

1 Software Installation

1.1 Java installation

To run Tomcat as well as to run the DOAS software, you need Java Standard Edition (Java SE), also known as the JDK, that can be downloaded from [here](#).

- Download the binary (say to Downloads directory) and install it as follows as root:

```
su - (for OpenSuse/fedora/RHEL) or sudo -s (for Ubuntu/Linux Mint) or su root (for Debian).
```

- Now do the following:-

```
# mkdir -p /usr/local
# cd /usr/local
# chmod 700 /yourhomedir/Downloads/jdk-version-architecture.bin
# /yourhomedir/Downloads/jdk-version-architecture.bin
```

- export PATH variable as:-

```
# export JAVA_HOME = /usr/java/jdk1.7.0_01
# export PATH =$JAVA_HOME/bin :$PATH
```

- **Check the version**

```
# which java
/usr/local/jdk1.7.0_01/bin/java
# java -version (should give something like following)
java version "1.7.0_01"
Java(TM) SE Runtime Environment (build1.7.0_01 - b08)
Java HotSpot(TM) Server VM (build 21.1-b02, mixed mode)
```

1.2 Apache Tomcat server installation

To install Apache Tomcat Server Download the [Tomcat server](#) binary. Installing Tomcat from a binary release (tar file) requires manual creation of the Tomcat user account. This is not necessary if you install the Tomcat RPM package on a Linux system that supports RPMs or You install with Netbeans IDE.

- let us install it manually from downloaded tar file.

- first create tomcat user as follows (with nologin):

```
# groupadd tomcat
# useradd -g tomcat -s /usr/sbin/nologin tomcat
```
- Extract the tar file to /srv and changed the ownership of all files and directories to tomcat:

```
# cd /srv
# tar zxvf /yourhomedir/Downloads/apache-tomcat-7.0.14.tar.gz
# chown -R tomcat.tomcat /srv/apache-tomcat-7.0.14
```
- To get the Tomcat version of the newly installed Tomcat, run:

```
# /srv/apache-tomcat-7.0.14/bin/version.sh
```
- To start tomcat, run:

```
# /srv/apache-tomcat-7.0.14/bin/startup.sh
```
- To stop tomcat, run:

```
# /srv/apache-tomcat-7.0.14/bin/shutdown.sh
```

1.3 MySQL community server installation

- For Debian type system(like Debian, Ubuntu, LinuxMint etc)
Download DEB package of [MySQL-community-server](#).

```
$ cd /yourhomedir/Downloads
$ chmod +x mysql-community-server-5.x.deb
$ sudo dpkg -i mysql-community-server-5.x.deb
```
- For RPM supporting systems (like OpenSuse, Fedora etc)
Download RPM package of [MySQL-community-server](#).

```
$ cd /yourhomedir/Downloads
$ chmod +x mysql-community-server-5.x.rpm
su -
# rpm -ivh mysql-community-server-5.x.rpm
```

- For OpenSuse (gui based)
 go to yast2-> software management.
 search mysql-community-server and mark for installation.
 apply the changes, mysql-community server will be installed on
 your system.

1.4 LDAP server installation

- Prerequisite database software is Berkeley DB database that can be downloaded from [here](#).
- Download OpenLDAP [here](#).
- Unpack the distribution and change directory:
 \$ tar xvfz openldap-VERSION.tgz
 \$ cd openldap-VERSION
- Configure the build system:
 \$./configure

If all goes well, the configure script will automatically detect the appropriate settings. If the configure script fails, you should read the config.log file that it generated to see what it was trying to do and exactly what failed. You may need to specify additional options and/or variables to obtain desired results, depending on your operating system.

The Platform Hints section of the [FAQ](#) provides help for operating system related problems.

- Build dependencies:
 \$ make depend
- Build the system:
 \$ make

If all goes well, the system will build as configured. If not, return to Configure step after reviewing the configuration settings. You may want to consult the Platform Hints subsection of the [FAQ](#) if you have not done so already.

- Test the standalone system:

This step requires the standalone LDAP server, slapd(8), with HDB and/or BDB support.

```
$ make test
```

If all goes well, the system has been built as configured.

If not, return to configure step after reviewing your configuration settings. You may want to consult the Installation section of the [FAQ](#) if you have not done so already.

