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# ASMF Pro Learning Management System

Mohammed Azhar Ali  
*Governors State University*

Shuja-Ur-Rahman Mohammed  
*Governors State University*

Ahmed Faraaz Syed  
*Governors State University*

Moqthar Ali Syed  
*Governors State University*

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## **ACKNOWLEDGEMENT**

At every outset we express my gratitude to almighty lord for showering his grace and blessings upon us to complete this project.

Although our name appears on the cover of this book, many people had contributed in some form or the other form to this project Development. We could not done this project without the assistance or support of each of the following we thank you all.

We wish to place on my record my deep sense of gratitude to our project guide, OUR TEAM for constant motivation and valuable help through the project work. Express my gratitude to Dr. Soon Ok Park, Advisor of Governors State University for her valuable suggestions and advices throughout the Graduate Seminar course. We also extend my thanks to other Faculties for their Cooperation during our Course.

Finally we would like to thank my friends for their cooperation to complete this project.

ASMF Learning Management System Team

## ABSTRACT

This Project is to design and develop an online learning management system for students, which will be an open source learning management tools like blackboard, which will provide an online platform for conducting and taking classes online. Where students can register for the classes and get access to the online lectures provided by the instructor that can be in any file format. This system consists of a registration module where a new student can register and login. The students who got registered will get the access to register for the course. And instructor module has the separate registration and can have access to the student details and list of students registered for the course.

The student module has student registration and login, at the registration page student need to provide with all the details like his name, email, phone number and it provide a student to add or drop a course and get access to the course description and details. The students can access the lectures in the portal provided by the instructor, the lecture can be in any type for example it can be a material or video or link to the source etc. The files can be of any format like pdf, doc, ppt, video etc. There will be an assignment submission portal or link where all the students can submit the assignment and can access their grades.

The instructor module will have the different registration form and after login to their portal an instructor can have access to all the student details and list of students that has registered for the class and adding and removing a student. Instructor can send a notification email to all the students and can also notify through text messages via mobile phone. Instructor can provide the lecture through uploading and updating the materials and video lectures to the system so that all the students can access to the materials provided by the instructor. And the instructor can provide record on-screen activity to students for assist with software installation and course related support, with the help of screencast tools. Instructor has the portal to post the assignments and check the assignments posted by students and grade them.

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## **1. INTRODUCTION**

The primary goal of this framework is to give a Learners Sojourn that offer learning and instructional exercise administration through elements, for example, slides seeing, speaker/understudy connection through video and sound gushing and the inquiry/answer sessions through visiting. One of the principle favorable circumstances as any this application would demonstrate to have is the wide range access to give the understudies and teachers might be anyplace on the planet yet at the same time figuring out how to get to the assets and data from anyplace.

## **2. SYSTEM OVERVIEW**

School is the level 1 learning station for any understudy. At the point when contrasted with a school or a college a regular school will have parcel of administrative work included. Right from understudy's admission to giving exchange testament to the understudy, there will be parcel of business related to him/her. Aside from understudy data, the organization will likewise need to keep up the educator's data and non-showing staff data and so on.. The application can be further upgraded according to necessity from particular school to coordinate their particular needs.

## **3. SYSTEM REQUIREMENTS**

### **TECHNOLOGIES USED**

- ASP.NET
- HTML
- CSS
- SQL

### **SOFTWARE REQUIREMENTS**

- VISUAL STUDIOS 2012
- SQL SERVER 2012
- WINDOWS 7,8,10
- SNAGIT

## **4. SCREENCAST TOOLS**

A screencast is an advanced recording of the computer screen output, otherwise called a feature screen capture, frequently also holding sound portrayal. The term screencast compares it with the related expression screenshot; inasmuch as screenshot generates a solitary picture of a workstation screen. A screencast is basically a motion picture of the progressions about whether that a client sees once a workstation screen, improved with sound portrayal.

Screencasts can show and instruct the utilization of programming elements. Making a screencast helps programming engineers flaunt their work. Teachers may likewise utilize

screencasts as another method for incorporating innovation into the curriculum. Students can record video and sound as they exhibit the best possible methodology to tackle an issue on an intuitive whiteboard.

Screencasts are valuable devices for conventional programming clients also: They help documenting report bugs in which the screencasts assume the position of possibly misty composed clarifications; they help demonstrating others how a given assignment is proficient in a particular programming environment.

In classrooms, educators and understudies can utilize this apparatus to make recordings to clarify content, vocabulary, and so on. Recordings can make class time more gainful for both educators and understudies. Screencasts may build understudy engagement and accomplishment furthermore give additional time in which understudies can work cooperatively in gatherings, so screencasts help them to thoroughly consider agreeable learning.

Also, screenshots permit understudies to move at their own particular pace since they can delay or audit content whenever and anyplace. Screencasts are incredible for those learners who simply require an oral and in addition a visual clarification of the substance exhibited.

Most trial adaptations of a screen casting programs regularly apply a watermark naturally, promising clients to buy the full form keeping in mind the end goal to expel it.

An option answer for catching a screencast is the utilization of an equipment RGB or DVI outline grabber card. This methodology puts the weight of the recording and pressure process on a machine separate from the one producing the visual material being caught.

The one screencast technique which we are using here is called SnagIt. The description of it is given below.

### **SnagIt:**

SnagIt is a screenshot program that catches video presentation and sound yield. Initially for the Microsoft Windows working frameworks, late forms have additionally been accessible for Mac OS, however with less components. It is made and conveyed by TechSmith, and was initially dispatched in 1990. SnagIt is accessible in English, German, Korean, and Japanese adaptations.

SnagIt replaces the local print screen capacity with extra elements. More up to date forms permit group catch of implanted things, for example, connections, pictures, and sight and sound. The client can set parameters and console easy routes to catch specific sorts of information, which are put away in an organizer called "List" as a matter of course. The product can likewise take after connections in website pages, catching the predetermined information from the connected pages.

Extras augment its components. For instance, **Flickr Output** empowers the client to transfer screen catches to a Flickr account.

