



Online ITCK Management System

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TERMS AND DEFINITIONS

1. HTML:

HyperText Markup Language Allows designers to define and structure the contents of your document.[evoch]

HTML new version has got new features and capabilities, that has enhanced

2. CSS:

Stands for **Cascading Style Sheets**, Styles define **how to display** HTML elements. [CSS].

3. JavaScript:

JavaScript is the most popular scripting language on the internet, and works in all major browsers, such as Internet Explorer, Firefox, Chrome, Opera, and Safari.[JavaScript].

4. JQuery:

jQuery is a library of JavaScript Functions.

5. AJAX is about updating parts of a web page, without reloading the whole page.[Ajax].

6. OS:

Operating System.

7. PHP:

Stands for HyperText Processor which is server side scripting language, that processes the client requests.

8. FTP:

File Transfer Protocol, This protocol is used by a server where Files are uploaded to or downloaded from.

9. VSFTPD :

Very Secure File Transfer Protocol Daemon or service. That allow computers to share data among each other.

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ABSTRACT

You might have seen a lot of administrative tasks be paper based, Paper based system is a slow system, that waste lots of human resources and material resources and costs a lot, everyday software are taken from ITCK staffs via flash drive or burned CD.

The Online ITCK management System Project idea converts the paper based system of ITCK to computerized one.

Software Management system provides useful software to be downloaded and new updated software to be uploaded for Kabul University students or teachers.

New user registration of ITCK is fully computerized, any new user now wouldn't have to fill papers and then wait few days until his/her account and card is created.

Fast ITCK card creation is another system that Creates the ITCK card in just few clicks by the user while registering its self, So now the user wouldn't have to wait for weeks for just a Card.

Complete management of ITCK users via web-based application, which will help ITCK managers to have full information about the ITCK Users, and Staff.

Weekly report of staff is now upgraded to a centralized system, staffs can easily submit the reports and the print manager of ITCK can easily find the reports and print it.

Faculty admins that are trained every year now has a centralized control by the course administrator of ITCK, Course administrator easily uploads the Course materials and Faculty admins now can easily reach their Course contents and give comments.

All ITCK Updates are published by our news management system, where site visitors can be up to date from ITCK status and announcements.

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INTRODUCTION

Kabul University is one of the important Universities in Afghanistan that teachers and students come from different provinces of Afghanistan and even from foreign countries teachers and students visit Kabul University and all of them use their desired software for their work and study.

There are hundred of websites that provide free and downloadable software available on the world wide web and Internet users download those software and Install them on their PCs without knowing the risks and virus,trojan and worm threats that can harm their computers and create a security holes for their network. KU users use these website's software and Install them and create threats for Kabul University's network and User's computer which store very confidential documents about the students grades and all semester profiles.

Since there are a lot of websites that provide free and secure downloadable software but due to the slow Internet Speed of Kabul University Users wait for hours and days for a small sized software.

Online Software Management System Provides free and secure software locally for Kabul University users so that they can fast and securly download their desired software.

The software provided is categorized and listed for site viewers, they can be downloaded by any anonymous users. Comments can be given for each software and then rated and listed by their high download average.

Another aspect of this system changes the paper based registration system of ITCK to electronic one, ITCK's new users wouldn't have to fill the question form and then verified by the ITCK authorities and then create the ITCK card for them, these are all time processing tasks, in this new ITCK User Management system, users would only ask for PIN number by an ITCK authority and then doesn't need any paper based system or confirmation, the new user would just register his/her self on the site and all the process will automatically be followed and ITCK Card will be created on the spot. And the user can take its card on the time of registration.

BACKGROUND INFORMATION

ITCK (Information Technology Center of Kabul) is a center where students and teachers from all over the faculties do researches and use Internet, faculty admins are trained every year and lots of seminars, meetings and other official conferences are taken in ITCK.

This century is the era of computers and technologies, for the ease and comfort people use software to help them solve lots of complicated problems fast and concise.

Software are used everywhere like (Science, agriculture, Medicine, Journalism, pharmacy, government, police, administration) almost now living without software is kind of hard.

Every student of faculties in Kabul University needs new software that could help him/her solve homework and projects given to them, like a computer science student needs programming software to write programs, or network tools to test network devices. Engineering student needs Architecture software and same science or pharmacy student need their appropriate software.

ITCK which is an important IT Center in Kabul University, that solve IT problems of faculties and troubleshoot Computers and Network devices and does system hardware/software PC installations of teachers and departments of faculties. And also provides Internet services for registered teachers and students in ITCK of Kabul University. ITCK registered users can use the ITCK Internet for their researches and studies, every year more than 30 faculty admins are given trainings on PC problem solutions and Network devices for their own faculties.

OBJECTIVES

ITCK Online Management System is designed for ITCK Center, in which most of the big issues are solved and eased.

The following list shows features provided by the system.

➔ **Online Software Management System.**

This system provides full software management where ITCK administrators can upload new software and edit the previous uploaded software on the system.

Common users can download software and post their comments about the software. Which will allow us to get feedbacks from users.

➔ **Online ITCK User Management System.**

This feature provides full administration of ITCK users, Where all users are registered through this system and then managed by ITCK administrators, where priorities and roles are easily applied on them. This system eases the Card management System where New ITCK cards are easily created and printed for new registered users.

➔ **Online staff reporting system.**

This system is only designed for ITCK staff only, which accepts reports from each staff and manages all of the reports in a centralized system by date and time, and then displays the reports for Report Manager of ITCK and will be sent to prints, the Report Manager can view all the weekly staff reports separately and even all the reports that has given in their entire job.

➔ **News System**

ITCK can publish news and updates of its center daily and weekly where users can stay in touch and get announced quickly.

➔ **Forums**

Forums allows others to post questions, give feedbacks and ask for assistance from ITCK administrators. This is the only Interface where we get users views and get feedbacks about the system.

➔ **Course Management:**

Course management is the system designed for Faculty admin course which is held every year, this system has created lots of facilities for teachers and students.

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PROBLEMS

Though ITCK provides facilities and solutions for all faculties, but has lots of paper based problems which makes the service and solution process a bit slow.

The following problems are listed bellow.

CURRENT PROBLEMS

Problems in Kabul University.

- Fast Growth of non-standard Kabul University Network.
- Old model of Network Devices that has slow down the over all speed.
- Increasing Of Internet Users in each Faculty.
- Bandwidth Limitation of Software Download.
- Same Software download From Internet repeatedly by many users slowing down network.

ITCK Problems :

- No Centralized and Categorized Software System for Faculties.
- No Software Transfer Facilities between Students and teachers.
- Paper based System for New users that joins ITCK.
- No Unique ITCK User Management.
- Time consuming process of Card Creation of New users.
- Duplications in registrations.
- File transfer via flash disks, cd/dvd.
- No Updated software available for PC Workshop for Installations matters.
- No Computer,printer Drivers Available for Faculties Computers and printers.
- No ITCK user traceability.

→ No ITCK user statistic systems.

Software websites problems:

- Virus and security threats of software provided on world wide web.
- Limited number of software download connections provided by websites.
- Limited number of downloads per public IP addresses.
- Slow download speed for visitors.

Download Types provided by websites.

- Torrent Download.
- Direct Download.

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TOP SOFTWARE WEBSITES

There are hundreds of websites that provides free software downloads for their visitors as an example some of them are listed bellow.