- Install the software. You may need to become the super-user (e.g. root) to do this :

```
$ su root -c 'make install'
```

- That's it. Enjoy!
- Special Case: **For OpenSuse users(gui based method):-**
To install OpenLDAP on OpenSuse do as follows
- go to yast2->software management
- search yast2-ldap-server and mark for installation.
- That's it.
- For more on ldap configuration and user management please consult my another manual:
Manual For Administrators

2 Users

2.1 Admin

2.2 Staff

2.3 Faculty

2.4 Student

3 Admin

As you login as the Admin, you can see the following menu items

- Attendance
- Assessment
- Initialization
- Yearly Activities

Attendance and Assessment will be explained in the Staff Module.

3.1 Initialization

There are three sub menus under Initialization menu. We can see them on moving the mouse pointer on Initialization menu.

- Faculty Database
- Load Curriculum File
- Elective Subject List

3.1.1 Faculty Database

1. On mouse Click on the *Faculty List* link, you will see a new form below the menu bar containing a Browse button and Upload button.
2. Click on Browse button
3. Choose the Faculty List file(file.csv) and click on open
 - Note: The file should be with .csv extension for ex. filename.csv etc.

The file should contain only two columns(Faculty User Id, Faculty Name) and columns should be separated by comma(,).

An example of the file is shown below.

Faculty User Id, Faculty Name
apcs, Anupama P //first row
sdbcs, S Durga Bhavani
tsrcs, T Sobha Rani

4. Click on Upload button
5. If the file uploaded successfully then it will show a Success page else Error page.

3.1.2 Load Curriculum File

1. On mouse Click on the *Faculty List* link, you will see a new form below the menu bar containing a Select button, a Browse button and Upload button.
2. Select a stream in the select button
3. Browse the Curriculum file of the stream that you have selected in the select button by using Browse button.
 - Note: The file should be with .csv extension for eg. file.csv, file1.csv etc.
 - Curriculum file should contain all the core subject list of the selected stream.
 - First Row of the file should contain #c, #l, #p, #e in the order
 - #c-number of core subjects
 - #l-number of labs
 - #p-number of projects
 - #e-number of electives
 - Second Row onwards, #c rows should be filled with cores subjects, next #l rows with lab subjects, #p rows with project information.
 - The columns should be in below given order

The file should contain only four columns(Subject Id, Subject Name, Credits, Semester) and columns should be separated by comma(,) and columns optionally enclosed by double quotes(" ").

An example of the file is shown below.

Subject Id,Subject Name,Credits,Semester
4,3,1,6 //first row
"CS703","Operating Systems",4,"I"
"CS704","Algorithms",4,"I"
"CS705","Computer Architecture",3,"I"

4. Click on Upload button
5. If the file uploaded successfully then it will show a Success page else Error page.

3.1.3 Elective Subject List

1. On mouse Click on the *Elective Subject List* link, you will see a new form below menu bar containing three columns Subject Id, Subject Name, Credits
2. It has five rows, one row for each subject information. Atleast one and atmost five can be updated at a time.
 - Note:Only elective subjects need to be updated through this form
3. Once you fill the data in the form, click on submit button
4. If the data updated successfully then it will show a Success page else Error page.

3.1.4 Add Faculty

1. On mouse Click on the *Add Faculty* link, you will see a form below containing columns Faculty User Id,Faculty Name
2. It has five rows, one row for each Faculty information.Atleast one and atmost five can be updated at a time
3. Once you fill the data in the form,click on submit button
4. If the data updated successfully then it will show a Success page else Error page.

3.2 Yearly Activities

3.2.1 New Batch

1. On mouse Click on the *New Batch* link, you will see a form below containing fields, one select button for selecting the stream, another select button for selecting the year and a browse and Upload button to upload the Student List of selected stream and batch.
2. Select Stream and Year
3. Browse the Curriculum file of the stream that you have selected in the select button by using Browse button.
 - Note: The file should be with .csv extension for eg. stream.csv, stream1.csv etc.

The file should contain only two columns(Student Registration No. , Student Name) and columns should be separated by comma(,) and columns optionally enclosed by double quotes(“”).

An example of the file is shown below.

Registration No. , Student Name
"11mcmt01","student1"
"11mcmt02","student2"
"11mcmt03","student3"

4. Click on Upload button
5. If the file uploaded successfully then it will show a Success page else Error page.

3.2.2 Re-Admission

3.3 Semester Activities

3.3.1 Faculty Subject Allocation

1. For this, staff have to login and select Admin->Online Faculty-Subject Registration menu option. It will show a form. where:
 - (a) the staff can choose for each faculty a maximum of 3 subjects using **pull-down menu**.