### **Snappy toolbar:**

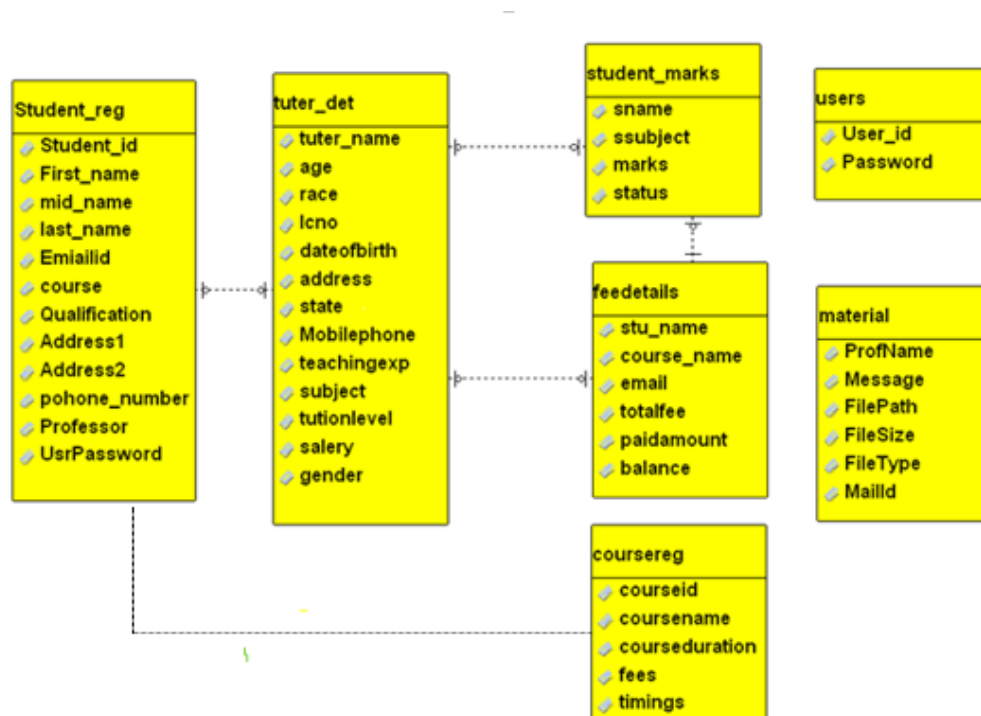
A snappy toolbar can build catch speed by either utilizing the last catch strategy connected or by permitting the technique to be immediately changed through an alternative menu.

It has a sneak peek window which demonstrates a zoomed thumbnail of whatever the cursor is floating over and a site page inventory producer. The review window can assemble all screen catches rapidly and make a page in five straightforward steps.

The product underpins diverse choice arrangements, which are All-in-One, Full Screen, Copy to clipboard, Web page as a PDF with connections, Copy content to clipboard, Free hand, and Menu with time delay. The catch apparatus has a cluster converter which permits change of a vast quantities of documents without a moment's delay.

The product can consequently move screenshots to the Edit segment once caught, where they can be resized, commented on, or enhancements can be included.

## 5. E-R Diagram



## 6. DATA DICTIONARY

| Student_reg |               |              |                                     |
|-------------|---------------|--------------|-------------------------------------|
|             | Column Name   | Data Type    | Allow Nulls                         |
|             | Student_id    | varchar(50)  | <input type="checkbox"/>            |
|             | First_name    | varchar(20)  | <input checked="" type="checkbox"/> |
|             | mid_name      | varchar(20)  | <input checked="" type="checkbox"/> |
|             | last_name     | varchar(20)  | <input checked="" type="checkbox"/> |
|             | Emialid       | varchar(20)  | <input checked="" type="checkbox"/> |
|             | course        | varchar(20)  | <input checked="" type="checkbox"/> |
|             | Qualification | varchar(20)  | <input checked="" type="checkbox"/> |
|             | Address1      | varchar(20)  | <input checked="" type="checkbox"/> |
|             | Address2      | varchar(20)  | <input checked="" type="checkbox"/> |
|             | pohone_number | nvarchar(50) | <input checked="" type="checkbox"/> |
|             | Professor     | varchar(50)  | <input checked="" type="checkbox"/> |
|             | UsrPassword   | varchar(50)  | <input checked="" type="checkbox"/> |
|             |               |              | <input type="checkbox"/>            |

| tuter_det |               |             |                                     |
|-----------|---------------|-------------|-------------------------------------|
|           | Column Name   | Data Type   | Allow Nulls                         |
|           | tuter_name    | varchar(50) | <input checked="" type="checkbox"/> |
|           | age           | int         | <input checked="" type="checkbox"/> |
|           | race          | varchar(50) | <input checked="" type="checkbox"/> |
|           | Icno          | varchar(50) | <input type="checkbox"/>            |
|           | dateofbirth   | varchar(50) | <input checked="" type="checkbox"/> |
|           | address       | varchar(50) | <input checked="" type="checkbox"/> |
|           | state         | varchar(50) | <input checked="" type="checkbox"/> |
|           | email         | varchar(50) | <input checked="" type="checkbox"/> |
|           | Mobilephone   | varchar(50) | <input checked="" type="checkbox"/> |
|           | teachingexp   | varchar(50) | <input checked="" type="checkbox"/> |
|           | subject       | varchar(50) | <input checked="" type="checkbox"/> |
|           | tutionlevel   | varchar(50) | <input checked="" type="checkbox"/> |
|           | salery        | varchar(50) | <input checked="" type="checkbox"/> |
|           | gender        | varchar(50) | <input checked="" type="checkbox"/> |
|           | Qualification | varchar(50) | <input checked="" type="checkbox"/> |
|           |               |             | <input type="checkbox"/>            |

| users |             |             |                                     |
|-------|-------------|-------------|-------------------------------------|
|       | Column Name | Data Type   | Allow Nulls                         |
|       | User_id     | varchar(50) | <input checked="" type="checkbox"/> |
|       | Password    | varchar(50) | <input checked="" type="checkbox"/> |
|       |             |             | <input type="checkbox"/>            |



| feedetails |             |             |                                     |
|------------|-------------|-------------|-------------------------------------|
|            | Column Name | Data Type   | Allow Nulls                         |
|            | stu_name    | varchar(20) | <input checked="" type="checkbox"/> |
|            | course_name | varchar(20) | <input checked="" type="checkbox"/> |
|            | email       | varchar(20) | <input checked="" type="checkbox"/> |
|            | totalfee    | int         | <input checked="" type="checkbox"/> |
|            | paidamount  | int         | <input checked="" type="checkbox"/> |
|            | balance     | int         | <input checked="" type="checkbox"/> |
|            |             |             | <input type="checkbox"/>            |

| student_marks |             |             |                                     |
|---------------|-------------|-------------|-------------------------------------|
|               | Column Name | Data Type   | Allow Nulls                         |
|               | sname       | varchar(20) | <input checked="" type="checkbox"/> |
|               | ssubject    | varchar(20) | <input checked="" type="checkbox"/> |
|               | email       | varchar(20) | <input type="checkbox"/>            |
|               | marks       | varchar(20) | <input checked="" type="checkbox"/> |
|               | status      | varchar(20) | <input checked="" type="checkbox"/> |
|               |             |             | <input type="checkbox"/>            |

