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| Resource Allocation System |
| User Manual |
| This document will guide the user in using Resource Allocation System. It contains details about actions that user will perform in this application. |

11/7/2014

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1.0 General Information

This section explains in general terms the system and the purpose for which it is intended.

* 1. System Overview

RAS application is a graphical user interface that will allow users to easily generate the required timetable for all their ongoing programs of a university. This application allows users to allocate the resources i.e. professors to different subjects and sessions of a program in some predefined weeks of a given year keeping the constraints like holidays, types of classrooms, professor availability, class timings etc. in mind.

1.2 Organization of the manual

This manual is organized in two sections excluding this one for now - System Summary and Getting Started. System Summary sections describes about the system configuration, user access levels and any contingencies while Getting started section contains complete reference to the application. It contains details about all functionality of the system.

2.0 System Summary

This section provides a general overview of the system. The summary outlines the uses of the system’s hardware and software requirements, system’s configuration, user access levels and system’s behavior in case of any contingencies.

2.1 System Configuration

2.2 User Access Levels

Only registered users are able to access this application.

2.3 Contingencies

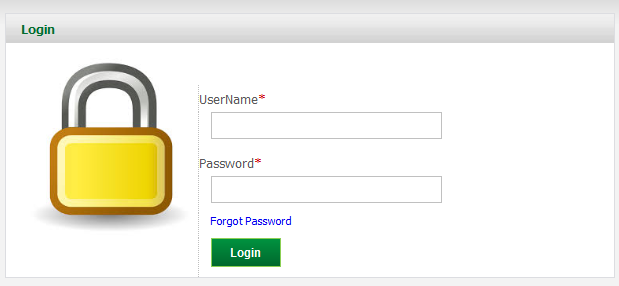
In case of power outage data are not saved in internal memory of the operating device (except photos that are stored in external storage folder of the device). In case there is no Internet connection available data cannot be saved in internal memory of the operating device.

3.0 Getting Started

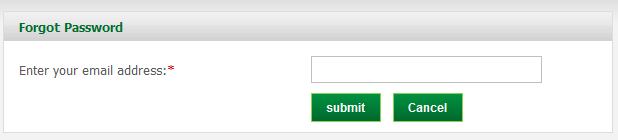
This section explains how to access the Resource Allocation System and presents briefly system menu.

3.1 Logging In

Depending upon the different user roles present in the system, users can login to the application by providing their respective user name and password information on the login page.



In case a user forgets the password, he can retrieve it with the “**Forgot Password**” which will ask for user’s registered Email and send the password on that Email address.