WEBSITE LIST

- 1: <http://download.com>
 - 2: <http://soft32.com/>
 - 3: <http://Opensourcemacs.org/>
 - 4: <http://download.zdnet.com/>
 - 5: <http://Geardownload.com/>
 - 6: <http://opensourceiphonesoftware.com/>
 - 7: <http://www.freewarefiles.com/>
 - 8: <http://www.tucows.com/>
 - 9: <http://www.softpedia.com/>
 - 10: <http://www.filecluster.com/>
- The 10 ten site list is taken from [TOP10Sites]
- 11: <http://RapidShare.com/>
 - 12: <http://brothersoft.com>
 - 13: <http://www.designed4mac.com>
 - 14: <http://softonic.com/>
 - 15: <http://freedomforsoft.blogspot.com/>
 - 16: <http://www.fiberdownload.com/>
 - 17: <http://www.software-download-downloads.com/>
 - 18: <http://magicp30.com/>

WEBSITE SERVICES

Most of websites are developed for business and commercial use only but some of them are for free usages.

Services

- 1) Account Service.
- 2) Upload Service.
- 3) Software Searches.
- 4) Download Service.
- 5) Comment Service.

COMMERCIAL WEBSITES

Most commercial websites have the following terms and condition listed.

Obstacles

- 1) Cost

Allot of software on the Internet isn't free of cost, user have to pay for the particular software in order to download it, users can download the trial version of the it where will be available for a limited period of time or will have less functionalities compared to a purchased software, Users should have master card or other internet surfer card to purchase the software.

- 2) Country blacklisting

There are lots of websites that provides cheap and free software but are just allowed for particular country or region, in most cases Afghanistan or central asian countries are not allowed to view and download software, those websites blacklists all the public IP addresses related to a particular country and allow the specified authorized countries.

- 3) Download Limitation

Websites allow you to download a free software but limits downloading per public IP address, like a person can download one free software per day if another person from that particular network tries to download another software is blocked, to download without any limitation the user has to pay and create premium accounts.

4) Download connection limitation

User can download a free software but will not be allowed to get full speed and connections that a download manager establishes connections with the file servers. you will have one slow connection with the website server which will take time to download that particular software though you have high Internet connection from your ISP.

5) Parallel download limitation

Websites allow a limited number of parallel download from a specific public IP addresses, where maximum two or three users are allowed to download simultaneously, if the fourth user from that particular network tries to download is blocked and not allowed until one session is released.

6) Accounts limitation

Websites provides two kinds of accounts (common accounts, Premium accounts) common accounts will have the problems stated above, but Premium accounts don't have any restrictions but to create those accounts user should pay and buy the accounts and then will be allowed to download free software for a particular period a month or a year.

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ITCK ONLINE SOFTWARE MANAGEMENT SYSTEM

After analyzing and understanding the problems and the current situation of Kabul University, teachers and students don't have financial support to pay for each software or Network bandwidth is not sufficient for huge software to download.

According to the problems stated in the 2nd and 3rd chapters, Online Software management is purposed to solve the problems and create centralized solution for software upload and downloads.

This chapter contains all specifications of Software Management System.

SPECIFICATIONS

This section describes the specifications of the Online Software management System.

Functional Requirements

The Software Management System has the following functions listed.

Functions

- ◆ Login
- ◆ Upload Software
- ◆ Update Software
- ◆ Delete Software
- ◆ Search Software
- ◆ Download Software
- ◆ List Software

System Actors

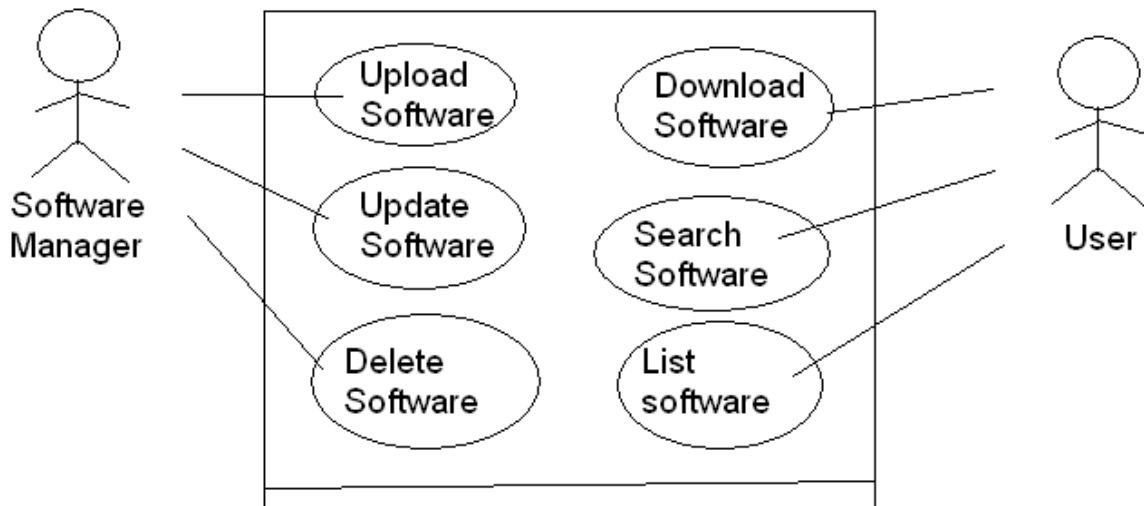
Any site visitor can download software and there is no restrictions of software download for users. There can be several software Managers that will be one of the ITCK Staff.

Actors

- ◆ Common Users
- ◆ Software Manager

Use - Cases

The use-cases shown here describe the typical interactions of a user with the system. The [UML](#) use-case diagram captures all possible interactions and hence the main functionalities, which are covered by the application.



Software Management System Use-Case 1:

Extended Use-Cases

Use-Case	Upload Software, Update
Actors	Software Manager
Purpose	Upload Software on website, or Updates it
Overview	Software Manager logs in to system and then uploads the new software
Type	Primary
User Steps	System Responses
1: Provides Username and Password 2: Accesses the Software manager tab 3: Browse the Software from its Computer for uploading. 3: Browse a new version of the software.	1: Checks Username and password and authenticates the Manager. 2: Checks the size and type of file and if correct then uploads the file on the server. 3: If update is applied on a software , first checks the previous software and then replaces the software.

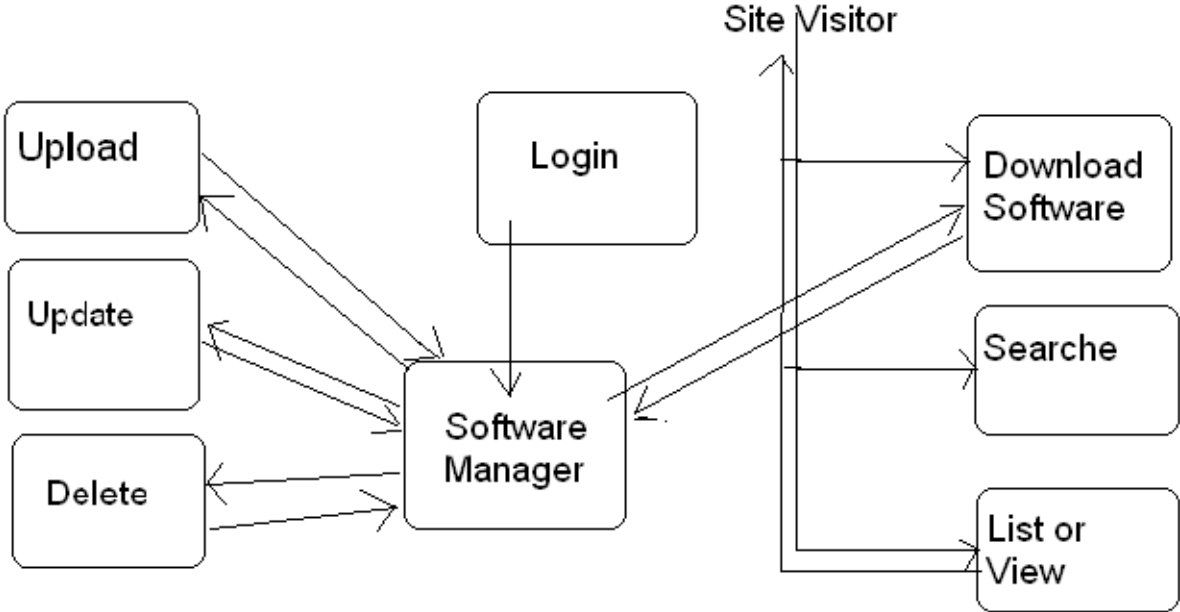
Use-Case	Search
Actors	Common User
Purpose	Search for a Software
Overview	Site Visitor can search a software with a keyword.
Type	Primary
User Steps	System Responses
1: Requests the Website's pages 2: Enters a keyword for search	1: Transfers the pages 2: Searches the database for the appropriate keyword and lists the available Software