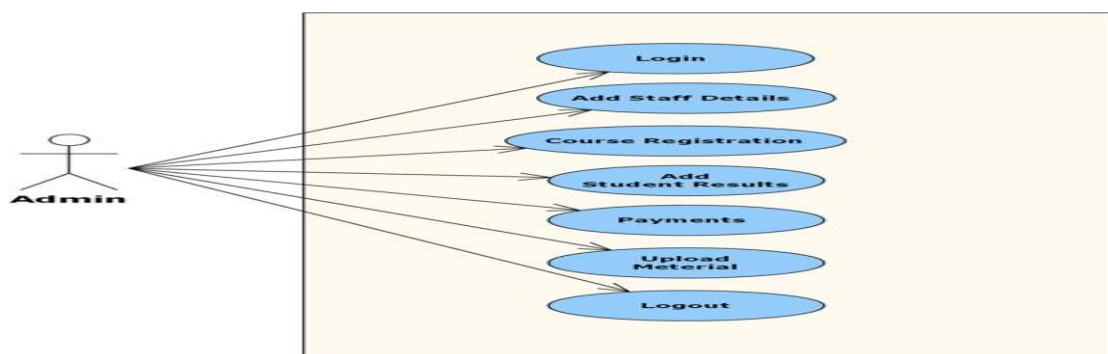
| material |             |              |                                     |
|----------|-------------|--------------|-------------------------------------|
|          | Column Name | Data Type    | Allow Nulls                         |
|          | ProfName    | varchar(50)  | <input checked="" type="checkbox"/> |
|          | Message     | varchar(250) | <input checked="" type="checkbox"/> |
|          | FilePath    | varchar(250) | <input checked="" type="checkbox"/> |
|          | FileSize    | varchar(15)  | <input checked="" type="checkbox"/> |
|          | FileType    | varchar(250) | <input checked="" type="checkbox"/> |
|          | MailId      | varchar(50)  | <input checked="" type="checkbox"/> |
|          |             |              | <input type="checkbox"/>            |

| demo |             |             |                          |
|------|-------------|-------------|--------------------------|
|      | Column Name | Data Type   | Allow Nulls              |
|      | num         | varchar(50) | <input type="checkbox"/> |
|      |             |             | <input type="checkbox"/> |

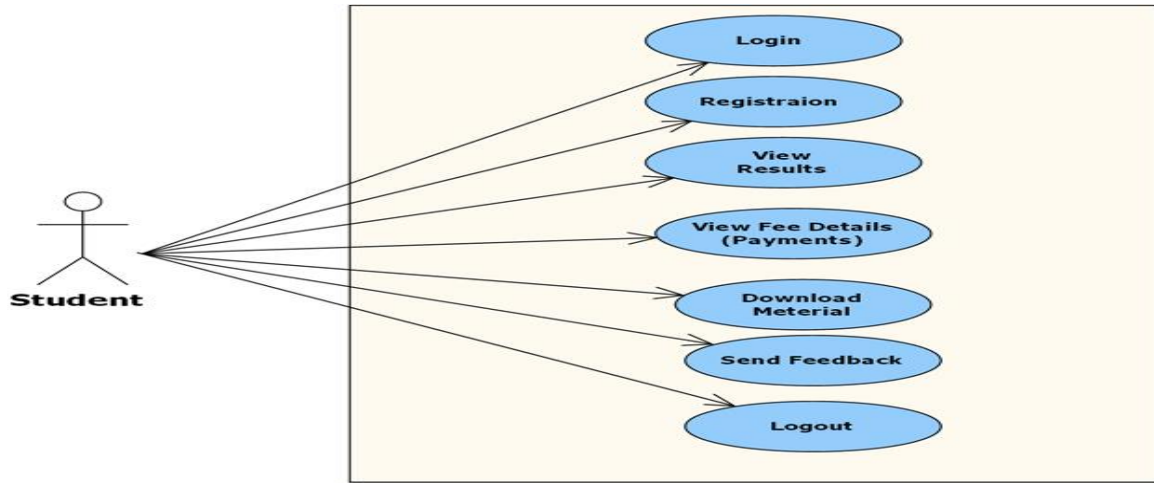
| courserereg |                |             |                                     |
|-------------|----------------|-------------|-------------------------------------|
|             | Column Name    | Data Type   | Allow Nulls                         |
|             | courseid       | varchar(20) | <input type="checkbox"/>            |
|             | coursename     | varchar(20) | <input checked="" type="checkbox"/> |
|             | courseduration | varchar(20) | <input checked="" type="checkbox"/> |
|             | fees           | money       | <input checked="" type="checkbox"/> |
|             | timings        | varchar(20) | <input checked="" type="checkbox"/> |
|             |                |             | <input type="checkbox"/>            |

## 7. UML DIAGRAMS

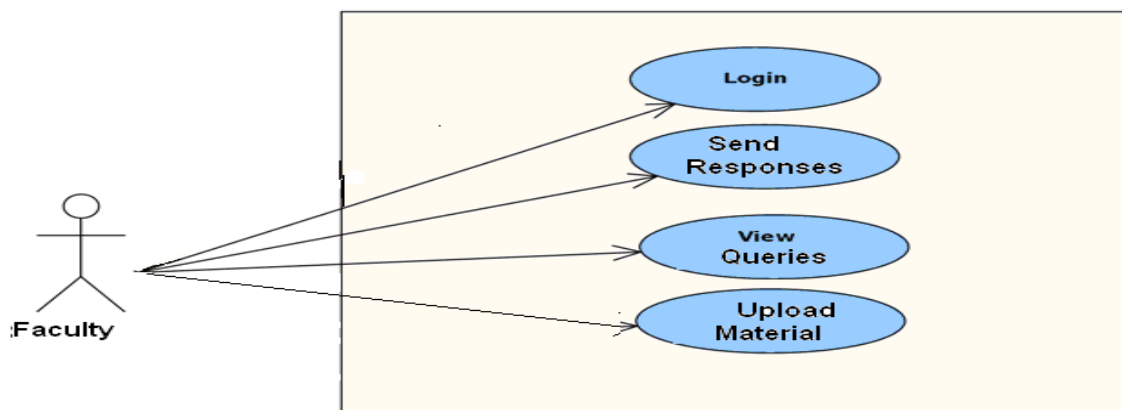
Use case For Admin:



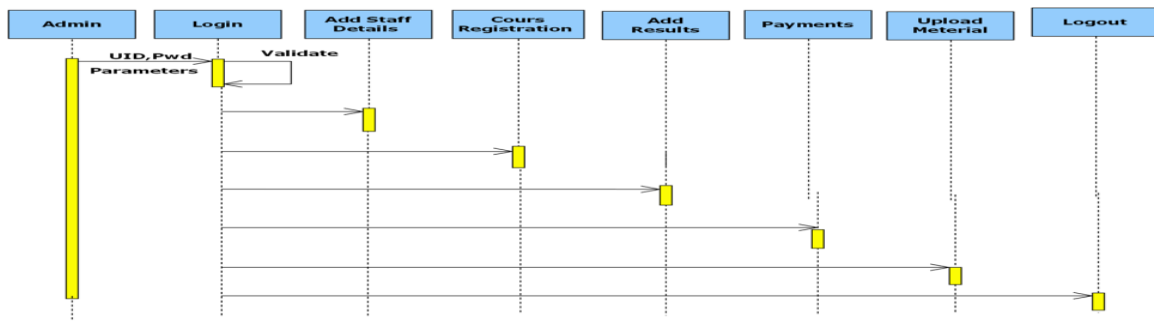
Use case for Student:



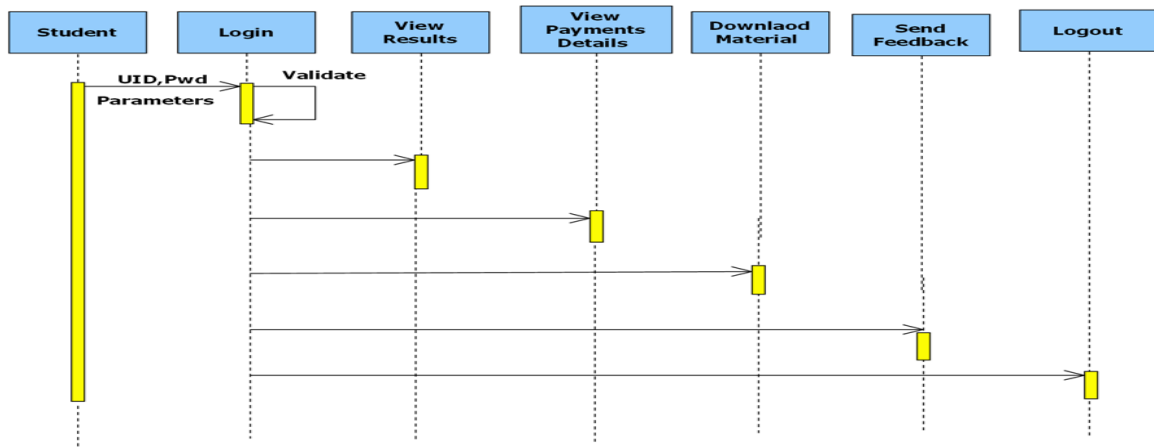
**Use Case For Faculty:**



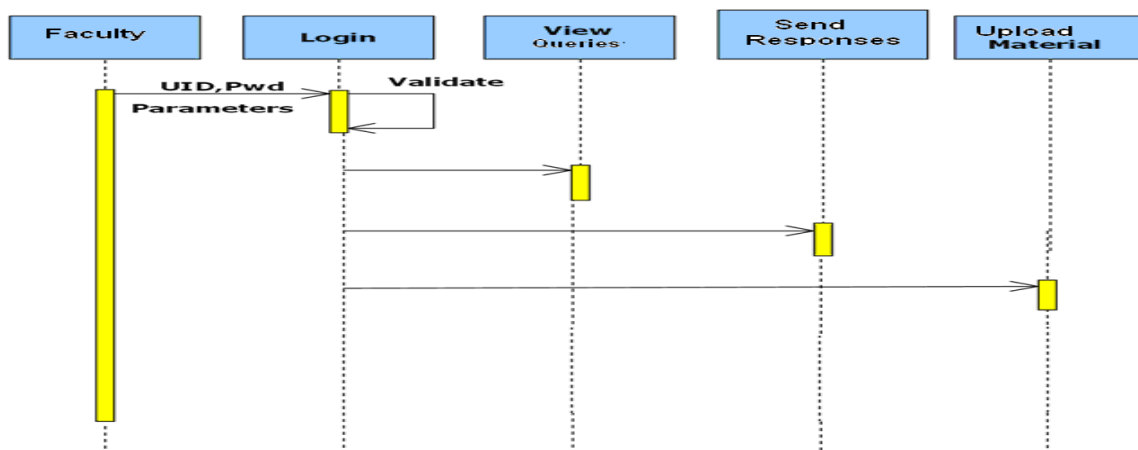
**Sequence for Admin:**



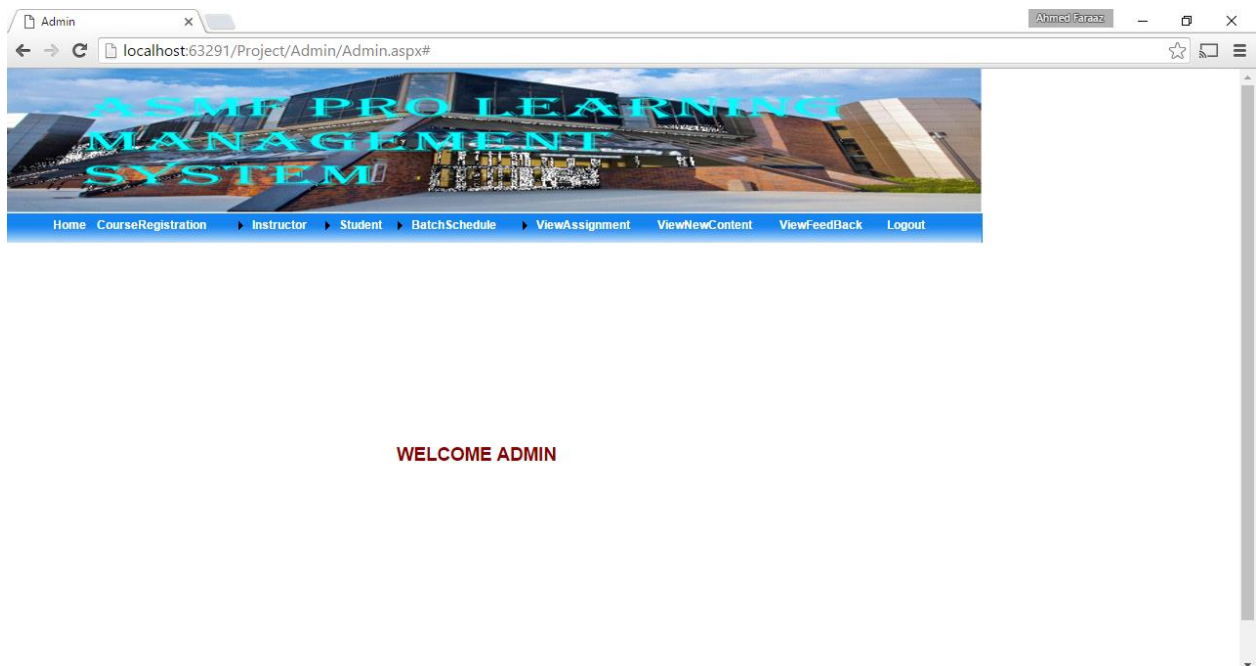
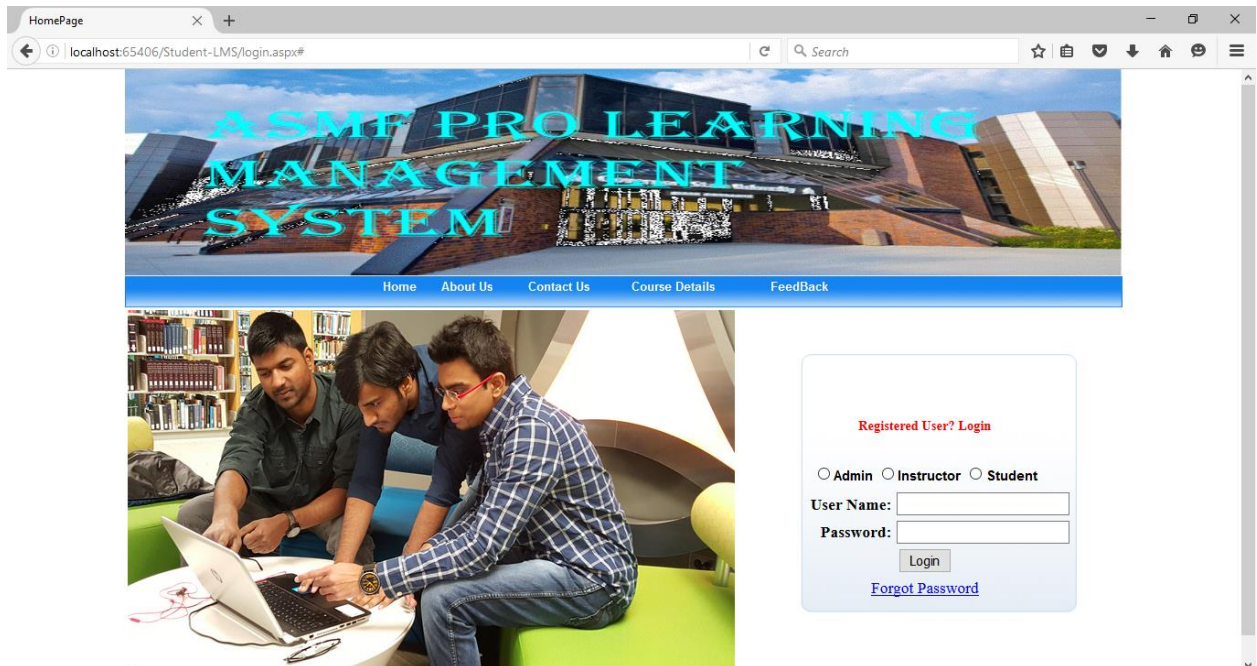
**Sequence for Student:**