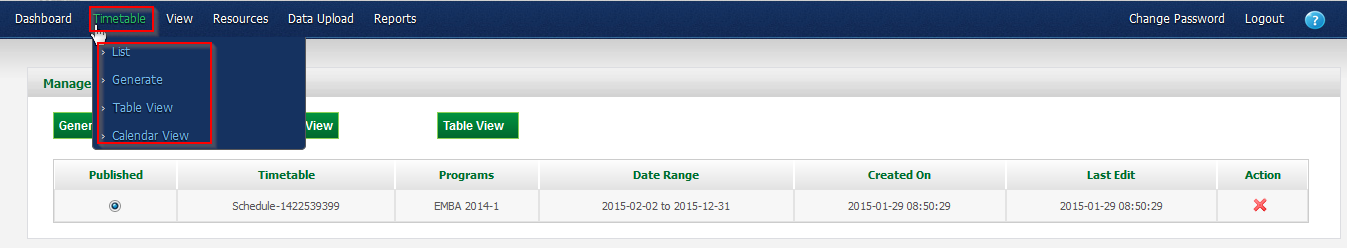
3.2 System Menu

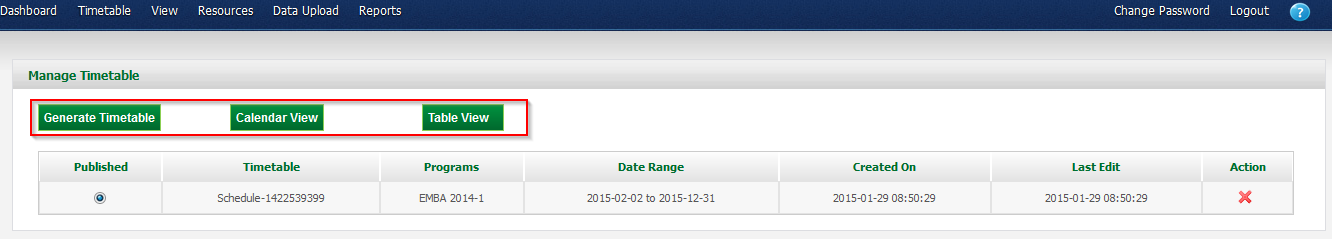
As of the current release, Resource Allocation System contains below image main menus, which further have sub menus.



3.2.1 Timetable Menu

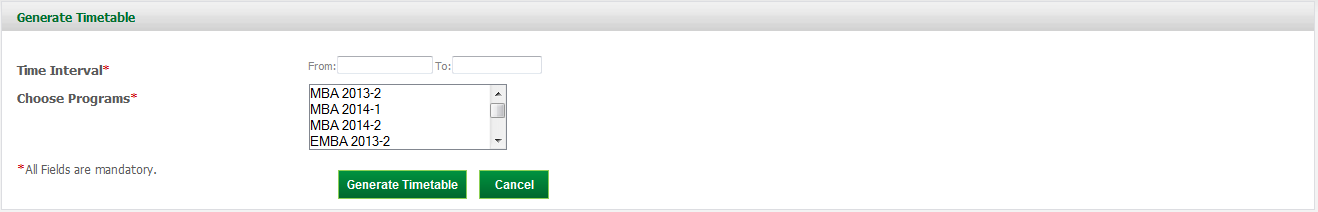
This menu item provides the functionality to manage a timetable. Direct links to sub menus **“List”, “Generate”, “Table View”, “Calendar View”** are also given as buttons on Timetable Dashboard which gets visible when a user clicks on “**Dashboard” or “List”(In sub menu)**.



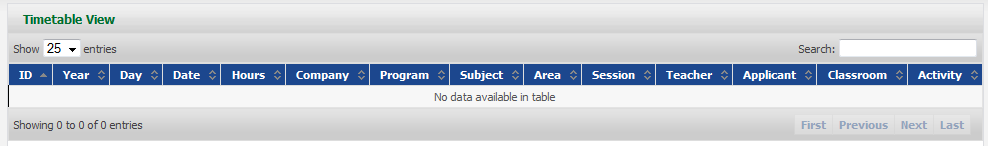


3.2.1.1 **Timetable** >**Generate**

This option lets a user to create new timetable by providing a duration and selecting the programs list for which timetable needs to be generated.