Use-Case	Download
Actors	Common User
Purpose	Download Software
Overview	Sites visitors can download their desired software from any kind of Categories
Type	Primary
User Steps	System Responses
1: Requests the Website's pages 2: Finds the software 3: Clicks on download	1: Forwards the pages 3: Gives a direct FTP/HTTP connection link for the user to download.

State Diagram

The following diagram shows the Objects of Software Management System where interacts with the software manager but site visitors can only communicate with three objects of this system, where the software manager can access all the components.

Site visitors are not forced to have an account in order to download a software, they can download software with out any kind of restrictions.



Software System Object Interactions 2:

ADVANTAGES

The Online ITCK Software Management System is only developed for Kabul University users, out of the KU the system is not available.

The System has the following advantages listed bellow.

1) Free Software

This System provides free software, where users won't have to pay for downloading, the software will be available with the crack program where that can be used by lots of people. This system will upload lots of open source software where doesn't need serial keys and online purchasing.

2) No Blacklisting

The system is created locally and is accessed locally, there is no blacklisting of network inside the network.

3) No Download Limitation

Many users from a specific network IP address can download as many software as is desired, No restriction count of download per network.

4) No Download connection Limitation

Download Managers can be used for downloading Software, the number of connections that a download manager can create is maximumly allowed, There is no limitation in connections, this non-limitation leads to high download speed.

5) No Parallel download Limitation

Maximum users are allowed to download software simultaneously from one network.

6) No Accounts

Accounts are don't play role in downloading software, anyone can download software without any type of account, just open the site and start downloading. Accounts are for Administrators of this System which are allowed to Upload Software on the server.

7) Ease of management

The system is easily handled by the administrator, that can (Upload, Update, Delete,Categorize) software on the website.

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ONLINE ITCK USER MANAGEMENT SYSTEM

ITCK is a center where students and teachers from all over the KU faculties use Internet for their researches, faculty admins are trained every year and lots of seminars, meetings and other official conferences are taken in ITCK.

More than 2000 users are registered to the Center that include teachers, students, staff, faculty admins and employees of Kabul University.

CURRENT PAPER BASED PROBLEMS

Paper based system is used in most part of governmental systems where the employees themselves face lots of problems, but it is better in places where the work area is not big or there is less amount of employees and users which can be easily managed and traced.

ITCK work area is extending daily and is the only IT solution center for Kabul University where has 16 faculties and lots of administrative departments, handling all of them with paper based system is very difficult and time consuming system.

1) Paper Based registration

ITCK has a paper based registration system where new user register themselves and all of the user's profiles are documented and stored on racks.

2) Registration Validation

There is no registration validation enquiry, or confirmation of email accounts and other user credentials investigation.

3) Time consuming Card Creation

After a user successfully registers then the registration form is handed to ITCK staff from which card will be created, this process takes minimum 1 week to be finished. The new user wouldn't have access to ITCK service until he gets the card. So the person should wait for minimum a week to get access.

4) Profile picture

For registration form a picture is required, there for individual pictures are taken by ITCK staff and then the picture file is given to other staff for card design and print.

SPECIFICATIONS

This system is designed to meet all the ITCK requirements and solve the current paper based problems.

Functional Requirements

functions

- ◆ Generate PIN
- ◆ Check Validation
- ◆ Register or Sign Up
- ◆ Login
- ◆ Store user profile
- ◆ List User profile
- ◆ Edit Preference
- ◆ Manage users (update,delete,set priorities ...)
- ◆ Create and edit card.
- ◆ Request for card.
- ◆ Print card.

System Actors

ITCK allows teachers, students,staff and employe of Kabul University to be registered with certain rules and regulations, the registration is secured no other un authorized user is allowed for registration.

Actors

- ✓ ITCK Staff
- ✓ Kabul University Teachers
- ✓ Faculty Admins
- ✓ Employes
- ✓ User Manager
- ✓ Others

The above should have security PIN numbers to successful register themselves on the system.

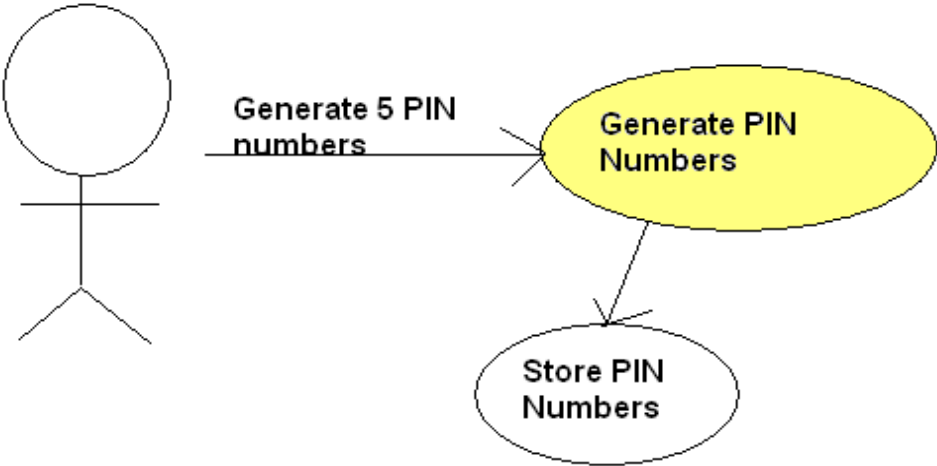
Extended Use-Cases

The following use-cases illustrate each functionalities of system.

Generate PIN

Any new user for registration should have a valid PIN number, The system automatically generates a random PIN number and will be handed to the new person.

