UNIVERSITY OF KANSAS

EECS 647 INTRODUCTION TO DATABASE SYSTEMS, FALL 2014

Project Report –KU ONLINE TUTOR SELECTION
SERVICE

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INTRODUCTION

TheMainpurposeofthisprojectistoassignTutorsonlinefortheUniversityofKansasstudents who need mentoringin Particular departments.

TheMain Objectives of this project are:

1) "To get assigned a real Tutor anytime, anywherewith thisonlinetutor selectionwebsite".

2)It connect students to a Professional tutor online who provides on demand homework help and tutoring services in Math, Physics, Chemistry and Biology etc.

3) It provides a Platform between Students and Tutors from all overthe University.

4) When a Student selects a Particular Department from the dropdown list, he will be directed to a page where the student will be asked to enter the course for which they want tutoring for, then allthe tutors who are capable of Mentoring that course will be shown.

Student is free to select Tutor of his own choice. Atlast a confirmation page will be displayed with student name, Department, Course and the assigned Tutor.

METHODOLOGY

TheProject will be implemented using Iterative (Agile) Methodology,wherein theBasic functionalitywillbecreated first and then tested formaximum possibleuse cases.Afterthebasic functionalityis achieved,furtherimprovements and customizations will beadded and tested.

## BACKGROUND FOR THEPROJECT(INSPIRATION)

Online Tutor websites like www.tutor.comand www.tutorvista.comarethewell-known websites in providingProfessionaltutors and also aguaranteedgrades forthestudents. Theyoffertutors who went through a rigorous screeningprocess with subject exams, mock tutoringsessions, mentor reviewand third-partybackground check.Everytutoris skilled at tutoringin their online classroom and helpingstudents understand concepts through ashared whiteboard, chat and file- sharing.

The features provided bytheseWebsites areveryrich andExhaustive, the Main ideabehind this Project is to comeup with a similar websitethatprovides the basic selection functionalityof Online tutoringservices, with provisions for adding additional features later on.

