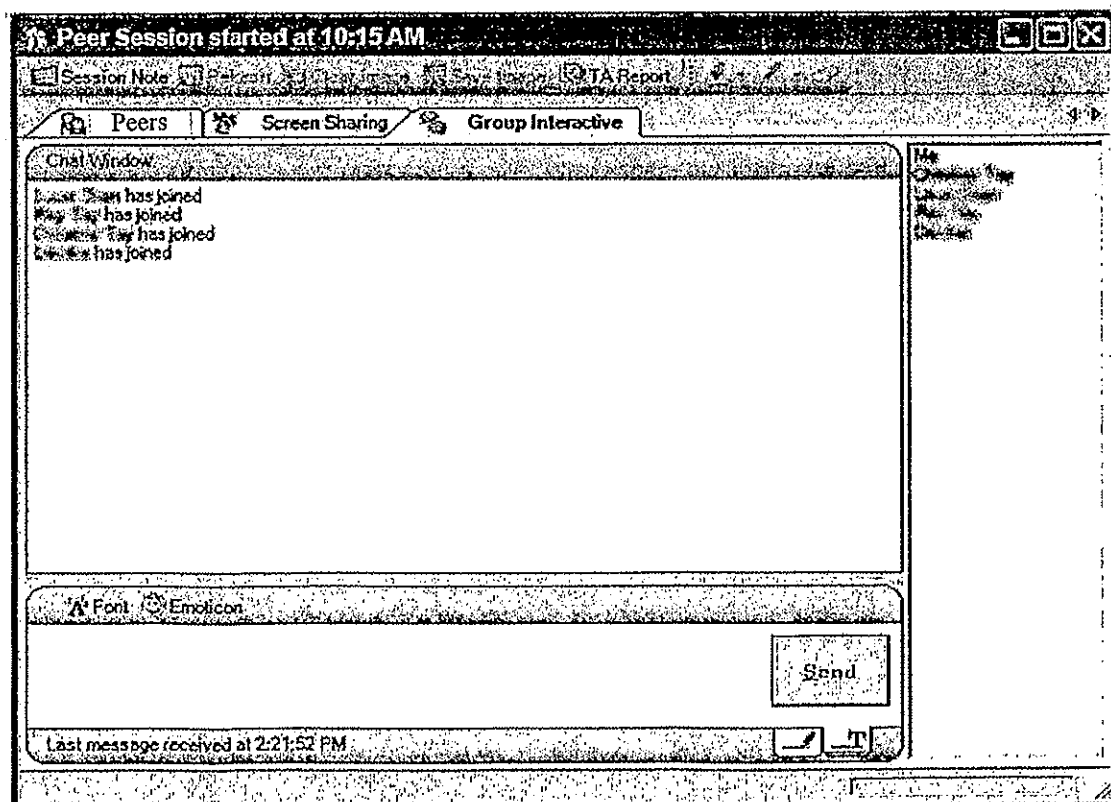


FIG. 21

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The screenshot shows a web application window titled "Poll Manager". It has a menu bar with "Create Poll" and "Search". Below the menu bar are three tabs: "Poll Details", "Options & Answers", and "Preview & Poll". The "Poll Details" tab is active, and the page displays "Step 1 - Please fill in the details for the Poll".

The form includes the following fields and buttons:

- Subject:** A text input field with a dropdown arrow, a "Delete Subject" button, and an "Add Subject" button.
- Category:** A text input field with a dropdown arrow, a "Delete Category" button, and an "Add Category" button.
- Description:** A large text area for entering the poll description.

Below the description field is a rich text editor toolbar with various icons for text formatting (bold, italic, underline, etc.) and alignment. At the bottom of the window are three buttons: "Preview", "Save", and "Close".

FIG. 22

The screenshot shows a web application window titled "TA Reports for". It displays a list of reports on the left and a detailed view of a specific report on the right.