<i>Use Case</i>	<i>Generate PIN number</i>
<i>Actors</i>	<i>User Management Staff</i>
<i>Purpose</i>	<i>The system is to provide valid PIN numbers for new users.</i>
<i>Overview</i>	<i>New users wants a new PIN number the system will provide a valid PIN number to ITCK staff then it is handed to new user.</i>
<i>Type</i>	<i>Primary</i>
<i>User steps</i>	<i>System Response</i>
<i>1: Staff logins and requests the amount of PIN numbers from the system.</i>	<i>1: Checks the authorization and then creates the amount of requested PIN numbers. 2: Stores the New PIN numbers on the System.</i>

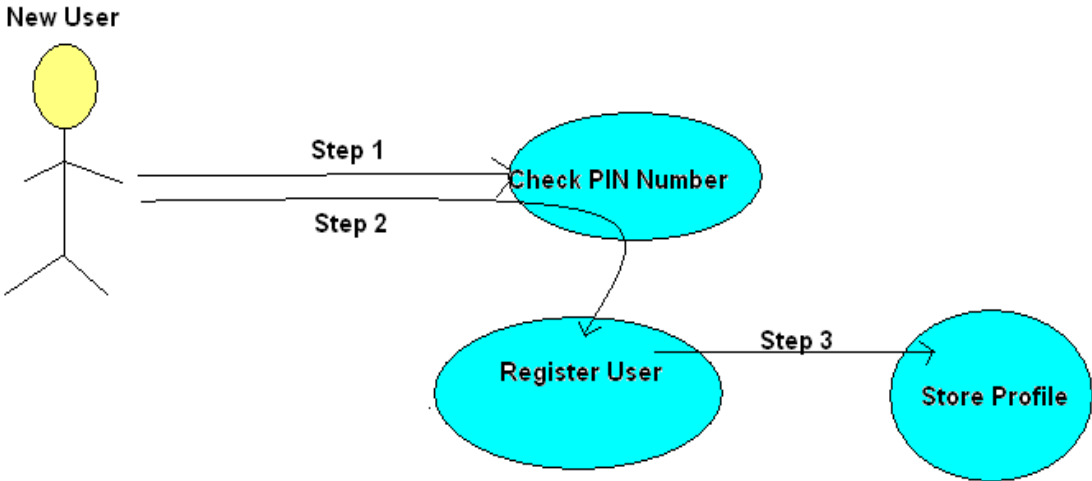


Generate PIN 1:

Registration Extended Use-Cases

This shows the registration process taken by new user

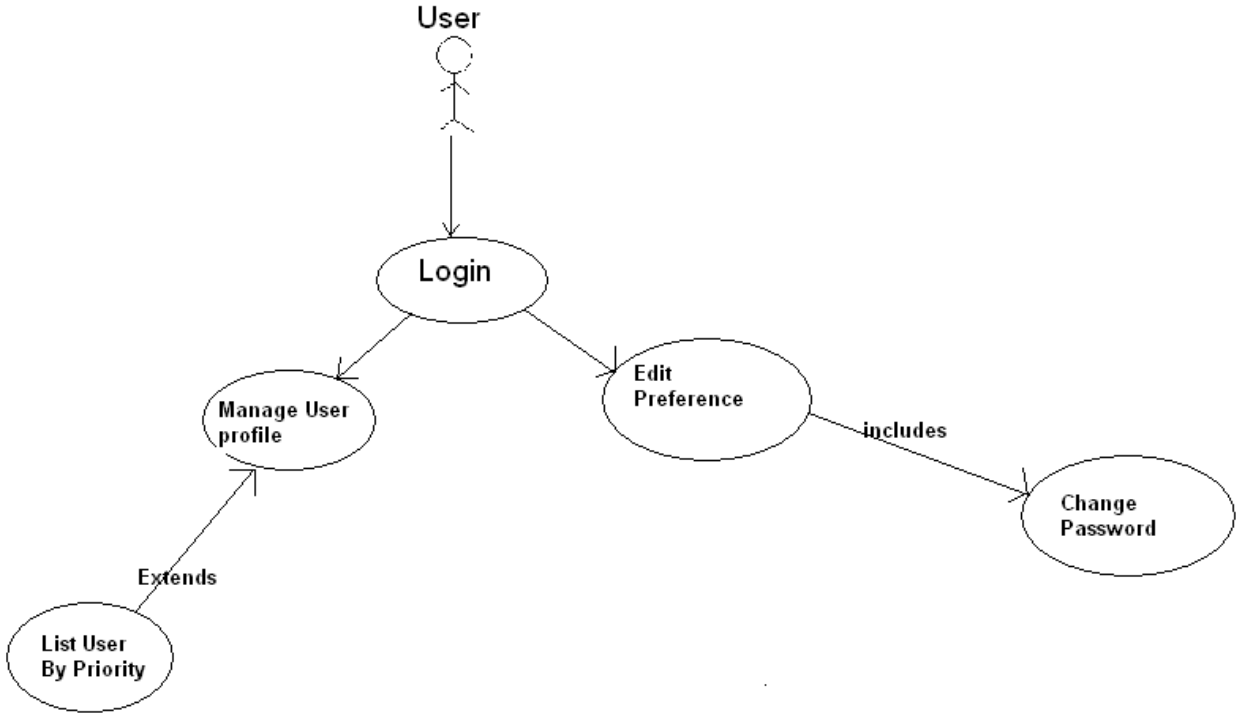
Use Case	<i>Registration process</i>
Actors	<i>New users (Teacher, Faculty Admins and Staff)+PIN Num</i>
Purpose	<i>This enables new users to register to the system.</i>
Overview	<i>New users with valid PIN code will be registered through this system.</i>
Type	<i>Primary</i>
User steps	<i>System Response</i>
<p><i>1: Gets the PIN from ITCK staff and Submits the PIN number.</i></p> <p><i>2: Fills all the form and create an account for his/her self.</i></p>	<p><i>1: Checks the PIN number if Valid, then proceed else, resubmit the new PIN.</i></p> <p><i>2: Checks the availability of the account if available then stores all the Profile to Profile database, else prompts for re typing another account.</i></p>



Registrations Use-Case 2

Login Extended Use-Case

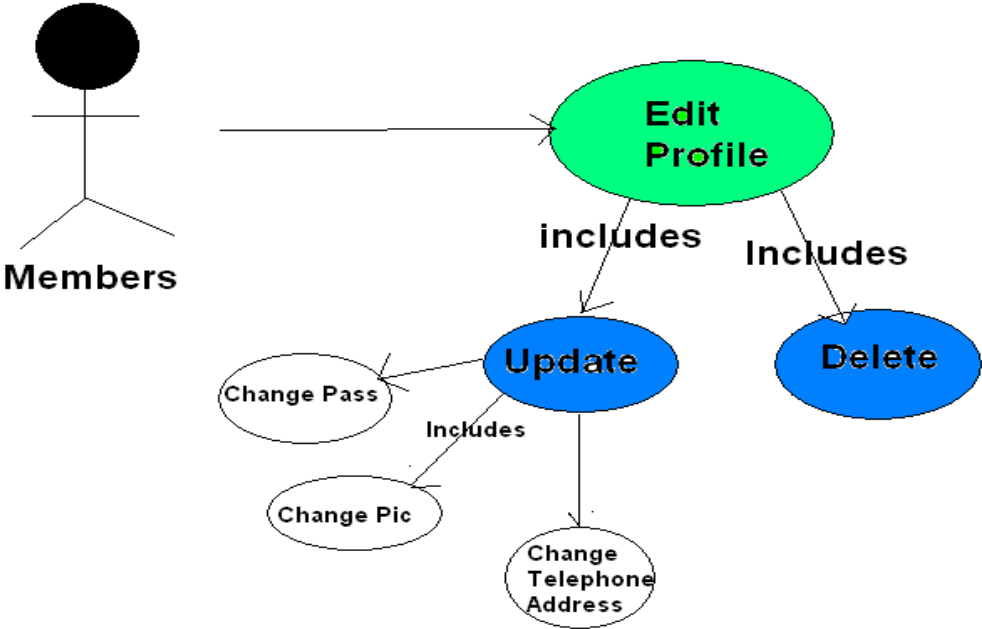
Use Case	<i>Login</i>
Actors	<i>Members of the system</i>
Purpose	<i>This allows members to login to system with their own priorities</i>
Overview	<i>This feature allows members to login with their correct usernames and passwords.</i>
Type	<i>Primary</i>
User steps	<i>System Response</i>
1: Submits the username and password	<i>1: checks the Username and password and then allows to login to their profiles. With their appropriate priorities.</i>