**Sequence for Faculty:**



## 8. SCREENSHOTS



The screenshot shows a web browser window with the URL `localhost:63291/Project/Admin/CourseRegistration.aspx#`. The page features a header with the text "ASMP PRO LEARNING MANAGEMENT SYSTEM" and a navigation menu with links: Home, CourseRegistration, Instructor, Student, BatchSchedule, ViewAssignment, ViewNewContent, ViewFeedBack, and Logout. Below the header is a form titled "Course Registration" with the following fields:

- \* Course Name: [Text Input]
- \* Subject: [Text Input]
- \* Topics: [Text Input]
- \* Assessment Authority: [Text Input]
- \* Date Of Assessment: [Date Picker (mm/dd/yyyy)]


An "Insert" button is located at the bottom right of the form.

The screenshot shows a web browser window with the URL `localhost:63291/Project/Admin/StudentRegistration.aspx#`. The page features the same header and navigation menu as the previous screenshot. Below the header is a form titled "Student Registration" with the following fields:

- \* Student Name: [Text Input, value: Admin]
- \* Password: [Text Input, value: \*\*\*\*]
- \* Qualification: [Dropdown Menu]
- \* Gender: [Radio Buttons (Male, Female)]
- \* Address: [Text Input]
- \* Contact MailId: [Text Input]
- \* Mobile: [Text Input, value: 91 - Country Code - Mobile Number]
- \* Phone: [Text Input, value: Country Code - STD Code - Phone Number]

An "Insert" button is located at the bottom right of the form.

Admin | New Tab | Ahmed Faraaz | localhost:63291/Project/Admin/InstructorRegistration.aspx#



Home CourseRegistration Instructor Student BatchSchedule ViewAssignment ViewNewContent ViewFeedBack Logout

**Instructor Registration**

\*Instructor Name: Admin

\*Password: \*\*\*\*\*

\*Qualification: Select

\*Gender:  Male  Female

\*Experience Req: Years

\*Designation:


\*Address:

\*Contact MailId:

\*Mobile: 91 - Country Code - Mobile Number

Phone: - - - Country Code - STD Code - Phone Number

Admin | Ahmed Faraaz | localhost:63291/Project/Admin/MaintainInstructor.aspx#



Home CourseRegistration Instructor Student BatchSchedule ViewAssignment ViewNewContent ViewFeedBack Logout

**Maintain Instructor Details**

| Action                   | InstructorName | Qualification | Experience | Designation |                      |
|--------------------------|----------------|---------------|------------|-------------|----------------------|
| <input type="checkbox"/> | kamala         | B.A           | 4-5        | teacher     | <a href="#">Edit</a> |
| <input type="checkbox"/> | khadar         | MBA/PGDM      | 14-15      | instructor  | <a href="#">Edit</a> |

1

[Check All](#) | [Clear All](#) | [Delete Checked](#)

The screenshot shows a web browser window with the URL `localhost:63291/Project/Instructor/Instructor.aspx#`. The page features a header banner with the text "ASMP PRO LEARNING MANAGEMENT SYSTEM" overlaid on a building image. Below the banner is a navigation menu with links: Home, ChangePassword, MyProfile, BatchInfo, AssignmentScheduling, StudentGrade, ViewBatchSchedule, AddCourse, ViewNewContent, and Logout. The main content area displays the text "WELCOME FARAAZ" in red.

The screenshot shows a web browser window with the URL `localhost:63291/Project/Instructor/MyProfile.aspx#`. The page features the same header banner and navigation menu as the previous screenshot. The main content area displays an "Instructor Profile" box with the following details:


| Instructor Profile      |                  |
|-------------------------|------------------|
| <b>Instructor Name:</b> | faraaz           |
| <b>Qualification:</b>   | MS               |
| <b>Gender:</b>          | FeMale           |
| <b>Experience Req:</b>  | 4-5              |
| <b>Designation:</b>     | instructor       |
| <b>Address:</b>         | 865 Glenlake Dr  |
| <b>Contact MailId:</b>  | faraaz@gmail.com |
| <b>Mobile:</b>          | 91-6304783318    |
| <b>Phone:</b>           | Not mentioned    |

At the bottom of the profile box is a "Cancel" button.



Admin x Ahmed Faraz

localhost:63291/Project/Instructor/AssignmentScheduling.aspx#



Home ChangePassword MyProfile BatchInfo AssignmentScheduling StudentGrade ViewBatchSchedule AddCourse ViewNewContent Logout

---

**Assignment Scheduling**

\*Assignment Name:

\*Description:

\*HeadLineText:

\*Grade:

\*Available From:

\*Due Days:


\*Last Submission:

\*Assignment Type:

\*Student Name:

Admin x Ahmed Faraz

localhost:63291/Project/Instructor/MaintainAssignmentScheduling.aspx#



Home ChangePassword MyProfile BatchInfo AssignmentScheduling StudentGrade ViewBatchSchedule AddCourse ViewNewContent Logout