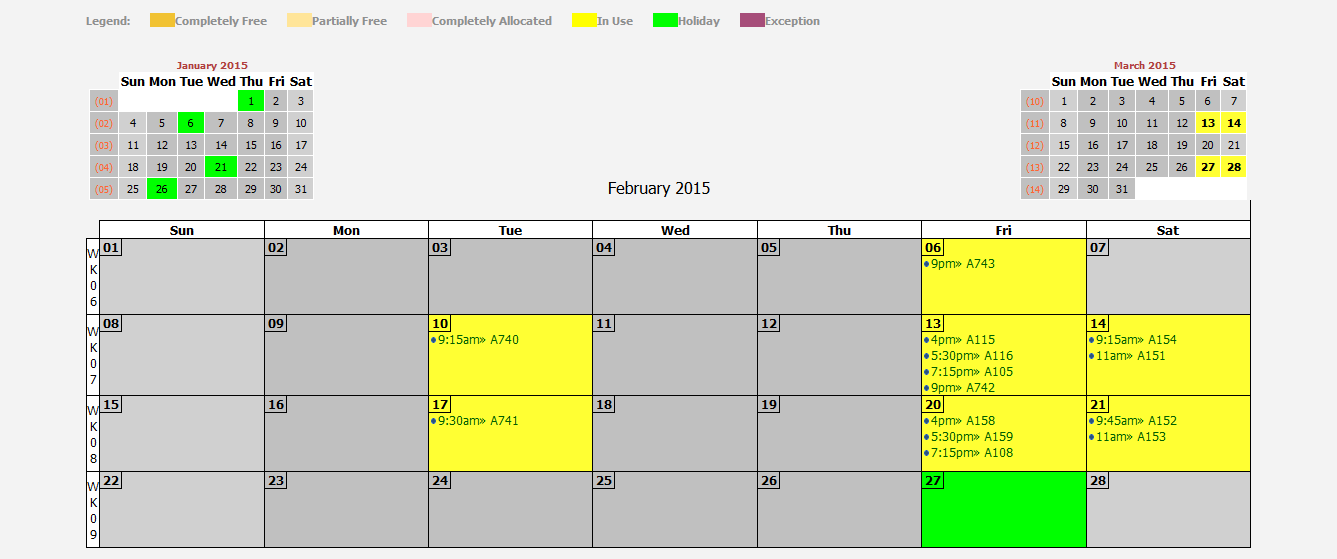
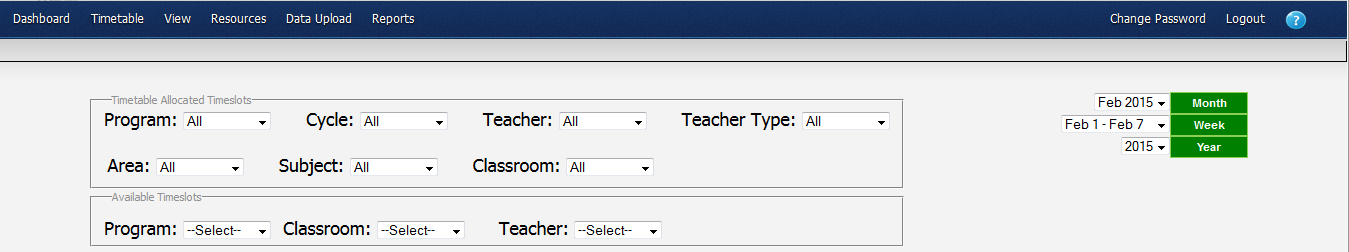


Once the **“Generate Timetable”** button is clicked, a timetable gets generated and is displayed in tabular format as follows-



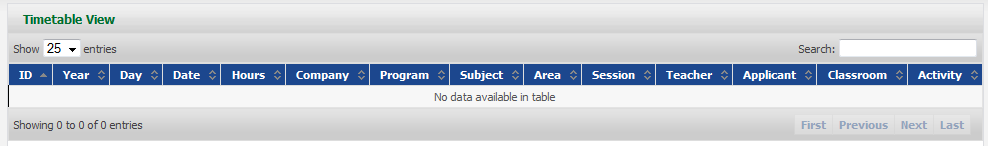
3.2.1.2 **Timetable**> **Calendar View**

To view the timetable in calendar view, use this option. It will show the timetable in a Calendar unlike the tabular view.



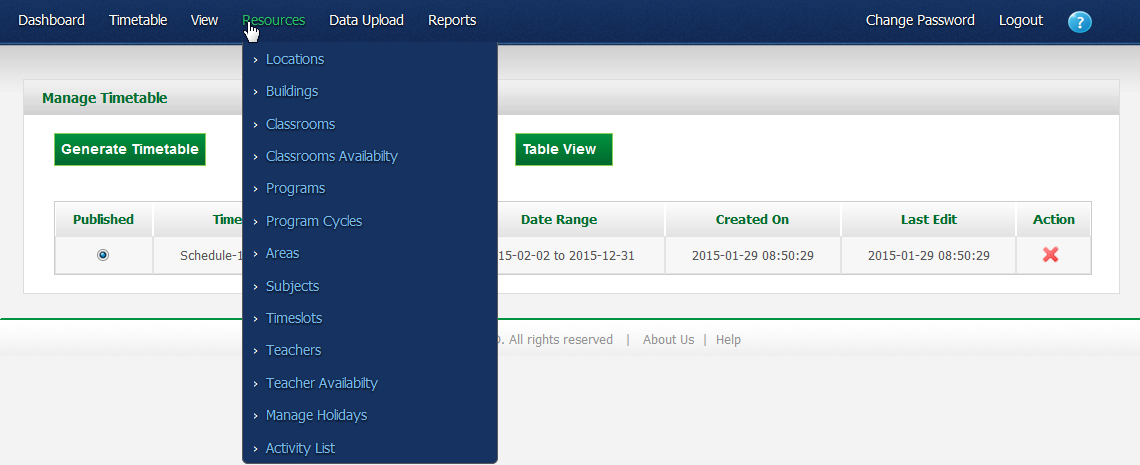
3.2.1.3 **Timetable** > **Table view**

This option will open the recent timetable in tabular format, in a new tab.