Login Use-Case 3:

Manage User profile

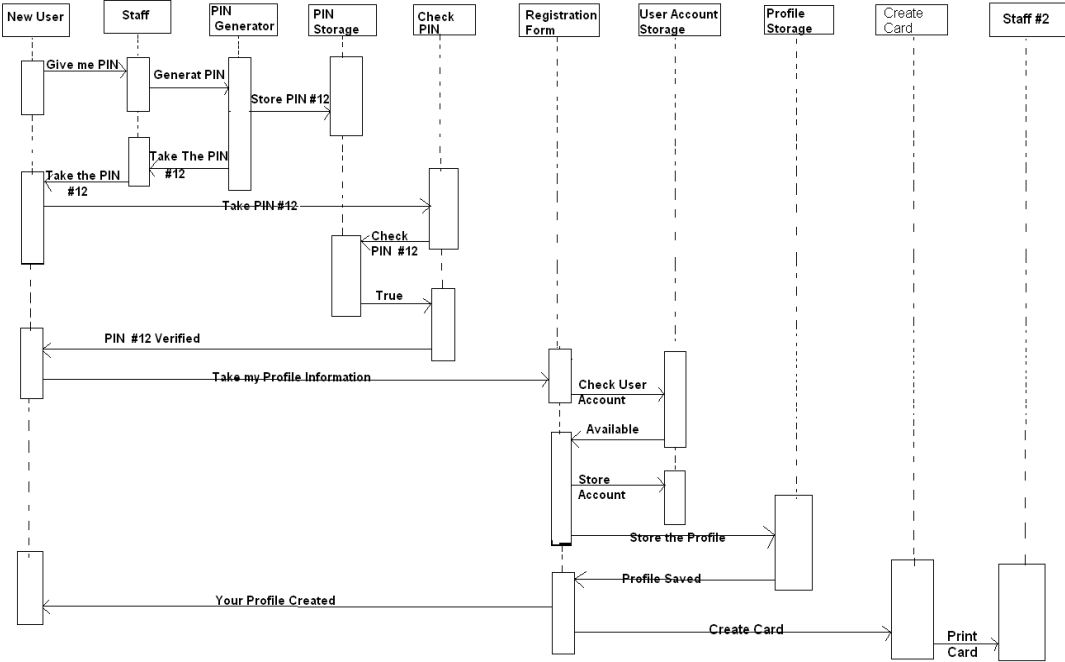
<i>Use Case</i>	<i>Manage User Profile</i>
<i>Actors</i>	<i>Staff, Faculty admins,hall users, (members)</i>
<i>Purpose</i>	<i>To manage their profile's preferences.</i>
<i>Overview</i>	<i>Members can change their profiles information.</i>
<i>Type</i>	<i>Secondary</i>
<i>User steps</i>	<i>System Response</i>
<p>1: Login to the system</p> <p>2: Change profile Information.</p>	<p><i>1: New profile updated. And checks that shouldn't conflict with their cards</i></p>



Manage Preference 4

Sequence Diagrams

The registration sequence diagram is shown bellow.



Registration Sequence Model 5

ADVANTAGES

After complete implementation of this system ITCK will have the following things.

1) Web-based registration Form.

This feature allows new users to easily register themselves via web-based application, the registration form fully ensures that the user have correctly filled the form, complete form validation is applied, no other person except the authenticated one is allowed to fill the registration form, new users are authenticated with the PIN number supplied by ITCK staff. This system is much easier then paper based system, staff wouldn't have to take photo of each new user for their registration forms.

2) ITCK Card Management.

This feature designs and creates cards for new users after successfully registration, the system takes the new user credential and photo from the database and then the card will be sent for User manager for printing. In paper based system cards design would take a week to be prepared.

3) Easy User traceability.

Registered users are easily traced, with the help of this system the statistics of ITCK users are gathered. And easily user's informations are fetched with in a minute.

4) Edit Preferences

Paper based registration is done once for a user, if the that user wants to update his old credentials or preference he doesn't have any option to do that but this system allows the user to update his preference any time which is a nice way to update old informations.

5) Request for card.

If the someone's card is lost or old, that user can request for renewal of card. In the renewal of card extra charges apply on the person. Soon the card will be printed after the person pays the bill of the card.

6)

6

ITCK ONLINE REPORTING SYSTEM

Staff's daily, weekly, monthly or even annual reports are very important for an administrative departments of an office, because the staff's activities are traced and they are responsible for that specific task that is done.

CURRENT STATES & PROBLEMS

Reports are written in word documents individually and then given to the print manager for printing after print they are signed by the reporter weekly, then the reports are handed to ITCK manager and are read and are discussed on weekly meetings.

Problems

1) Individual weekly reports

Staffs individually write the weekly reports in their own personal computers or ITCK computers where are not centrally placed at one location.

2) Reports transfer

When the reports are written, the other annoying problem is the mean of transferring the file to print manager, some transfer it via flash disk that has virus threats , some transfer via messengers like Skype or some staffs upload them on ITCK file server which now has lots of viruses that is a threat for windows operating systems.

3) Reporting the reports at one particular day

As is usually known is that the staffs write the reports of their all week in one day, which is sometimes time consuming, or sometimes forget the date of the tasks and even forget the tasks to be written on the reports.

4) Report traceability

There is no system to find a particular report given by a staff in particular date. All the reports are documented and stored on shelves and is very hard to find and trace a task.

SPECIFICATIONS

ITCK online reporting system is designed to meet the requirements of ITCK report managements. Functional requirements are listed bellow

Functional Requirements

- 1) Collect reports daily.
- 2) Store reports.
- 3) View reports.
- 4) Update last reports.
- 5) Manage all reports.

System Actors

- 1) Staffs
- 2) Report Manager

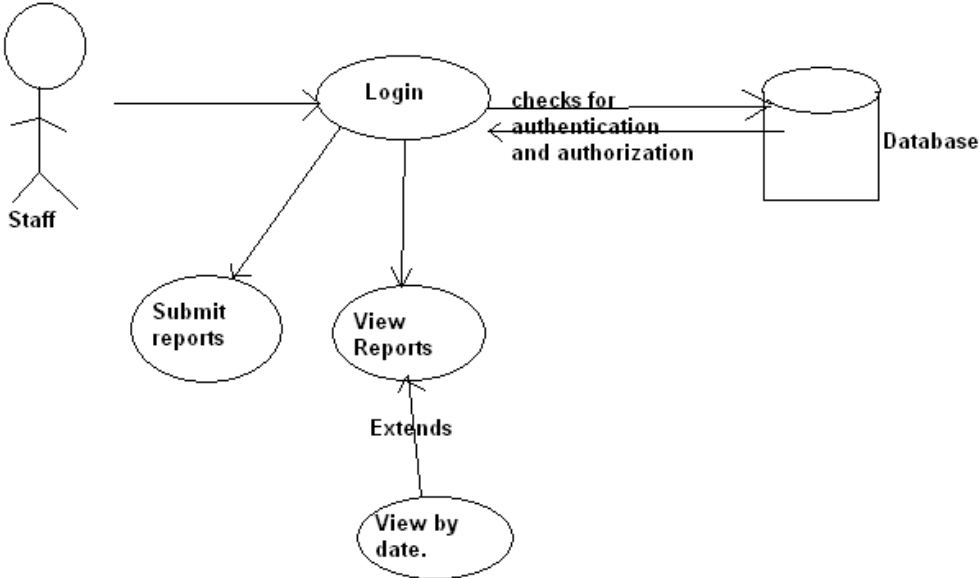
Extended Use-Cases

Collect Report Use-Case

<i>Use Case</i>	<i>Collect report</i>
<i>Actors</i>	<i>Staffs</i>
<i>Purpose</i>	<i>To collects all the reports of staffs given</i>
<i>Overview</i>	<i>Takes the reports of staffs by date and saves them by date on the database. And will be able to be retrieved easily by listing the reports.</i>
<i>Type</i>	<i>Primary</i>
<i>User steps</i>	<i>System Response</i>
<i>1: Login to the system as staff</i> <i>2: Submits the reports on the system.</i>	<i>1: Checks the account for staff privileges.</i> <i>2: Saves the report on the databases with submitted data.</i>

Report system Use-Case:

This System fully ensures that only staffs of ITCK can submit their reports on time.