Left Panel (List of Reports):

- Class: STEC2203-G2
- Prof: [Name]
- Report: [Name]
- STEC2203-G2
- 27/10/2005 4:20 PM
- 27/10/2005 4:28 PM
- 27/10/2005 4:36 PM
- 28/10/2005 2:42 PM
- 28/10/2005 5:05 PM
- 28/10/2005 5:11 PM
- 28/10/2005 5:23 PM
- 24/11/2005 11:53 AM
- 24/11/2005 11:56 AM
- 24/11/2005 12:06 PM
- 24/11/2005 2:59 PM
- 24/11/2005 3:00 PM
- 25/11/2005 11:04 AM
- 25/11/2005 11:09 AM
- 28/11/2005 12:00 PM
- 28/11/2005 12:13 PM
- 30/11/2005 3:02 PM
- 30/11/2005 3:50 PM

Right Panel (Detailed View):

- Name:** [Name]
- Comment:** Very attentive. Prepared for the discussion.
- Name:** [Name]
- Comment:** Late but prepared. Asked some interesting questions.
- Name:** [Name]
- Comment:** On MC...
- Name:** [Name]
- Comment:** Rather participative. Has fully prepared for the discussion.

At the bottom of the window are two buttons: "Submit" and "Ok".

FIG. 23

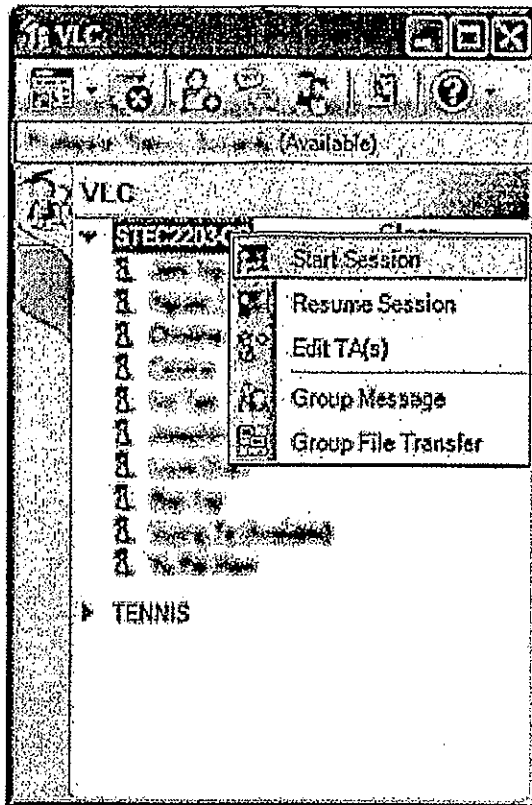