3.2.2 Resources Menu

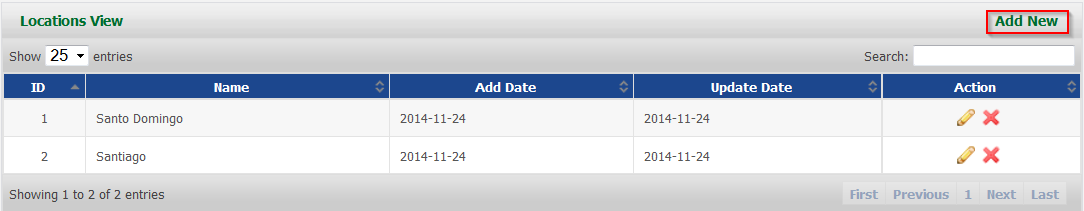
All the prerequisites required to generate a timetable can be managed from here. This menu provides options to manage all the resources like teachers, programs, subjects, sessions, classrooms, buildings, areas etc.

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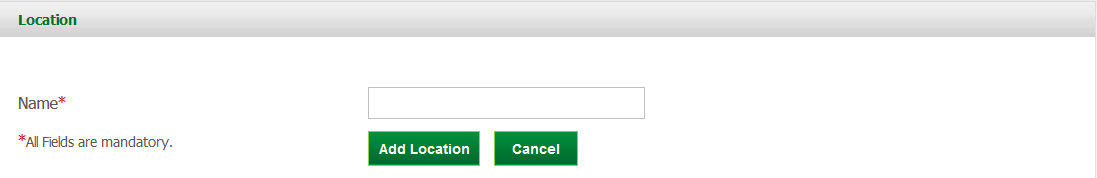
3.2.2.0 **Resources** > **location**

Using this option, you can manage the location. To go to the location dashboard page which shows a list of all location in the system and all actions that can be performed on this location, go to **Resources -> Location**

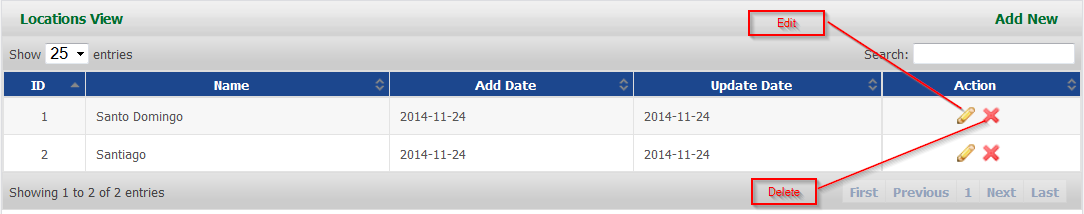
To add a location, click on **“Add New”** link on the right hand side of Location Dashboard.

****

This will open a page as below where Location information can be provided.



After the location has been added, it will appear on the dashboard as below-

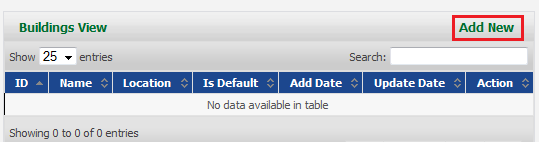


You can click on the **Edit** link to edit the details of location and you can also delete the location by clicking on cross sign next to edit link.