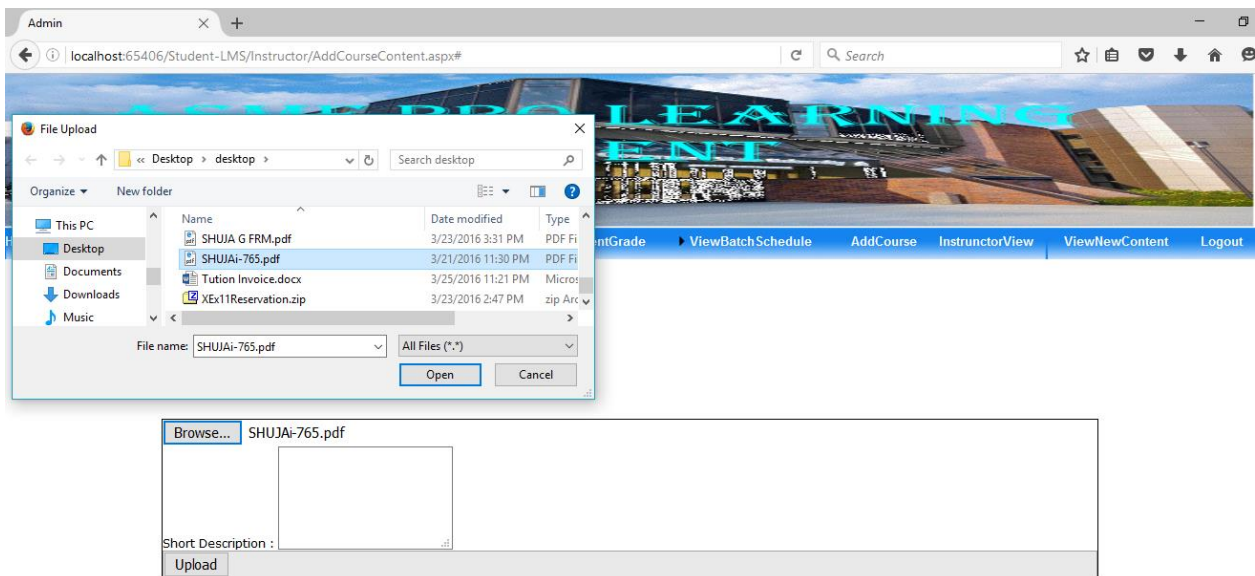
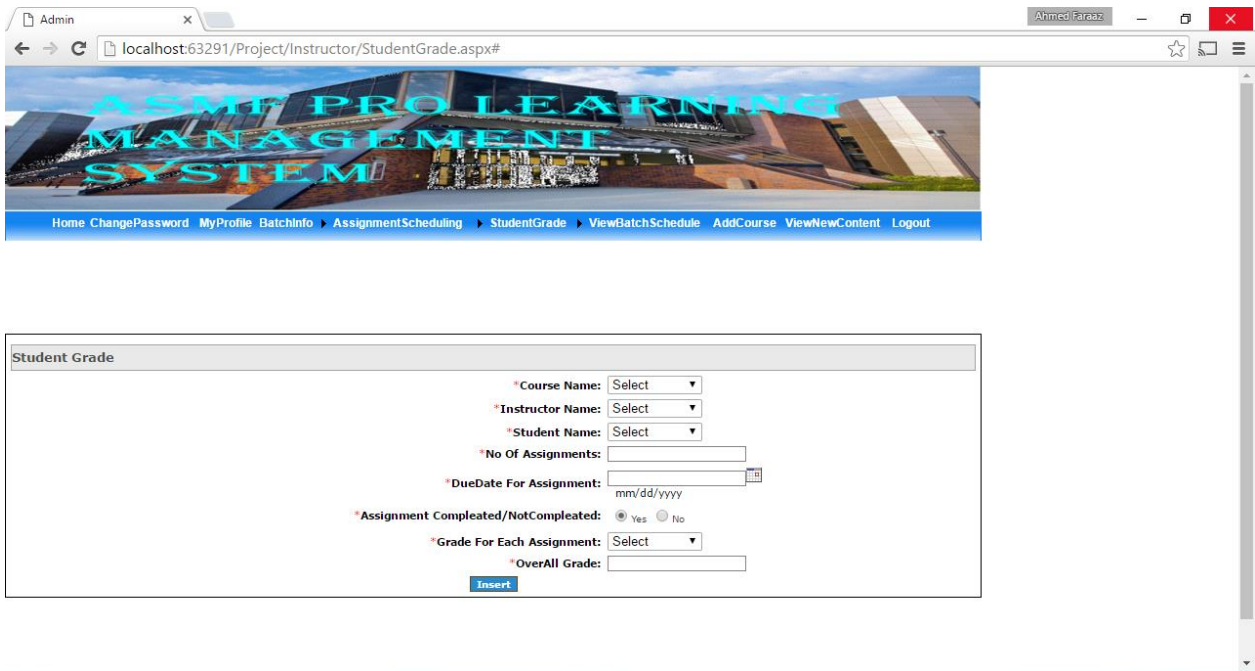
---

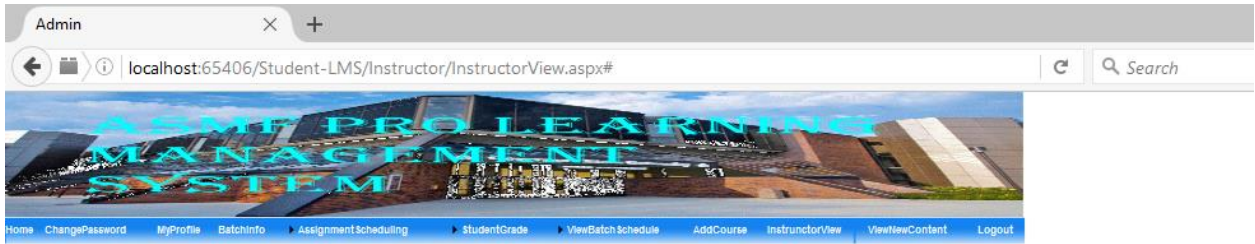
**MaintainAssignmentScheduling Details**

| Action                   | AssignmentName | Assignment Type | Grade | AvailableFrom | PreventLastSubmissions |                      |
|--------------------------|----------------|-----------------|-------|---------------|------------------------|----------------------|
| <input type="checkbox"/> | DataBase2      | MultipleChoice  | A     | 09/03/2016    | 09/23/2016             | <a href="#">Edit</a> |
| <input type="checkbox"/> | week 2         | FillInTheBlanks | A     | 05/03/2016    | 05/13/2016             | <a href="#">Edit</a> |
| <input type="checkbox"/> | week 5         | FillInTheBlanks | A     | 03/02/2016    | 03/10/2016             | <a href="#">Edit</a> |
| <input type="checkbox"/> | week 10        | MultipleChoice  | A     | 10/03/2016    | 20/03/2016             | <a href="#">Edit</a> |

1

[Check All](#) | [Clear All](#) | [Delete Checked](#)





**Assignment:**

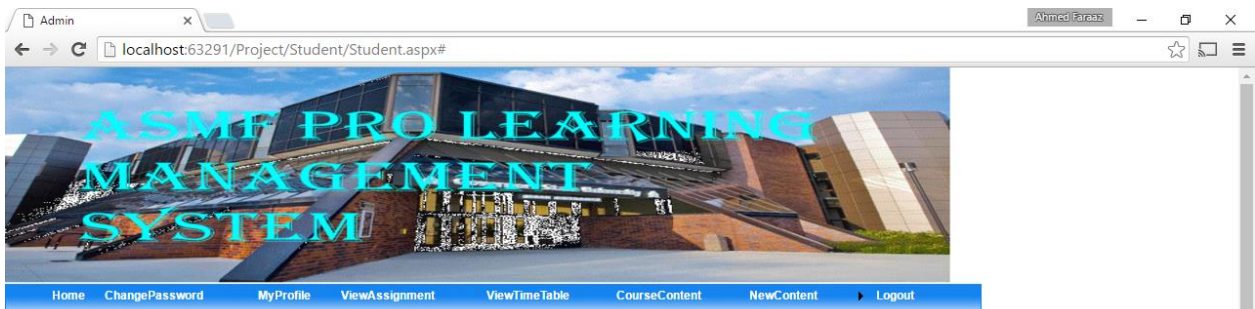
| InstructorID | Instructor Name | File Name       | Short Description | Uploaded Date        | Action                   | Action                 |
|--------------|-----------------|-----------------|-------------------|----------------------|--------------------------|------------------------|
| 9            | faraz           | q-1145.pdf      | forms             | 5/4/2016 1:03:40 PM  | <a href="#">Download</a> | <a href="#">Delete</a> |
| 9            | faraz           | SHLOA G FRM.pdf | gform             | 5/5/2016 10:33:57 AM | <a href="#">Download</a> | <a href="#">Delete</a> |