SYSTEM DESIGN

Below is the basic system design, where a user(Client) sends a request (requesting for a Tutor) through Internet, the request is received by the web server, it is processed and the Web server connects to the database and does the required operation and formulates a response and sends it back to the user. Finally the User will be assigned a Tutor along with Tutor's Information like his Experience, Phone, and Address.
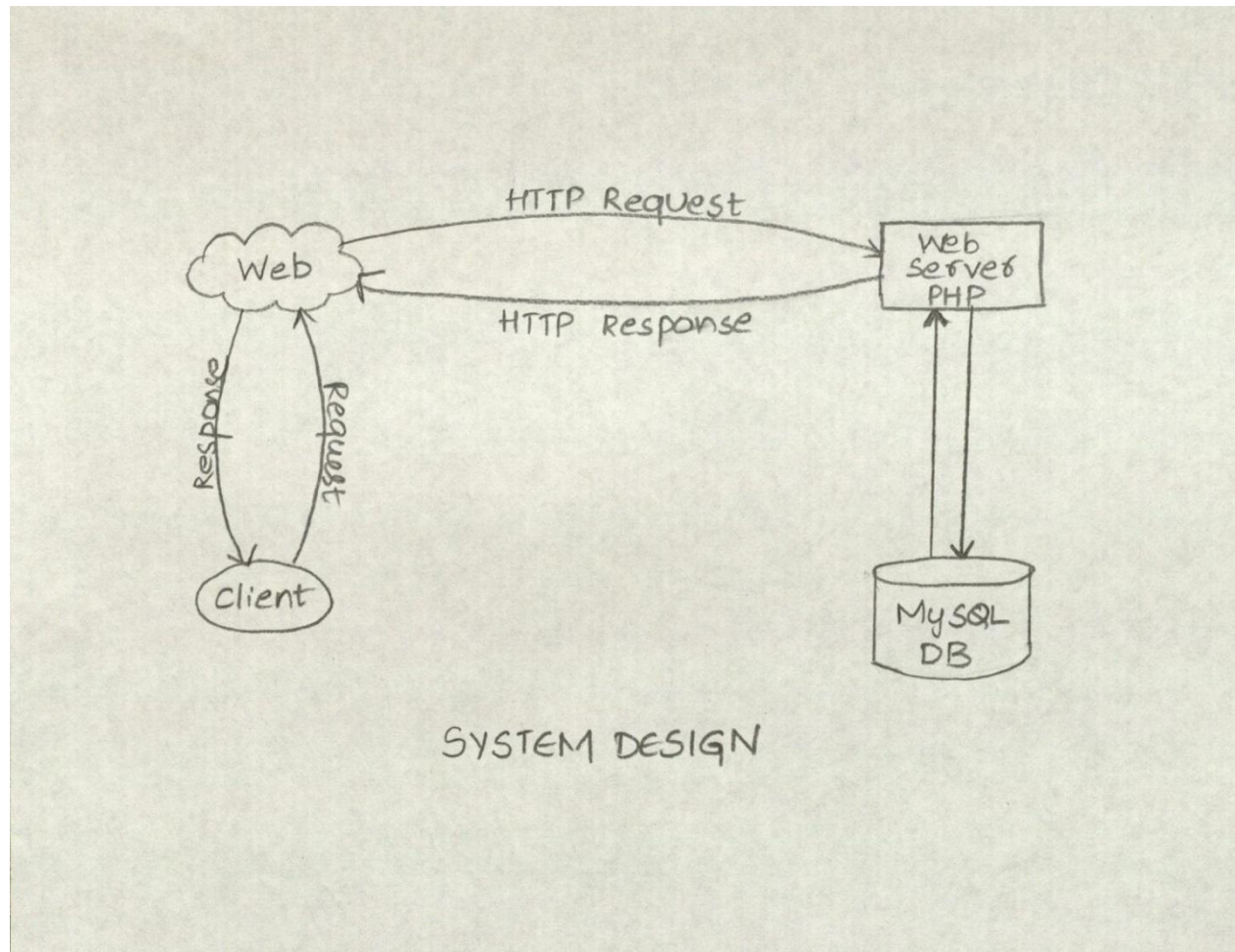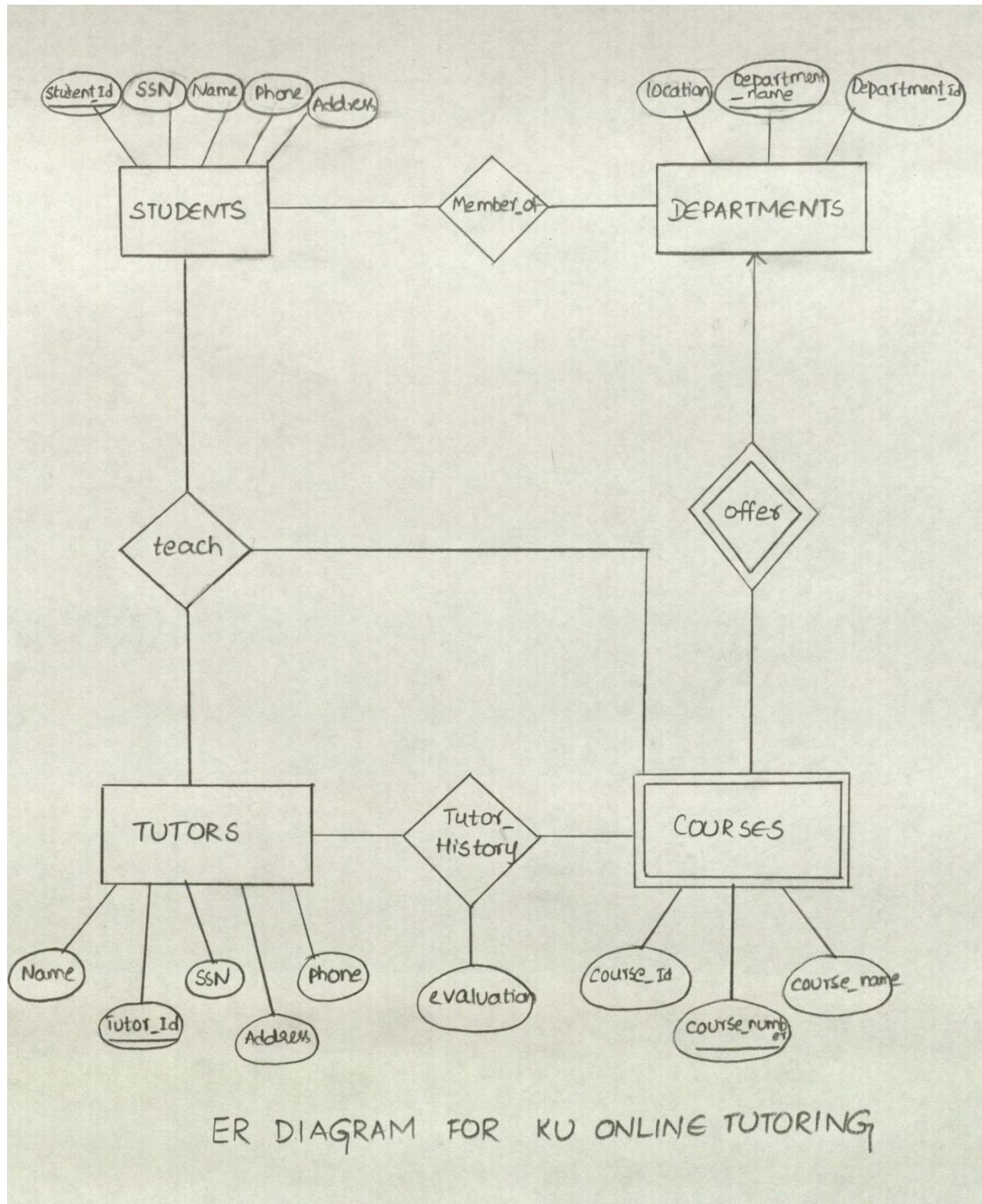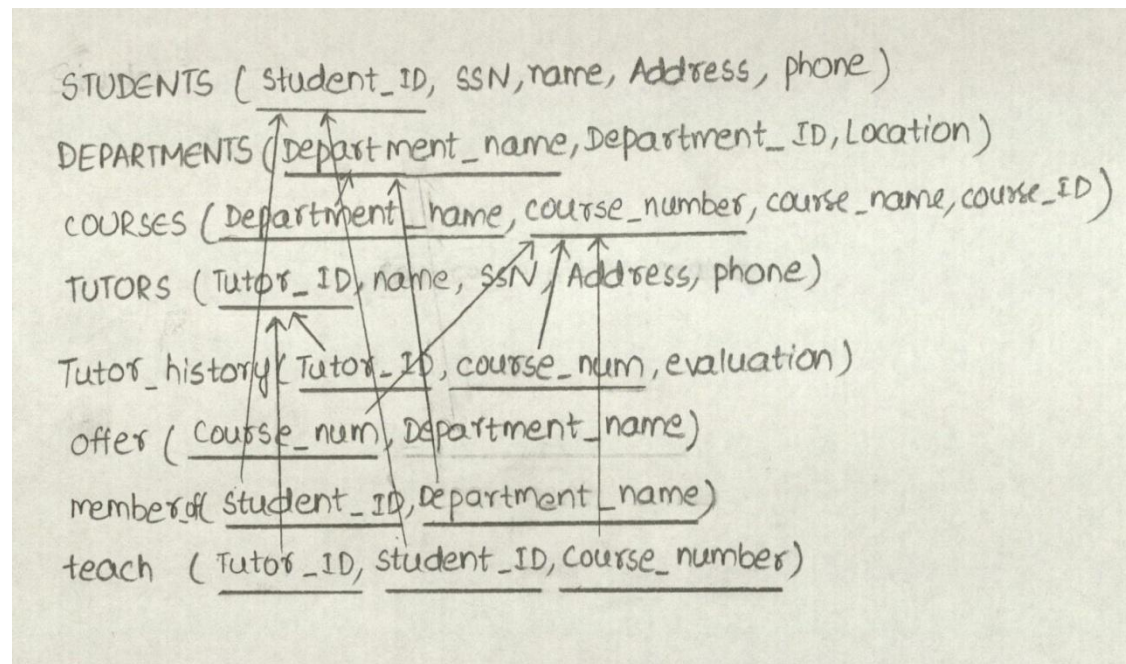