- (b) For each subject there is a **check box** which allows one to specify whether the selected subject is an elective subject or not.
 - If the subject is an elective, then this **check box** is automatically selected.
 - If the subject is a core but being opened up as an elective then this **check box** is selected to indicate the same.
 - If the subject is only a core, then, this **check box** should not be selected.
2. After filling this for each faculty, submit that form using **submit button**.

3.3.2 Course Details

The course details page is automatically displayed after *Faculty-Subject Registration* in previous section is successfully done. If this is not immediately done, then, the staff can login and navigate to this page using the Admin->Course Details menu option. This will open a form in which we need to fill the following:

- The **maximum number of students per stream** allowed in the course.
- If there are any **pre-requisites** in terms of courses done and grade obtained in a particular course, these details have to be filled in.

Once both these details are filled for each elective, submit that form using **submit button**.

3.3.3 Course Registration

1. For this, staff have to login and select Admin->Course Registration menu option. Then choose the stream for which course registration is being done.
2. This shows all the students corresponding to that stream as rows and possible electives for that stream as columns. Each subject column has a **check box**.
3. Select the **check boxes** according to students preferences and click on **submit button** and it shows the list of the courses chosen by each student.

3.4 Attendance

3.5 Assessment

4 Staff

4.1 Attendance

4.1.1 Update

1. On mouse Click on the *Update* link, you will see left and right frames below the menu bar.
2. Left Frame will have a select button containing all the subjects that are running in the current semester and a Go button
3. Right Frame consists of many form fields explained each one below.

Attribute	Description	Type
Year	Displays current year	read only
From	Start date of Attendance of current month	Select Button
To	End date of Attendance of current month	Select Button
(a) Semester	Current semester	read only
Subject Name	Name of Selected Subject in left frame	read only
Code	Subject code of Selected Subject in the frame	read only
Previous Total	Previous Months Cumulative Attendance	read only
Current Total	Current Month Total Attendance	text field

- (b) Two Radio Buttons, one for upload Attendance from a file and other for update Attendance online
4. Use the select buttons from and to for selecting the duration of the Month
5. Use the Current Total Text Field to enter total attendance of the selected Month.
6. Click on one Radio Button to enter the Attendance.
7. If you click on radio button, Upload from a file then
 - (a) It will display the page containing all the above form fields(read only) and one more form field Total(readonly).
 - (b) The page also contains the Browse button and Add Button.

- (c) On clicking on the browse button, you select the Attendance File and click on Open button. Then the path of the file will be displayed in the text field before the Browse button.
- (d) Click on the Add button.
- (e) It will display a message “File uploaded successfully” and a View Data button, if the file is uploaded successfully else no message will be displayed(again you need to upload the file)
 - Note: The file should be with .csv extension for eg. attendancelist.csv, attendancelist1.csv etc.

The file should contain only three columns(Student Registration No. , Student Name, Attendance of the Current Month) and columns should be separated by comma(,) and columns optionally enclosed by double quotes(“”).

An example of the file is shown below.

Registration No. , Student Name, Attendance
"11mcmt01","student1",12
"11mcmt02","student2",11
"11mcmt03","student3",10

- (f) On click on View data button, you can view the Updated Attendance and Percentage.

8. If you click on the Radio button, Update Online then

- (a) It will display the page containing all the above form fields(read only) and one more form field Total(readonly).
- (b) The page also contains the Registration No., Student Name, Current Attendance of the subject that you selected in the left frame.
- (c) Registration No., Student Name are readonly fields, and Current Attendance is editable text field where you need to give the respective student attendance of that month.
 - Note: Current Attendance field of all students is already filled Current Total Attendance. You can simply change the fields where there is less Attendance for the student.
- (d) Once you fill the data, click on Update Database button.
- (e) After clicking on Update Database button, you can view the Updated Attendance and Percentage.

4.1.2 Student

1. On mouse Click on the *Student* link, you will see left and right frames below the menu bar.
2. In the left frame you can see an editable text field and a Go button.
3. Enter the Student Registration No. in the text field and ENTER.
4. Then the Attendance of the that Student can be visible in the right frame.