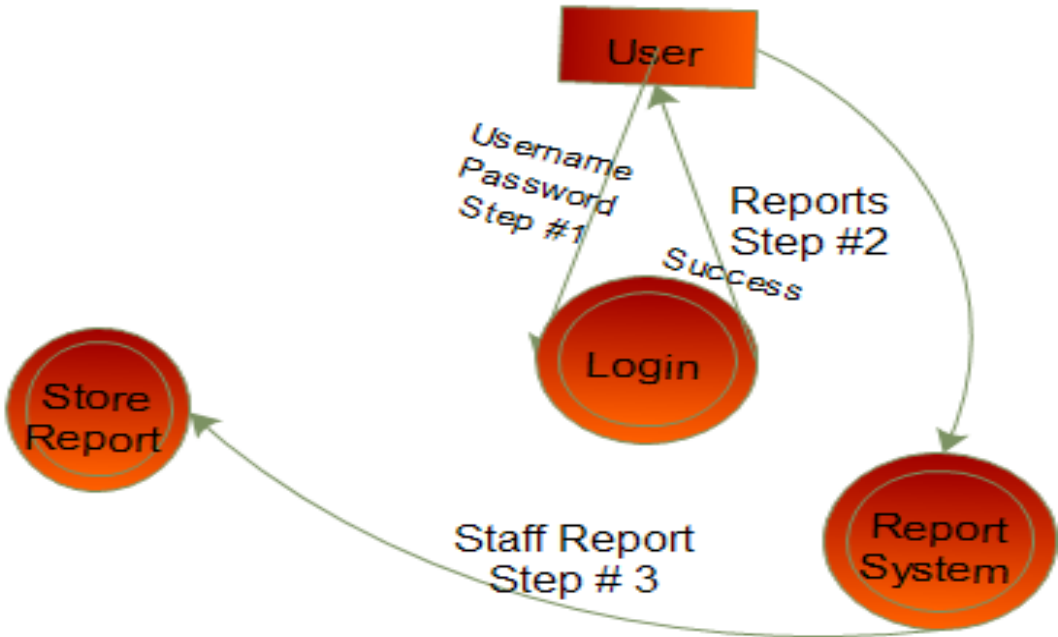


Reporting Use-Case 1:

Report System Data Flow:

As described in the illustration above, the staff should provide their correct username and password, after authentication the system will check for authorization of the user if the user has the staff credential then he is allowed to submit its report on the system.

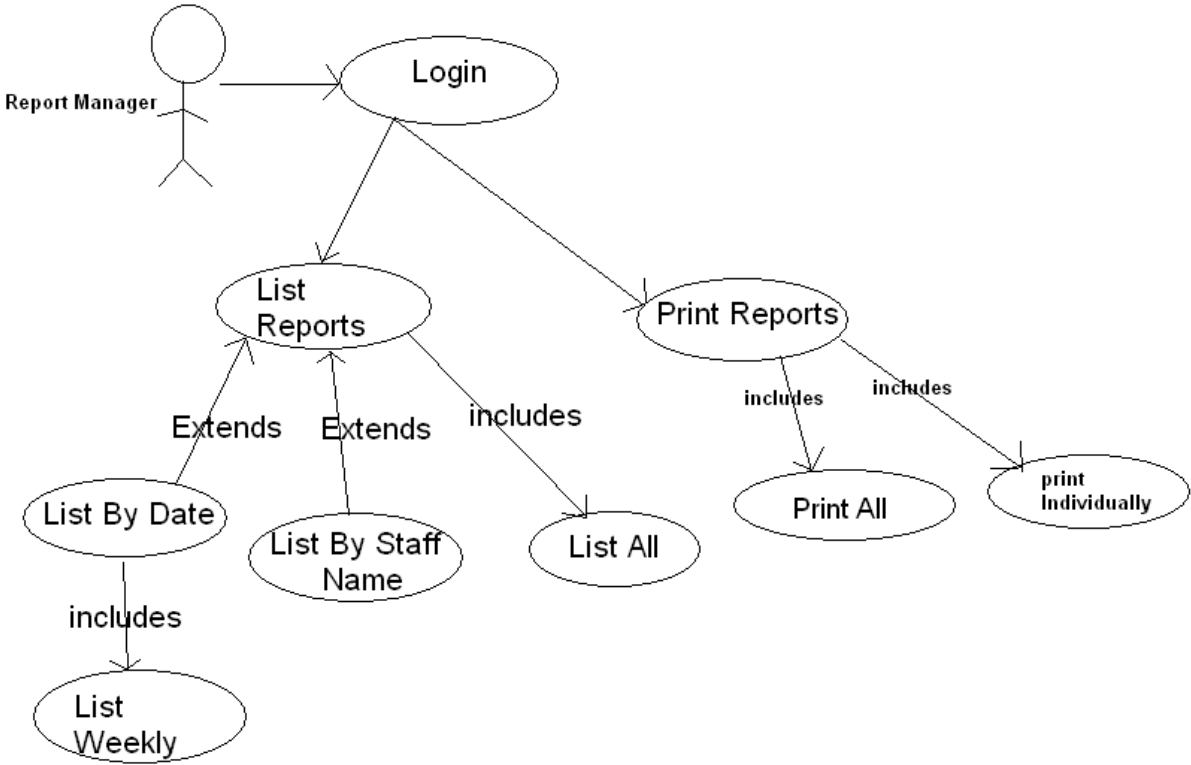
The report submitted will have the first-name of the user , submitted date and report description stored on the database. And then can be easily fetched by report administrator.



Reporting System 2

Report Management Use-Case

The following Use-Cases shows how reports are managed when a report is submitted by a staff in a week.



Report Management Use-Case 3:

The report manager is someone who collects all daily, weekly and all reports submitted by the ITCK staffs. As illustrated in the above diagram, that the report manager can list the reports individually by names of staff , by date and by week. After listing the reports they can be sent for printing.

7

ITCK FORUM

An **Internet forum**, or **message board**, is an online discussion site where people can hold conversations in the form of posted messages.

ITCK forum is designed just for registered users, registered users can post messages on the system. New discussions can be created by administrator of the system and then messages can be posted on that particular discussion. Users can trace all the discussions and post their views and reviews.



ITCK User's discussion 1:

CURRENT STATES AND PROBLEMS

There are lots of concerns about the user's communication with ITCK staffs remotely, users can't share their problems, views and feedbacks with ITCK staffs and other authorized person.