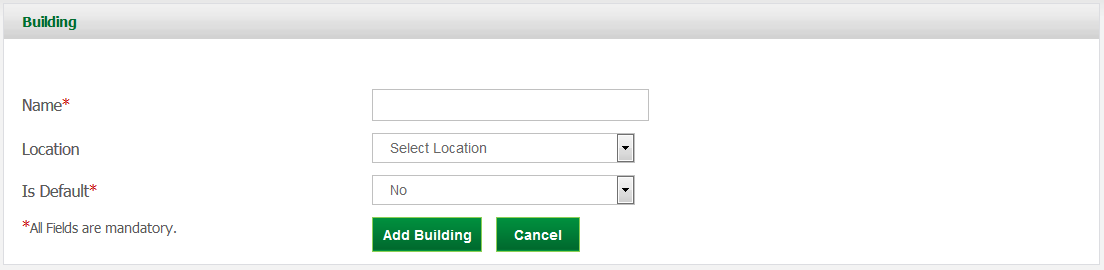
3.2.2.1 **Resources** > **Building**

Using this option, you can manage the buildings. To go to the building dashboard page which shows a list of all buildings in the system and all actions that can be performed on these building, go to **Resources -> Building**

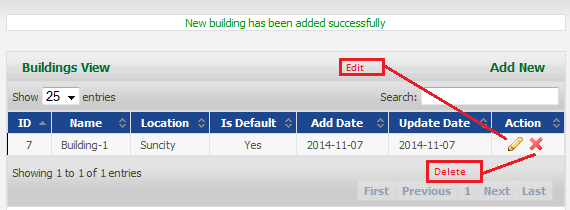
To add a building, click on **“Add New”** link on the right hand side of Building Dashboard.

****

This will open a page as below where Building information can be provided.



After the building has been added, it will appear on the dashboard as below-

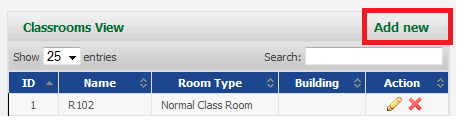


You can click on the **Edit** link to edit the details of building and you can also delete the building by clicking on cross sign next to edit link.

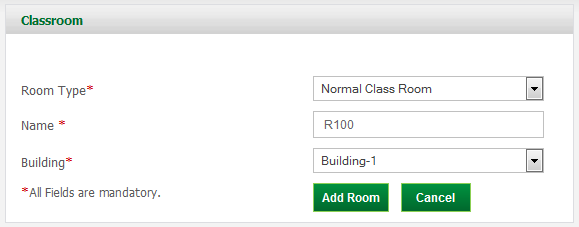
3.2.2.2 **Resources** >**Classrooms**

Using this option, you can manage the classrooms. To go to the classroom dashboard page which shows a list of all classrooms in the system and all actions that can be performed on these classrooms, go to **Resources -> Classrooms**

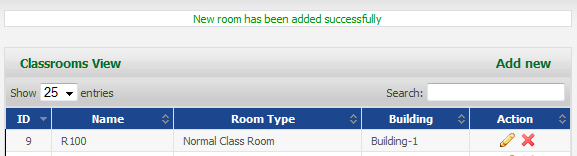
To add a classroom, click on **“Add New”** link on the right hand side of Classroom Dashboard.



This will open a page as below where Classroom information can be provided.



After the classroom has been added, it will appear on the dashboard as below-

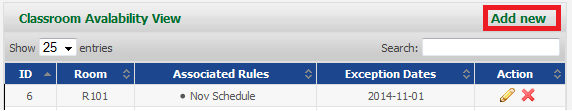


You can click on the **Edit** link to edit the details of classroom and you can also delete the classroom by clicking on cross sign next to edit link.