Technology Stack:

Business Logic and Frontend: PHP

Web server: PHP

Database: MySQL

ER DIAGRAM

ER DIAGRAM FOR KU ONLINE TUTORING

LOGICAL DATABASE DESIGN

STUDENTS (Student_ID, SSN, name, Address, phone)

DEPARTMENTS (Department_name, Department_ID, Location)

COURSES (Department_name, course_number, course_name, course_ID)

TUTORS (Tutor_ID, name, SSN, Address, phone)

Tutor_history (Tutor_ID, course_num, evaluation)

offer (Course_num, Department_name)

member_of (student_ID, Department_name)

teach (Tutor_ID, student_ID, Course_number)

IMPLEMENTATION:

The project is implemented using PHP and MYSQL. The front end and the businesslogic will be implemented using PHP and MYSQL will be used for database related operations. Below are the key components in the project.

1)STUDENTLOGINPAGE.php: When a student want to choose a Tutor,he/she should enter their name and KU ID in order to login into "KU ONLINE TUTOR SELECTION WEBSITE".

In case, any of the student provides wrong student Name or KU ID, The student will be redirected to same login page again so that he/she can enter it correctly again.

2)SELECT_DEPT.php: Once the student gives his/her login details, All the departments stored in the database will be displayed, and among those the student should select one department in this page.

3)SELECT_COURSE.php: Once student selects the department in previous page, Student can enter a course for which he/she want tutoring for.

If the student enters the course for which tutors are not available,It shows a message that "Tutors are not available for that course".

SORRY!TUTORS ARE NOT AVAILABLE FOR THIS COURSE

If the tutors are available for the course entered,in next page all the Tutors who are willing to tutor that course will be displayed.

4)TUTOR.php: All the tutors who can tutor the course selected by student will be displayed in this page and if a student selects one particular tutor,then the student will get assigned to that tutor.

AVAILABLE TUTORS FOR THE COURSE YOU SELECTED

TUTOR_ID:1
TUTOR_NAME:JOSEPH
DEPT_NAME:CHEMISTRY
COURSE_NUM:130
PHONE:7854323421
ACCENT:AMERICAN

TUTOR_ID:5
TUTOR_NAME:WILL
DEPT_NAME:CHEMISTRY
COURSE_NUM:130
PHONE:7856435643
ACCENT:BRITISH

ENTER TUTOR NAME OF YOUR CHOICE FROM THE LISTED TUTORS

submit

The student is free to select a tutor of his choice depending on the Tutor's accent.If student enters a wrong tutor name, A message will be displayed.

PLEASE SELECT THE TUTOR ONLY FROM THE LISTED TUTORS!!!

5)CONFIRM.php: If the student enters Tutor name correctly from the listed tutors,he/she will be directed to a confirmation page where the student is assigned to a tutor along with department name and course number.

CONFIRMATION PAGE

A TUTOR HAS BEEN SUCCESSFULLY ASSIGNED TO YOU!!!

STUDENT_NAME: KATIE
DEPARTMENT_NAME: CHEMISTRY
COURSE_NUMBER: 130
TUTOR_NAME: WILL
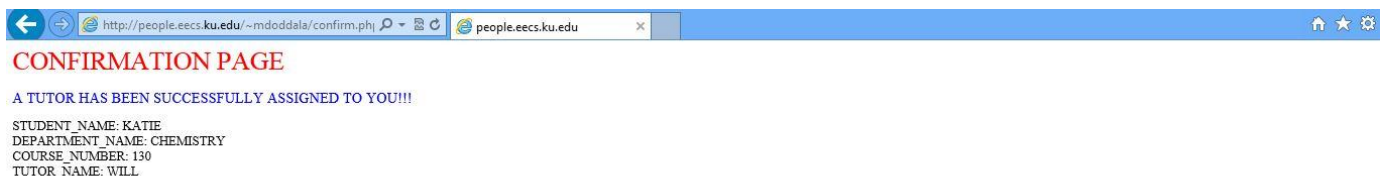
APPENDIX

TABLES:

1)STUDENTTABLE:

Browse	Structure	SQL	Search	Insert	Export	Import	Operations

✔ Showing rows 0 - 4 (~5 total ⊙ , Query took 0.0009 sec)

```
SELECT *
FROM `STUDENT`
LIMIT 0 , 30
```