Problems

1. Telephone call costs.
2. No ease of discussion with ITCK staff.
3. Reachability and time constraints for discussions.
4. No complete and full descriptions on troubleshooting matters by staff.
5. No overall discussions on one matter.
6. No feedbacks from users.
7. No user error reporting and requirement reporting system.

SPECIFICATIONS

After understanding the needs and requirements of users the ITCK Forum is suggested which solves problems defined above.

Functional Requirements:

1. Create New discussions.
2. List discussions.
3. View Posts on each discussions.
4. Post new messages on discussions.
5. Delete Posts.
6. Delete Discussions.

System Actors:

1. ITCK Staff.
2. Other ITCK Registered Users.

FORUM EXTENDED USE-CASES :

The following extended Use-Cases are listed bellow.

Create and view Discussions Use-Case :

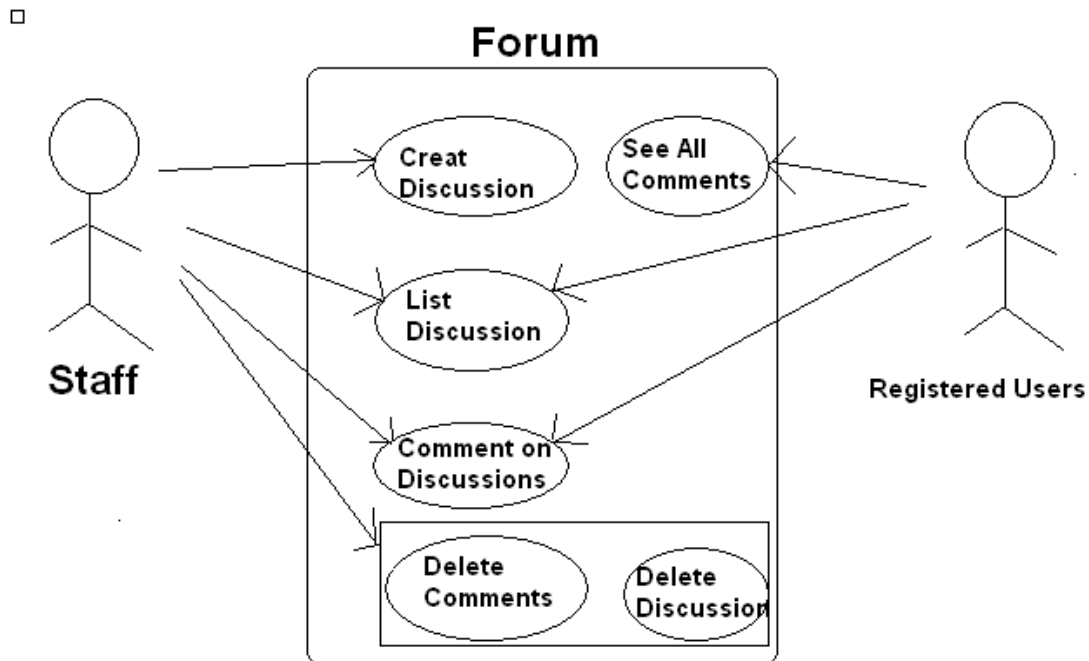
Use Case	<i>Create and View Discussions</i>
Actors	<i>Staffs and registered users.</i>
Purpose	<i>Create and view Discussions on the Forums</i>
Overview	<i>Discussions are created for sharing views and opinions. All discussions are able to be seen and Post comments on each of them.</i>
Type	<i>Primary</i>
User steps	<i>System Response</i>
1: Login to the system as staff	<i>1: Checks the account for staff privileges.</i>
2: Create a discussion.	<i>2: List the created discussion for other users.</i>
3: Post a comment	<i>3: Saves the comment for that specific Discussion.</i>

All Discussions are created by staff only, common users can't create discussions but can see them and post new comments on them.

New discussions are listed first so that the users could find the latest ones and have new discussions.

If any user writes un necessary comments or uses abusing words in their comments, the staff responsible can delete comment and even block his/her account.

Forum Use-Case



Forum 2:

As It is shown in the illustration There are two main actors (staff and Registered Users) that are in touch with ITCK forum. Staff has full privilege to do all the required tasks for listed above, but the common user have limited access.

Benefits

The form solves the listed problems discussed early. This forums

1. You can read comments fairly, quickly and validate them to show students you are invested in their ideas.
2. You can refer to points made on the forums in class to enrich discussions and to acknowledge thoughtful ideas.
3. You can save a thread of a discussion forums give quiet students another outlet for sharing ideas.
4. Students learn to value revision when they receive comments on their writing from their peers.

The above 4 statements were taken from [Forum]

5. Students can ask and answer questions and solve their daily questions.
6. Students and teachers get used to writing effective solutions and paragraphs.

8

COURSE MANAGEMENT

Every year ITCK trains Faculty Admins from all Kabul University faculties, these faculty admins will then work in their own faculties and troubleshoot IT related problems.

During their training courses they learn effective techniques and methods of troubleshooting, they are given books, lecture notes, video trainings , presentations, slideshows, troubleshooting charts and other course materials.

After completion of each course they take exam, and then their results are published and enrolled to the new course.

Other than faculty admins course , several other short term courses are held in ITCK for students and teachers from faculties which their course subjects are not related to IT subjects. Those courses have their own procedures and roles.

Most courses are handled individually by the course teachers or the teacher's assistants, there is no centralized system to handle all of them from one place by a course manager, or user managers.

CURRENT STATUS AND PROBLEMS

Most problems are related to students here .

1. Course details:

Every year course details are published on the ITCK noticeboards which is hard for a student to visit ITCK and check the notice board, No online course publicity.

No Exact starting dates, ending dates, Course instructor and course studies lists and exam details.

2. Course study material:

Course materials include: books, lecture notes, video trainings , presentations, slideshows, troubleshooting charts and others, When the course is started the students face problems in retrieving the study materials because they don't know where to get them. Or when they receive the material it is too late.

Usually the materials are taken via a flash disk or a file server there is no secure repository course material system for downloading materials easily.

3. Course Exams:

After a course is finished there will be an exam given by the instructor of the course, usually the exam is paper based where paper based system has its own problems for students and teachers. (Online Exam is escaped from this project, but will be added at other version of the documentation).

4. Exam results:

Exam results are published individually for each course, there is no valid enrollment of the passed students and no calculation of over all course results for each student. If that exists then it is hard to calculate all the marks for each student. No centralized system for result managements.

SPECIFICATIONS

ITCK course Management solves the defined problems and enhances the manageability , scalability and facilities of courses.

Functional Requirement:

1. Create new Courses.
2. Upload Course Materials.
3. Download Course Materials.
4. List Course materials.
5. Publish result marks.
6. Publish full course details.
7. Enrolls students to other courses.

System Actors:

The following actors are:

1. Teacher
2. Faculty Admin.

EXTENDED USE-CASES

The course management Use-Cases are shown bellow.

Activity	Intend	Abstract Steps
Open Course Management.	To Manage all Students Course	Login to system and Create Course.
Check Username and password	To check the valid user.	Communicate with Profile system.
Create new Course	To create a course for faculty admins. Which will be available for faculty admins.	Teacher login and then go to course management tab and then create a new course.
Delete Courses	To delete Course. When ever the course is finished the course will automatically.	Check if the course is finished and then delete it from the server.
Upload Course Material	To upload course materials for faculty admins for downloading.	Login to system, go to upload course materials, and upload the new file.

Course Management provides best control over students and provides facilities for students and teachers

11

NON FUNCTIONAL REQUIREMENTS

Choosing technologies are the most important thing for the better performance and enhancements.