**Lecture:**

| InstructorID | Instructor Name | File Name         | Short Description | Uploaded Date        | Action                   | Action                 |
|--------------|-----------------|-------------------|-------------------|----------------------|--------------------------|------------------------|
| 9            | faraz           | Abstract Sp6.docx | abstract          | 5/4/2016 1:03:10 PM  | <a href="#">Download</a> | <a href="#">Delete</a> |
| 9            | faraz           | Homework.doc      | Assignment        | 5/5/2016 10:32:05 AM | <a href="#">Download</a> | <a href="#">Delete</a> |

**Videos/Audios**


| InstructorID | Instructor Name | File Name     | Short Description | Uploaded Date       | Action                   | Action                 |
|--------------|-----------------|---------------|-------------------|---------------------|--------------------------|------------------------|
| 9            | faraz           | SampleVIDEO   | sample video      | 5/4/2016 1:50:06 PM | <a href="#">Download</a> | <a href="#">Delete</a> |
| 9            | faraz           | SampleVIDEO   |                   | 5/4/2016 3:34:08 PM | <a href="#">Download</a> | <a href="#">Delete</a> |
|              |                 | Instructor2.m |                   |                     |                          |                        |



**WELCOME KARTHIKAA**

Admin x Ahmed Faraz

localhost:63291/Project/Student/CourseContent.aspx#




Home ChangePassword MyProfile ViewAssignment ViewTime Table CourseContent NewContent Logout

| [ID] | File Name                                | InstructorID | Instructor Name | Uploaded Date        | Total Amount             |
|------|--|--------------|-----------------|----------------------|--------------------------|
| 6    | assignment 4(1).zip                      | 8            | khadar          | 4/23/2016 4:36:29 PM | <a href="#">Download</a> |
| 5    | SampleVIDEO1.mp4                         | 8            | khadar          | 4/23/2016 4:30:19 PM | <a href="#">Download</a> |
| 4    | Learning management system abstract.docx | 8            | khadar          | 4/23/2016 4:28:55 PM | <a href="#">Download</a> |
| 3    | SampleVIDEO1.mp4                         | 8            | khadar          | 4/23/2016 3:26:47 PM | <a href="#">Download</a> |
| 2    | Basic windows service.docx               | 3            | kamala          | 3/19/2016 3:25:58 PM | <a href="#">Download</a> |
| 1    | test.pdf                                 | 3            | kamala          | 3/19/2016 3:09:26 PM | <a href="#">Download</a> |

Admin x Ahmed Faraz

localhost:63291/Project/Student/viewAssignment.aspx#



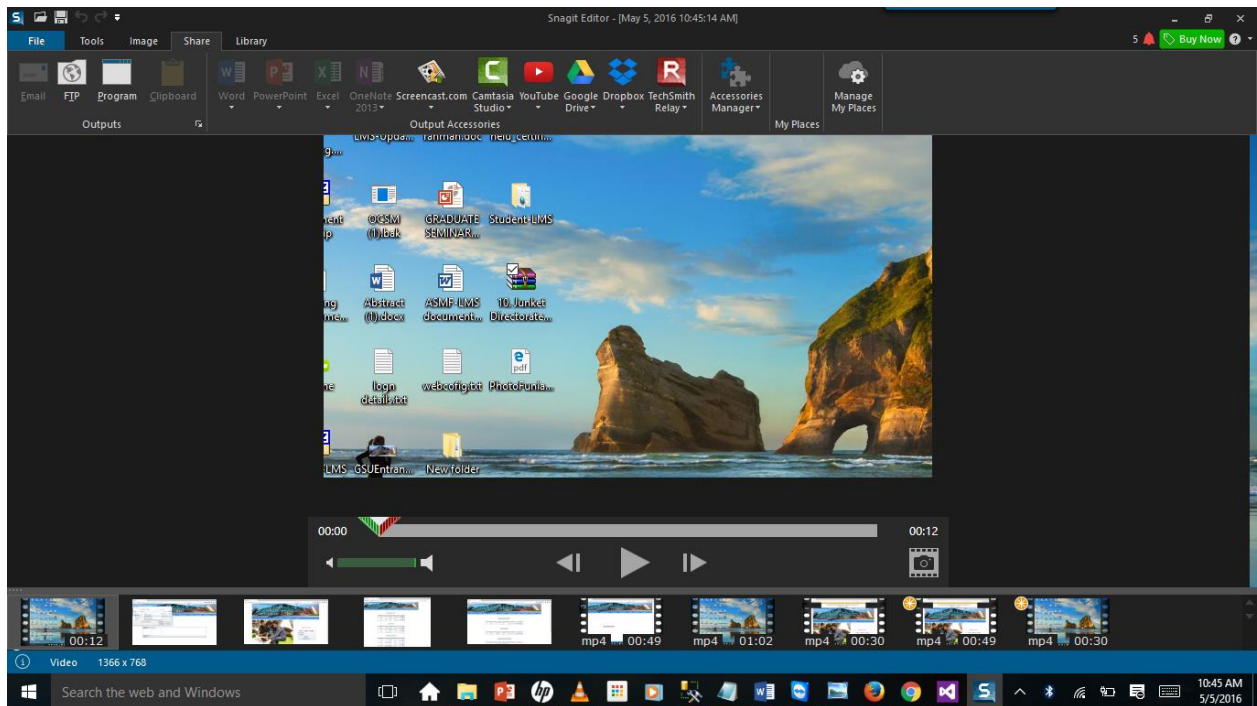
Home ChangePassword MyProfile ViewAssignment ViewTime Table CourseContent NewContent Logout