FIG. 24

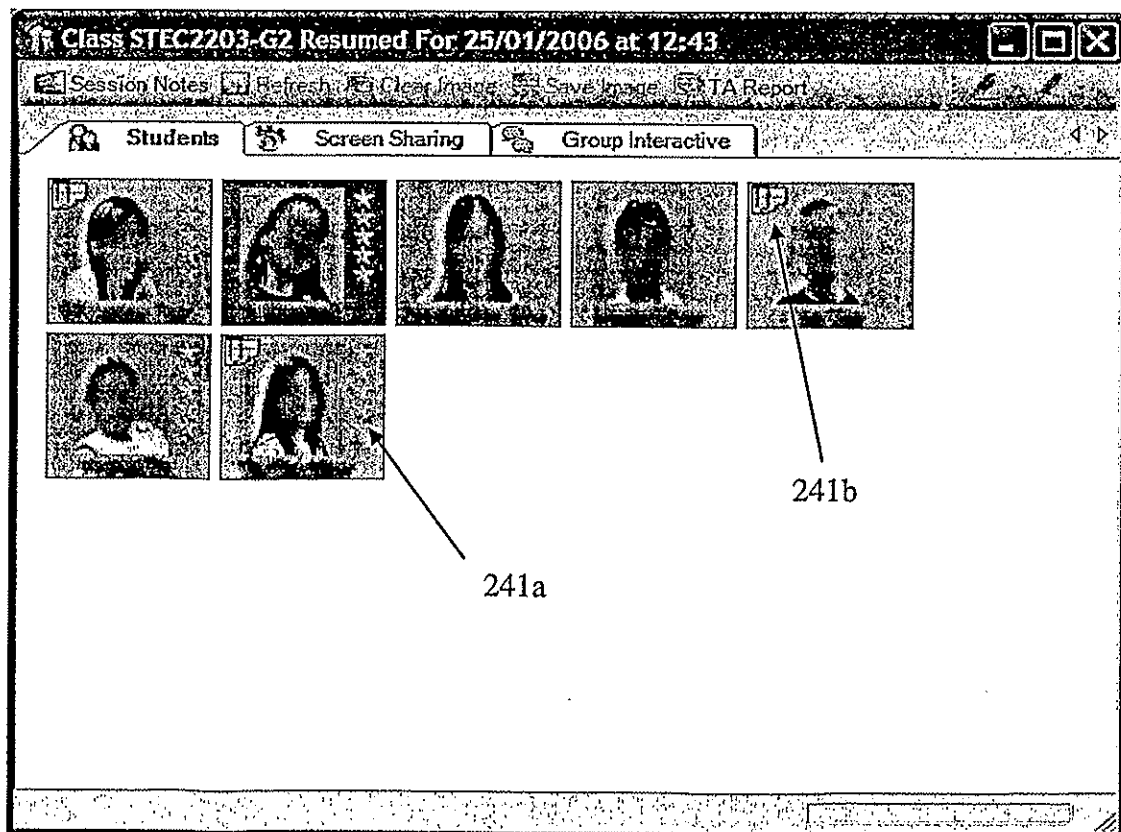


FIG. 25

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Student Session Note

Class: STEC2203-G2 on Wednesday at 12:43 PM

Name: 

Grade: ★★★★★ ← 241a

Comment:

Very participative. ← 241c

Ok Cancel

FIG. 26

Student Progress Tracking

 Class: STEC2203-G2

Name:  ← 244a

Grade: ★★★★★ ← 241a

Session: 22/06/2005 at 18:54

Comments: none.

Grade: ★★★★★ ← 241c

Session: 24/06/2005 at 12:43

Comments: not active in participation

Grade: ★★★★★

Session: 24/06/2005 at 12:32

Comments: none.

Grade: ★★★★★

Ok

FIG. 27

Question Manager

Create Question Search

Question Details Options & Answers Preview & Save Question

Step 1 - Please fill in the details of the MCQ

Subject: English Delete Subject Add Subject

Category: Comprehension Delete Category Add Category

Description:

Preview Preview With Answer Save Close

FIG. 28

[illegible]