LIST OF TECHNOLOGIES

The technologies used for client side and server side are listed bellow.

Client-side Technologies:

Client-Side technologies that are used are

1. Java Script:
2. JQuery:
3. HTML V5:
4. CSS:
5. AJAX:



The 5 technologies mentioned above create the view and give style for the client interface.

Server-Side Technologies:

Most secure and high performance server side technologies are being used for the Online Management System, Bellow they are numbered.

1. PHP.
2. MySQL.

Why PHP ?

PHP scripting language is used because

- It supports for most of the web servers today.
- Freedom of choosing any operating system.
- Has the abilities includes outputting images, PDF files and even Flash movies.
- Output easily any text, such as XHTML and any other XML files.
- It supports a wide range of databases.(MySQL, SQLlight
- Supports services using protocols such as LDAP, IMAP, SNMP, NNTP, POP3, HTTP, COM.



Php Logo 1:

The Above introduction has been taken from [PHP]

Why MySQL:

“The MySQL database has become the world's most popular open source database because of its high performance, high reliability and ease of use. It is also the database of choice for a new generation of applications built on the LAMP stack (Linux, Apache, MySQL, PHP / Perl / Python.) Many of the world's largest and fastest-growing organizations including Facebook, Google, Adobe, Alcatel Lucent and Zappos rely on MySQL to save time and money powering their high-volume Web sites, business-critical systems and packaged software.”[MySQL]



MySQL logo 2:

Server services:

1. Apache2.
2. FTP (VSFTPD).

Why Apache2 ?

The apache web server is listed bellow.

- Multi-platform.
- Industry standard for most web servers.
- Flexible.
- Open source.
- It is free.
- Most Popular web server



Why VSFTPD file server ?

This one of the best file server runs on Linux distributions which is fast and ease to use .

Features

- allowed users can upload/download files.
 - allowed users can read/modify the files uploaded by other allowed users
 - uploaded files are stored in the WWW/FTP folder
- [VSFTPD][FTP Tip]

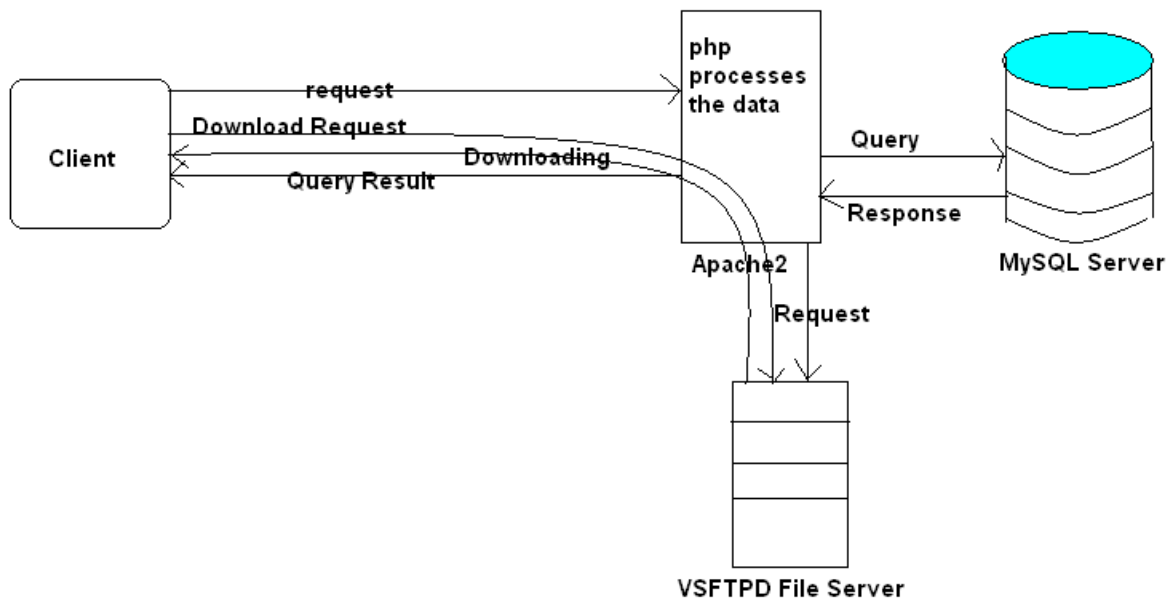


VSFTPD Logo 4

VSFTPD daemon help boost the performance of ITCK Online software Management, Users can actually download the software fast and very securely.

SERVER INTERACTIONS:

A simple server communication is displayed bellow, that how a user requests and how the data is retrieved back from the server.



Server Communications 5:

As shown in the illustration (5) the client communicates directly to the Web server (Apache2) where the web server forwards all the requested pages to client, the content of the dynamic pages are first retrieved from the database and then displayed to the client.

The software which is downloaded by a client is actually stored in the FTP server, but the address from which it is accessible is stored in the database server, this technique helps to easily give references of each software and make them downloadable for clients.

A

APPENDIX

ONLINE SYSTEM SCREENSHOTS:

1: Home page



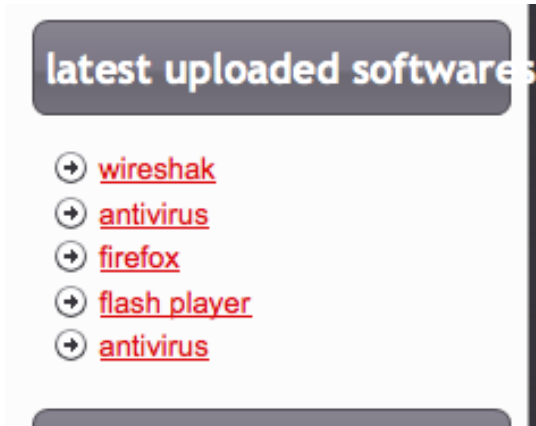
Index page 1:

2: Software Categories:



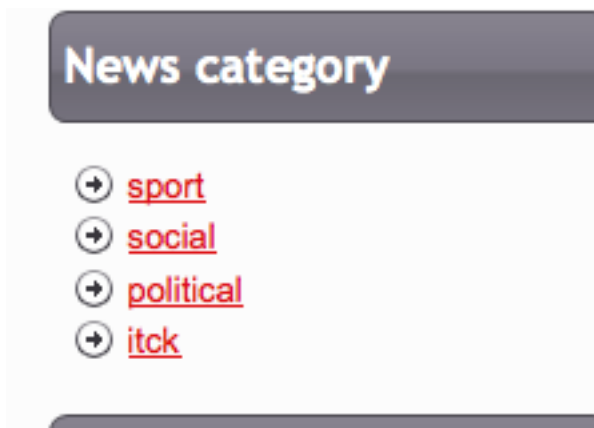
Software Categories 2:

3: Lates Uploaded Software



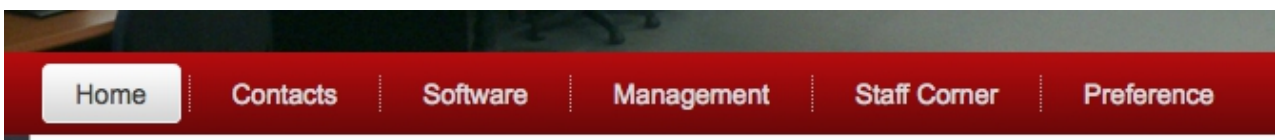
Lasted Uploaded Software 3:

4: News System Categories.



News Categories 4:

5: System Tabs:



System Tabs 5:

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