4.1.3 Subject

1. On mouse Click on the *Subject* link, you will see left and right frames below the menu bar.
2. Left Frame will have a select button containing all the subjects that are running in the current semester and a Go button
3. Select a subject from select menu and click on Go button.
4. Then the Attendance of all the Students studying in that subject can be visible in the right frame.

4.1.4 Stream

1. On mouse Click on the *Stream* link, you will see left and right frames below the menu bar.
2. Left Frame will have a select button containing all the streams that are running in the current semester and a Go button
3. Select a Stream from select menu and click on Go button.
4. Then you can view the Cumulative Attendance of every subject of every student who are in that stream, overall percentage and remarks in the right frame.

4.1.5 Summary View

1. On mouse Click on the *Summary* link, you will see left and right frames below the menu bar.
2. Left Frame will have a select button containing all the streams that are running in the current semester and a Go button

3. Select a Stream from select menu and click on Go button.
4. Then you can view the Overall Attendance of every Student who are in that stream and remarks in the right frame

4.2 Assessment

4.2.1 Student

1. On mouse Click on the *Student* link, you will see left and right frames below the menu bar.
2. In the left frame you can see an editable text field and a Go button.
3. Enter the Student Registration No. in the text field and ENTER.
4. Then the grade and cgpa of the that Student can be visible in the right frame.

4.2.2 Subject

1. On mouse Click on the *Subject* link, you will see left and right frames below the menu bar.
2. Left Frame will have a select button containing all the subjects that are running in the current semester and a Go button
3. Select a subject from select menu and click on Go button.
4. Then the grade of all the Students studying in that subject can be visible in the right frame.

4.2.3 Stream

1. On mouse Click on the *Stream* link, you will see left and right frames below the menu bar.
2. Left Frame will have a select button containing all the steams that are running in the current semester and a Go button
3. Select a Stream from select menu and click on Go button.
4. Then you can view the grade of every subject of every student who are in that stream, cgpa and remarks in the right frame.

4.2.4 Grade-Formula

1. On mouse click of the *Grade-Formula* link, you will see left and right frames below the menu bar.
2. Left Frame will have radio buttons containing all course of study, running in the department.
3. Select a course of study.
4. Then you can view a table in the right frame, which display all the grades, and you have to fill the respective marks, within which the grade will fall.
5. Then finally click on save button.

5 Faculty

5.1 Attendance

5.1.1 Update

1. On mouse Click on the *Update* link, you will see left and right frames below the menu bar.
2. Left Frame will have a select button containing the subjects, which has been taught by the faculty, that are running in the current semester and a Go button
3. Right Frame consists of many form fields explained each one below.

Attribute	Description	Type
Year	Displays current year	read only
From	Start date of Attendance of current month	Select Button
To	End date of Attendance of current month	Select Button
(a) Semester	Current semester	read only
Subject Name	Name of Selected Subject in left frame	read only
Code	Subject code of Selected Subject in left frame	read only
Previous Total	Prev Months Cumulative Attendance	read only
Current Total	Current Month Total Attendance	text field

- (b) Two Radio Buttons, one for upload Attendance from a file and other for update Attendance online

4. Use the select buttons from and to for selecting the duration of the Month
5. Use the Current Total Text Field to enter total attendance of the selected Month.
6. Click on one Radio Button to enter the Attendance.
7. If you click on radio button, Upload from a file then
 - (a) It will display the page containing all the above form fields(read only) and one more form field Total(readonly).
 - (b) The page also contains the Browse button and Add Button.
 - (c) On clicking on the browse button, you select the Attendance File and click on Open button.Then the path of the file will be displayed in the text field before the Browse button.
 - (d) Click on the Add button.
 - (e) It will display a message “File uploaded successfully” and a View Data button, if the file is uploaded successfully else no message will be displayed(again you need to upload the file)
 - Note: The file should be with .csv extension for eg. attendancelist.csv,attendancelist1.csv etc.

The file should contain only three columns(Student Registration No. , Student Name, Attendance of the Current Month) and columns should be separated by comma(,) and columns optionally enclosed by double quotes(“”).

An example of the file is shown below.

Registration No. , Student Name, Attendance
”11mcmt01”,”student1”,12
”11mcmt02”,”student2”,11
”11mcmt03”,”student3”,10

- (f) On click on View data button, you can view the Updated Attendance and Percentage.
8. If you click on the Radio button, Update Online then
 - (a) It will display the page containing all the above form fields(read only) and one more form field Total(readonly).