☐ Profiling [Inline] [Edit] [Explain SQL] [Create PHP Code] [Refresh]

Show : 30 row(s) starting from row # 0 in horizontal ▼ mode and repeat headers after 100 cells

Sort by key: None ▼

+ Options

←T→				STUDENT_NAME	KU_ID
☐ 🖉 Edit 🖉 Inline Edit ﹃ Copy ⊖ Delete				JORDAN	2134528
☐ 🖉 Edit 🖉 Inline Edit ﹃ Copy ⊖ Delete				MILLER	2674532
☐ 🖉 Edit 🖉 Inline Edit ﹃ Copy ⊖ Delete				SRIMAN	2769403
☐ 🖉 Edit 🖉 Inline Edit ﹃ Copy ⊖ Delete				ALEX	2781345
☐ 🖉 Edit 🖉 Inline Edit ﹃ Copy ⊖ Delete				KATIE	2787070

2)DEPARTMENTTABLE:

Browse	Structure	SQL	Search	Insert	Export	Import	Operations

✔ Showing rows 0 - 3 (~4 total ⊙ , Query took 0.0009 sec)

```
SELECT *
FROM `DEPARTMENT`
LIMIT 0 , 30
```

☐ Profiling [Inline] [Edit] [Explain SQL] [Create PHP Code] [Refresh]

Show : 30 row(s) starting from row # 0 in horizontal ▼ mode and repeat headers after 100 cells

Sort by key: None ▼

+ Options

←T→				DEPT_NAME	DEPT_ID
☐ 🖉 Edit 🖉 Inline Edit ﹃ Copy ⊖ Delete				BIOLOGY	1003
☐ 🖉 Edit 🖉 Inline Edit ﹃ Copy ⊖ Delete				CHEMISTRY	1002
☐ 🖉 Edit 🖉 Inline Edit ﹃ Copy ⊖ Delete				MATHEMATICS	1000
☐ 🖉 Edit 🖉 Inline Edit ﹃ Copy ⊖ Delete				PHYSICS	1001

↑ Check All / Uncheck All With selected: 🖉 Change ⊖ Delete Export

Show : 30 row(s) starting from row # 0 in horizontal ▼ mode and repeat headers after 100 cells

3)COURSETABLE:

Table	Action	Rows	Type	Collation	Size	Overhead
COURSE	Browse Structure Search Insert Empty Drop	10	InnoDB	latin1_swedish_ci	16.0 KiB	-
COURSE_LIST	Browse Structure Search Insert Empty Drop	10	InnoDB	latin1_swedish_ci	16.0 KiB	-
DEPARTMENT	Browse Structure Search Insert Empty Drop	4	InnoDB	latin1_swedish_ci	16.0 KiB	-
STUDENT	Browse Structure Search Insert Empty Drop	5	InnoDB	latin1_swedish_ci	16.0 KiB	-
TUTOR	Browse Structure Search Insert Empty Drop	26	InnoDB	latin1_swedish_ci	16.0 KiB	-
TUTOR_INFO	Browse Structure Search Insert Empty Drop	7	MyISAM	latin1_swedish_ci	2.2 KiB	-
6 tables	Sum	62	MyISAM	latin1_swedish_ci	82.2 KiB	0 B

4) COURSE_LIST TABLE:

DEPT_NAME	COURSE_NUM
BIOLOGY	101
BIOLOGY	102
CHEMISTRY	130
CHEMISTRY	131
MATHEMATICS	104
MATHEMATICS	105
MATHEMATICS	115
MATHEMATICS	116
PHYSICS	114
PHYSICS	115

5) TUTOR_INFO TABLE:

TUTOR_NAME	TUTOR_ID	PHONE	ACCENT
JOSEPH	1	7854323421	AMERICAN
MARINDA	2	7854328756	BRITISH
ASHER	3	7854325677	AMERICAN
PARKER	4	7856432189	BRITISH
WILL	5	7856435643	BRITISH
KARTHIK	6	7855050653	INDIAN
SIDDARTH	7	7854563247	INDIAN

6) TUTOR TABLE :