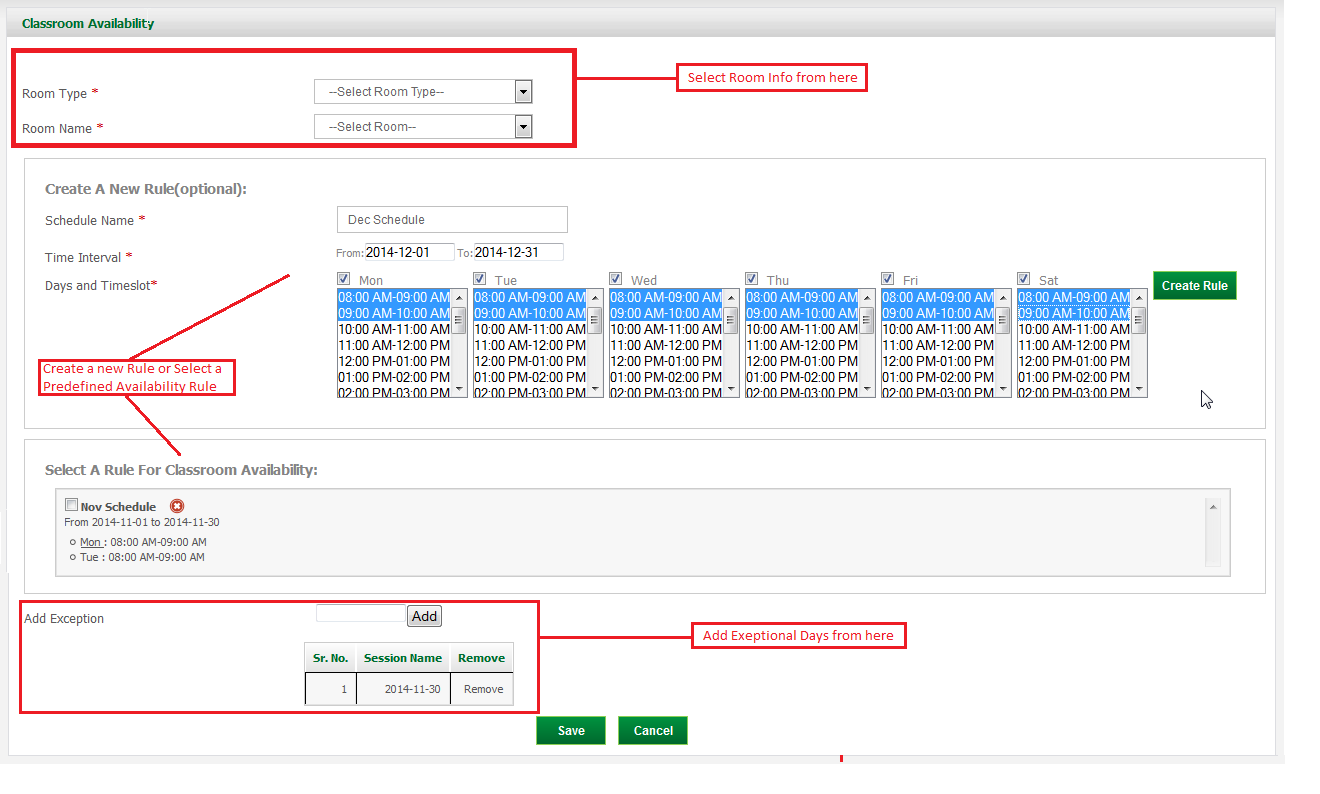
3.2.2.3**Resources** >**Classroom Availability**

Using this option, you can manage the classrooms availability. To go to its dashboard page which shows a list of all classrooms which are available in the system and actions which can be performed over them, go to**Resources -> Classrooms Availability**

To add a classroom, click on **“Add New”** link on the right hand side of the Dashboard.



This will open a page as below where Classroom Availability can be provided.



After the classroom availability has been added, it will appear on the dashboard as below-

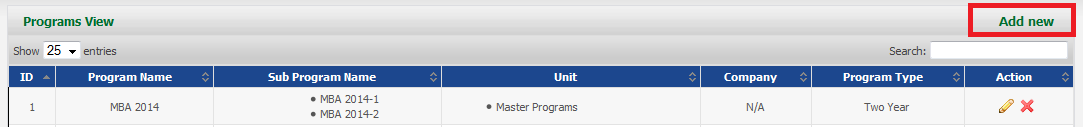


You can click on the **Edit** link to change theclassroom availability oryou can also delete the classroom availability by clicking on cross sign next to edit link.