ViewAssignment

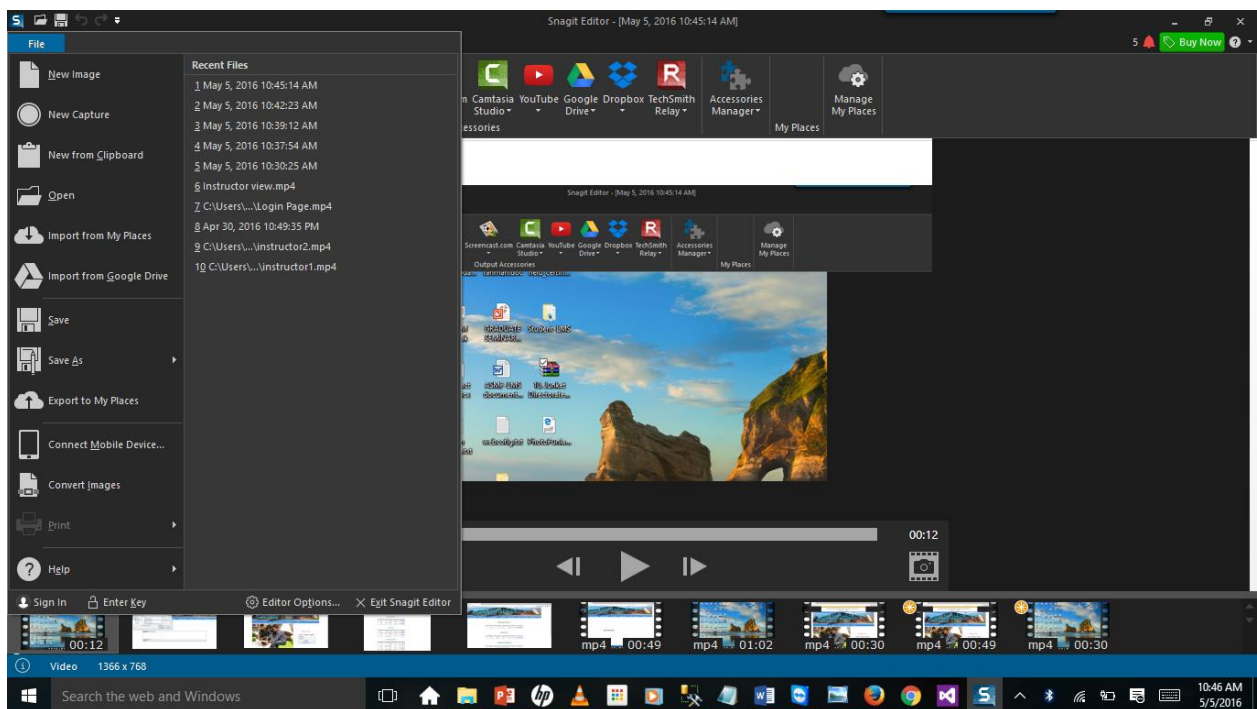
| AssignmentName | Description | HeadlineText         | Grade | DueDate    | PreventLastSubmissions | AssignmentType  |
|----------------|-------------|----------------------|-------|------------|------------------------|-----------------|
| DataBase2      | Data2       | Data2                | A     | 20days     | 09/23/2016             | MultipleChoice  |
| week 2         | chapter 3   | database             | A     | 05/13/2016 | 05/13/2016             | FillInTheBlanks |
| week 5         | .net        | internet programming | A     | 03/10/2016 | 03/10/2016             | FillInTheBlanks |
| week 10        | Flat        | turning machine      | A     | 20/03/2016 | 20/03/2016             | MultipleChoice  |

## HOW TO USE SNAGIT:

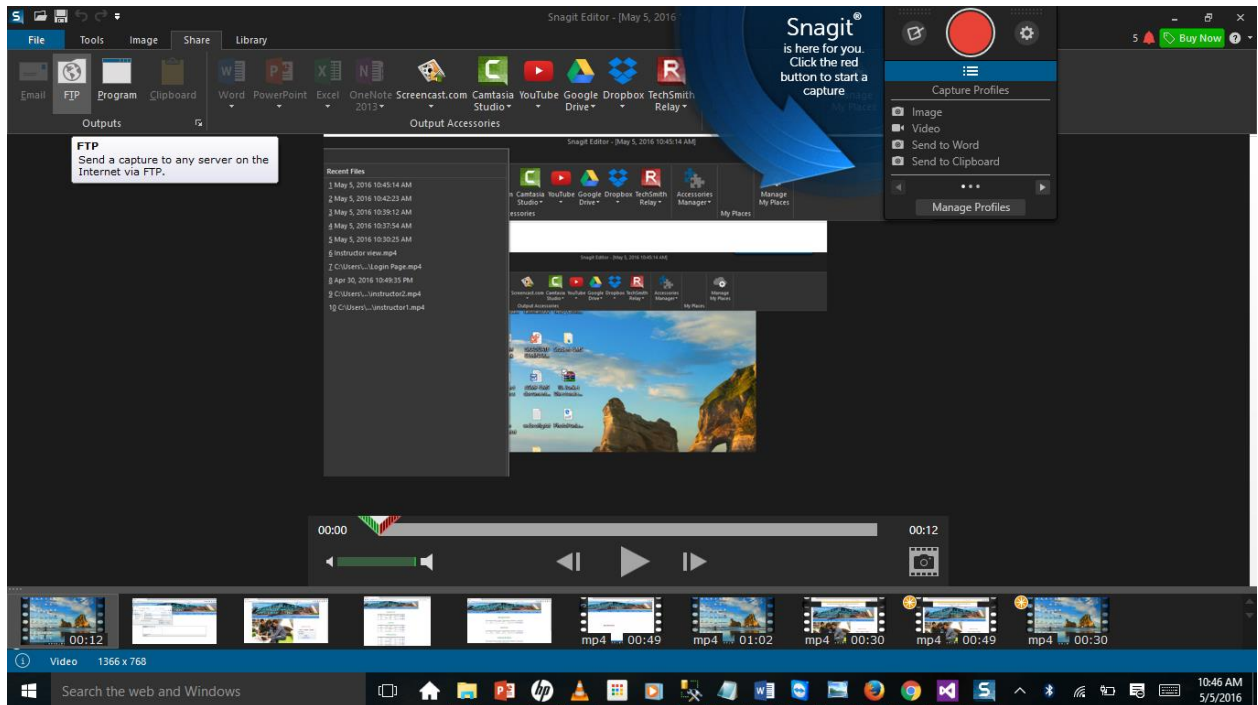
Step1: click snagit application.



Step2: Select options and file save and share.



Step 3: Start the Screen Capture Click on the red button.



## 9. CONCLUSION

It has been a great pleasure for us to work on this exciting and challenging project under Dr. Park. This project proved good for me as it provided practical knowledge of not only programming in ASP.NET and C#.NET web based application and some extent Windows Application and SQL Server database, but also about all handling procedure related with "LEARNERS SOJOURN". It also provides knowledge about the latest technology used in developing web enabled application and client server technology that will be great demand in future. This will provide better opportunities and guidance in future in developing projects independently.

## 10. BIBLIOGRAPHY

- 1) Smith, Tech. "SnagIt: The Ultimate Screen Capture Tool for Mac and Windows." TechSmith. N.P., 15 Apr. 1995. Web. 05 May 2016.
- 2) Software.Inc, Lucid. "Lucid chart." Lucid chart. N.P., 18 Feb. 1998. Web. 05 May 2016.
- 3) Smith, Tech. "Free Online Video Sharing With Screencast.com." TechSmith. N.P., 15 Apr. 1996. Web. 05 May 2016.
- 4) Professional C#, 2nd Edition, Simon Robinson, K. Scott Allen, Ollie Cornes, Jay Glynn, Zach Greenvoss, Burton Harvey, Christian Nagel, Morgan Skinner, Karli Watson, ISBN: 978-0-7645-4398-2 .
- 5) Steven Feuerstein, Bill Pribyl ., PL/SQL Programming, O'Reilly Media, 2014