- (b) The page also contains the Registration No., Student Name, Current Attendance. of the subject that you selected in the left frame.
- (c) Registration No., Student Name are readonly fields and Current Attendance is editable text field where you need to give the respective student attendance of that month.
 - Note: Current Attendance field of all students is already filled with Current Total Attendance. You can simply change the fields where there is less Attendance for the student.
- (d) Once you fill the data, click on Update Database button.
- (e) After clicking on Update Database button, you can view the Updated Attendance and Percentage.

5.1.2 View

1. On mouse Click on the *Subject* link, you will see left and right frames below the menu bar.
2. Left Frame will have a select button containing the subjects, which has been taught by the faculty, that are running in the current semester and a Go button
3. Select a subject from select menu and click on Go button.
4. Then the Attendance of all the Students studying in that subject can be visible in the right frame.

5.1.3 Summary View

1. On mouse Click on the *Subject* link, you will see left and right frames below the menu bar.
2. Left Frame will have a select button containing the subjects, which has been taught by the faculty, that are running in the current semester and a Go button
3. Select a subject from select menu and click on Go button.
4. It will display Student Id, Student Name, Current Month Attendance, Overall percentage of that subject in the right frame.

5.2 Assessment

5.2.1 Update Marks

1. On mouse Click on the *Update Marks* link, you will see left and right frames below the menu bar.
2. Left Frame will have a select button containing all the subjects, which has been taught by the faculty, that are running in the current semester and five radio buttons to enter internal marks or major marks.
3. Right Frame consists of many form fields explained each one below.

	Attribute	Description	Type
(a)	Subject	Name of selected subject in left frame	read only
	Code	Subject code of selected subject in left frame	read only
	Marks	Type of marks selected by radio button in left frame	read only

- (b) Two Radio Buttons, will be displayed, in case you selected Minor1, Minor2, Minor3 or Major marks, one for upload marks from a file and other for update marks online, and one radio button upload from a file will be displayed, in case you selected Semester marks, where faculty can directly upload internal and major marks together.
4. Click on one Radio Button to enter the marks.
 5. If you click on radio button, Upload from a file then
 - (a) It will display the page containing all the above form fields(read only).
 - (b) The page also contains the Browse button and Add Button.
 - (c) On clicking on the browse button, you select the marks file and click on Open button. Then the path of the file will be displayed in the text field before the Browse button.
 - (d) Click on the Add button.
 - (e) It will show the updated data, if the file is uploaded successfully, else will show an error message(again you need to upload the file)
 - Note: The file should be with .csv extension for eg. minor1.csv, major.csv etc.

If Minor1, Minor2, Minor3 or Major marks radio button is selected, then the file should contain only three columns(Student Registration No. , Student Name, Marks) but if, Semester marks is selected, then the file should contain four columns(Student Registration No. , Student Name, Internal marks, Major marks) and columns should be separated by comma(,) and columns optionally enclosed by double quotes(“”).

Example of the files are shown below.

Registration No. , Student Name, marks
"11mcmc01","student1",12
"11mcmc02","student2",11
"11mcmc03","student3",10

Registration No. , Student Name, Internal marks, Major marks
"11mcmc01","student1",12,45
"11mcmc02","student2",11,55
"11mcmc03","student3",10,40

- (f) On click on View data button, you can view the Updated Marks and grade.

6. If you click on the Radio button, Update Online then:

- (a) It will display the page containing all the above form fields(read only).
- (b) The page also contains the Registration No., Student Name, Current marks of the subject that you selected in the left frame.
- (c) Registration No., Student Name are readonly fields, and Current marks is editable text field where you need to give the respective student marks of that exam.
 - Note: For the first time marks field for all the students will be empty, you can fill the respective marks of every student, but if you click on the same radio button again, you will see field of all students is already filled with the marks you updated last time. You can simply change the fields where there is any modification in the marks of the student.
- (d) Once you fill the data, click on save button.
- (e) After clicking on save button, you can view the Updated marks.

6 Student

6.1 Attendance

6.1.1 View

1. On mouse Click on the *View* link, Attendance of all the subjects of that Student can be visible below the menu bar.

6.2 Assessment

6.2.1 View

1. On mouse Click on the *View* link, grade of all the subjects of the current semester and cgpa, will be visible for that Student below the menu bar.

6.2.2 Detail View

1. On mouse Click on the *Detail View* link, grade of all the subjects upto that semester and cgpa, will be visible for that Student below the menu bar.