←T→	TUTOR_NAME	DEPT_NAME	COURSE_NUM
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	ASHER	BIOLOGY	102
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	ASHER	PHYSICS	114
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	ASHER	PHYSICS	115
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	JOSEPH	BIOLOGY	101
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	JOSEPH	CHEMISTRY	130
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	JOSEPH	CHEMISTRY	131
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	JOSEPH	MATHEMATICS	104
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	JOSEPH	MATHEMATICS	115
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	KARTHIK	BIOLOGY	102
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	KARTHIK	MATHEMATICS	115
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	KARTHIK	MATHEMATICS	116
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	KARTHIK	PHYSICS	114
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	KARTHIK	PHYSICS	115
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	MARINDA	BIOLOGY	101
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	MARINDA	BIOLOGY	102
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	MARINDA	MATHEMATICS	116
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	PARKER	MATHEMATICS	105
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	PARKER	PHYSICS	114
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	SIDDHARTH	BIOLOGY	101
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	SIDDHARTH	CHEMISTRY	130
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	SIDDHARTH	CHEMISTRY	131
☐ 🖉 Edit 🖉 Inline Edit ⬓ Copy ⊖ Delete	SIDDHARTH	MATHEMATICS	104

7) SELECTTUTOR VIEW:

	TUTOR_ID	TUTOR_NAME	DEPT_NAME	COURSE_NUM	PHONE	ACCENT
Edit Inline Edit Copy Delete	1	JOSEPH	BIOLOGY	101	7854323421	AMERICAN
Edit Inline Edit Copy Delete	1	JOSEPH	CHEMISTRY	130	7854323421	AMERICAN
Edit Inline Edit Copy Delete	1	JOSEPH	CHEMISTRY	131	7854323421	AMERICAN
Edit Inline Edit Copy Delete	1	JOSEPH	MATHEMATICS	104	7854323421	AMERICAN
Edit Inline Edit Copy Delete	1	JOSEPH	MATHEMATICS	115	7854323421	AMERICAN
Edit Inline Edit Copy Delete	2	MARINDA	BIOLOGY	101	7854328756	BRITISH
Edit Inline Edit Copy Delete	2	MARINDA	BIOLOGY	102	7854328756	BRITISH
Edit Inline Edit Copy Delete	2	MARINDA	MATHEMATICS	116	7854328756	BRITISH
Edit Inline Edit Copy Delete	3	ASHER	BIOLOGY	102	7854325677	AMERICAN
Edit Inline Edit Copy Delete	3	ASHER	PHYSICS	114	7854325677	AMERICAN
Edit Inline Edit Copy Delete	3	ASHER	PHYSICS	115	7854325677	AMERICAN
Edit Inline Edit Copy Delete	4	PARKER	MATHEMATICS	105	7856432189	BRITISH
Edit Inline Edit Copy Delete	4	PARKER	PHYSICS	114	7856432189	BRITISH
Edit Inline Edit Copy Delete	5	WILL	BIOLOGY	102	7856435643	BRITISH
Edit Inline Edit Copy Delete	5	WILL	CHEMISTRY	130	7856435643	BRITISH
Edit Inline Edit Copy Delete	5	WILL	MATHEMATICS	104	7856435643	BRITISH
Edit Inline Edit Copy Delete	6	KARTHIK	BIOLOGY	102	7855050653	INDIAN
Edit Inline Edit Copy Delete	6	KARTHIK	MATHEMATICS	115	7855050653	INDIAN
Edit Inline Edit Copy Delete	6	KARTHIK	MATHEMATICS	116	7855050653	INDIAN
Edit Inline Edit Copy Delete	6	KARTHIK	PHYSICS	114	7855050653	INDIAN
Edit Inline Edit Copy Delete	6	KARTHIK	PHYSICS	115	7855050653	INDIAN

CONCLUSION

The KU Online tutoring service helps many students to get connected with a tutor by which students end up getting good grades.

Students can search for courses online through this website and select a particular department, then the courses that are offered by that department are listed. Upon selecting a particular course, tutors who are capable of teaching that course will be listed, then the student can select a particular tutor and he/she will be assigned to that particular student.

Also With the help of online tutoring websites, Students can get help from tutors regarding their Assignments, quizzes, Exams.

FUTURE IMPROVEMENTS

PEER TUTORING - This Online Tutoring service can be extended and implemented for a group of peers also, by which a tutor can mentor some small number of students at a time.