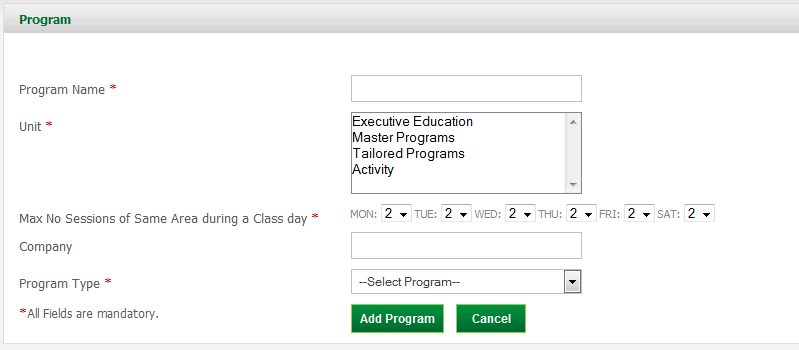
3.2.2.4**Resources** >**Programs**

Using this option, you can manage the programs. To go to its dashboard page which shows a list of all programs in the university and all actions that can be performed on these programs, go to **Resources ->Programs.**

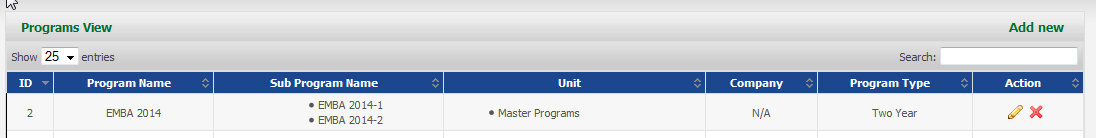
To add a program, click on **“Add New”** link on the right hand side of Program Dashboard.

****

This will open a page as below where Program details can be provided.



After the program has been added, it will appear on the dashboard as below-

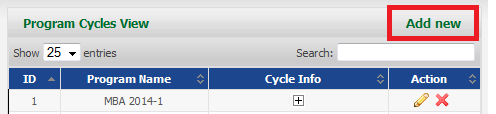


You can click on the **Edit** link to change the Program details or you can also delete the Program by clicking on cross sign next to edit link.

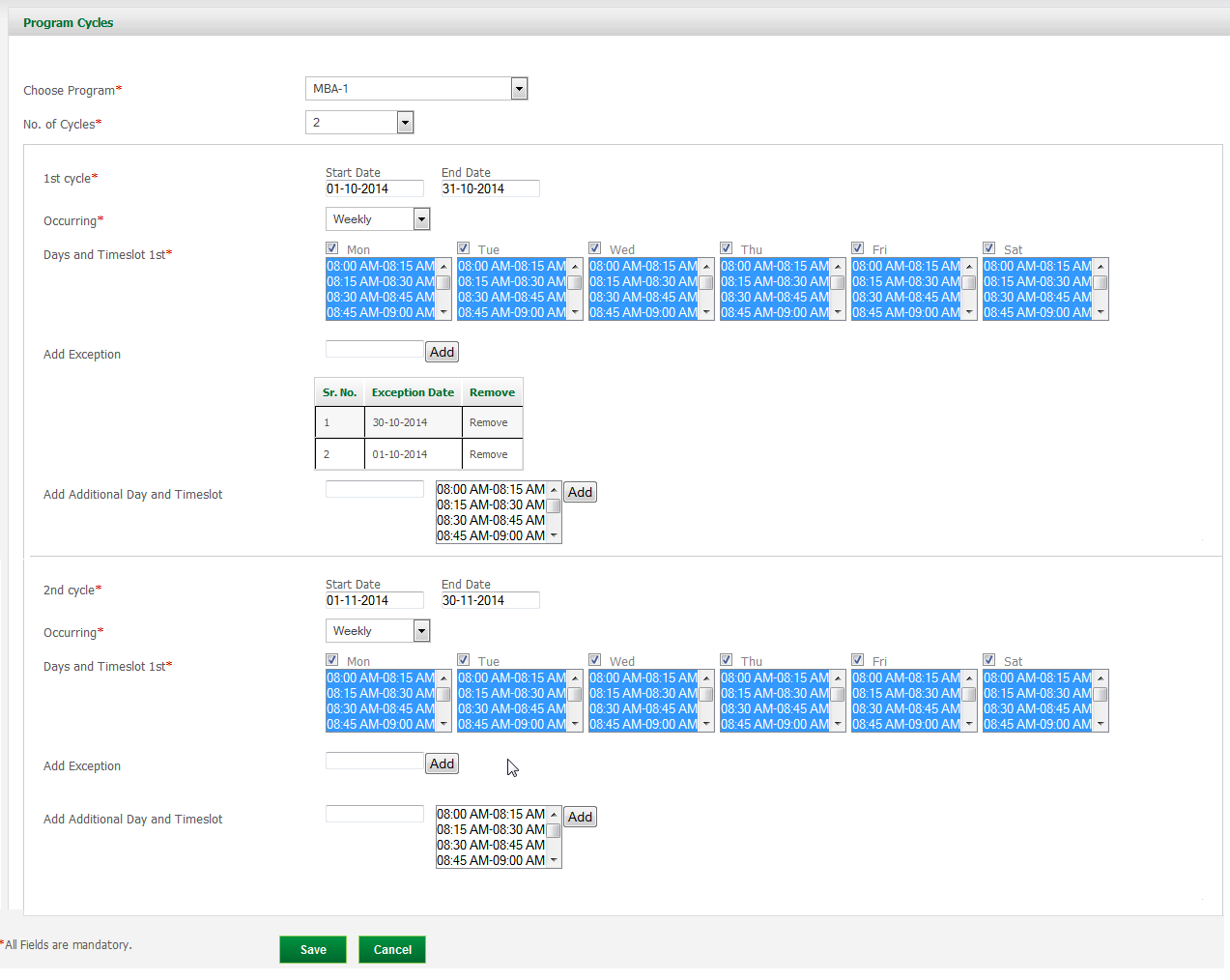
3.2.2.5**Resources** >**Program Cycles**