FIG. 29

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Assessment Attempt

Assessment Monitor | Statistics | Preview

Assessment: Mid Term Assessment

Details of the Paper: 5 Questions

Duration: 1 min 32 min ☐ Time/Assessment

Total number of Students: 10 students

Clients Ready: 10 students

Number of Students Submitted: 10 students

Time Elapsed: 1 min 32 seconds

Status: Assessment Completed

View Assessment | Stop Assessment | Close

FIG. 30

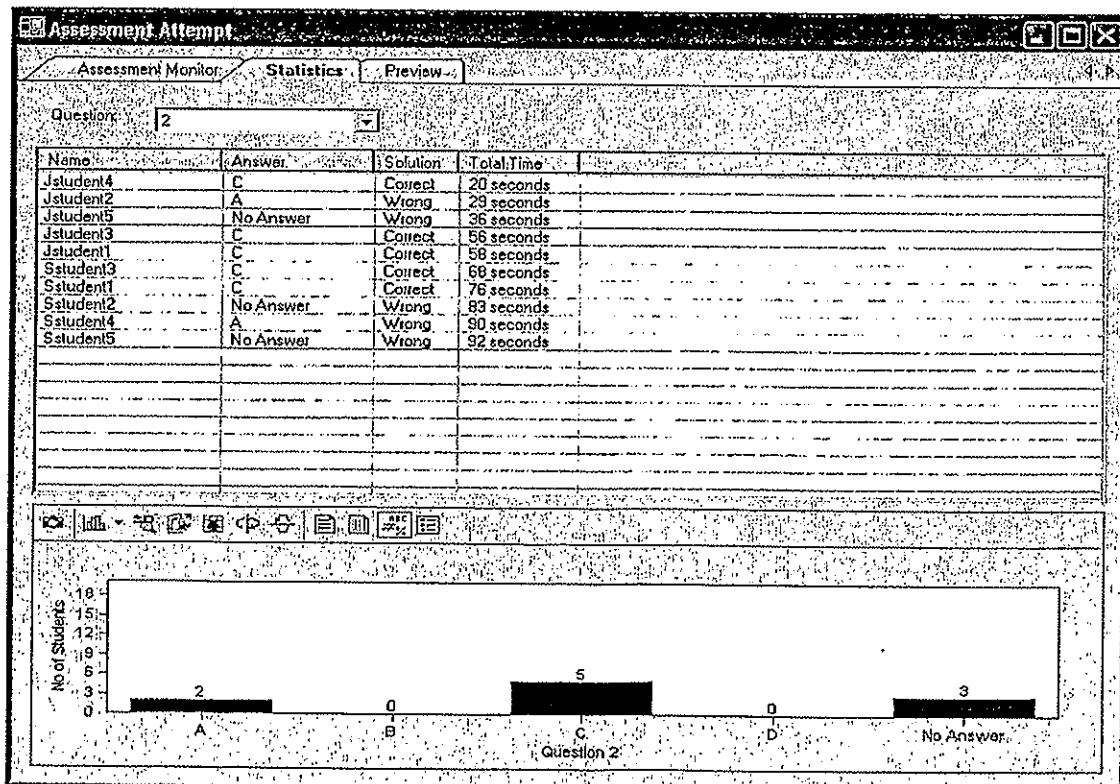


FIG. 31

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Assessment Manager

Assessment Details Preview & Save

Question 1.
Watching movies is a good way of relaxation.

1 2 3 4 5
Strongly Disagree ☐ ☐ ☐ ☐ ☐ Strongly Agree ← Likert

Question 2.
Nancy prefers to _____ her dog for a walk in the morning.

☐ A taken
☐ B took
☐ C talce
☐ D takes ← MCQ

Question 3.
How much do you think a car should cost?

← Open-Ended

Question 4.
Birds Fly.

☐ True
☐ False ← True-False

Question 5.
Please draw a cat.

← Drawing

FIG. 32

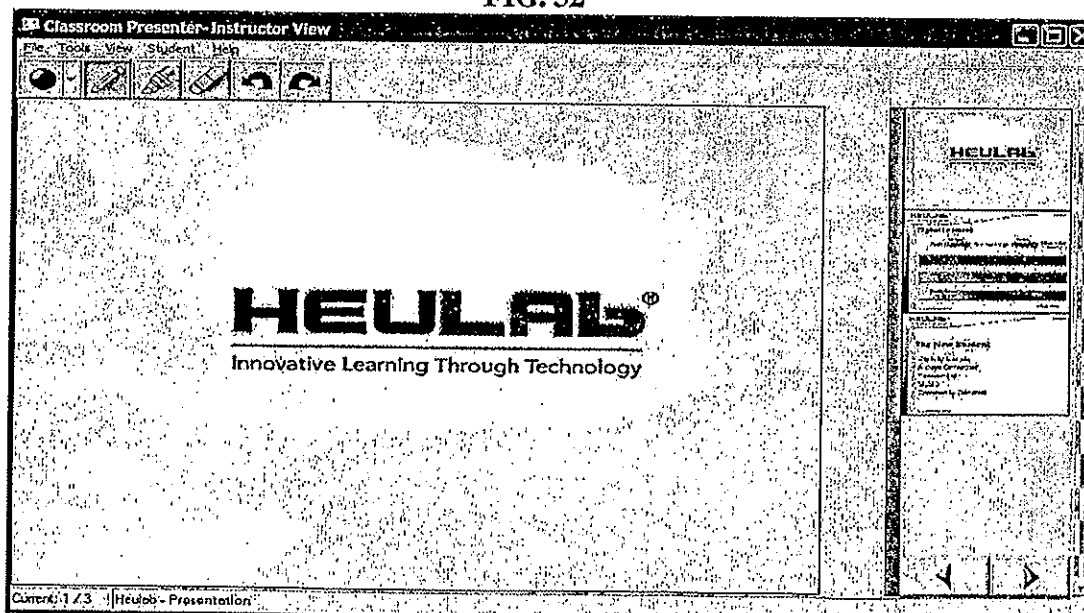


FIG. 33