Using this option, you can manage the Program Cycles. To go to the Program Cycles dashboard page which shows a list of Programs and its associated Cycles and all actions that can be performed on these Program Cycles, go to **Resources -> Program Cycles**

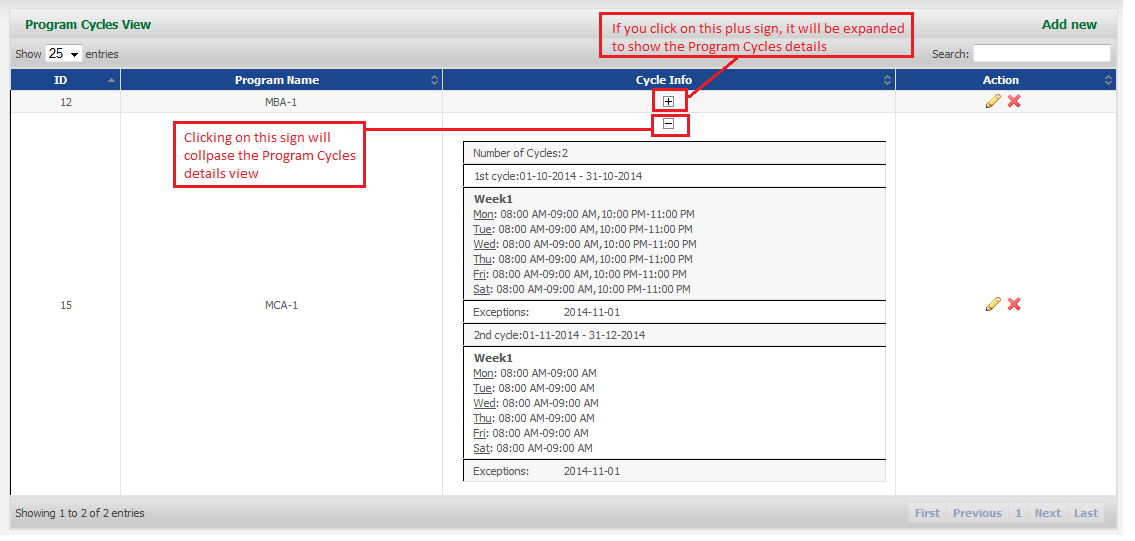
To add Program Cycles, click on **“Add New”** link on the right hand side of Program Cycles Dashboard.



This will open a page as below where Program Cycles details can be provided.



After the Program Cycles has been added, it will appear on the dashboard as beloYou can click on the **Edit** link to change the Program Cycles details or you can also delete the Program Cycles by clicking on cross sign next to edit link.

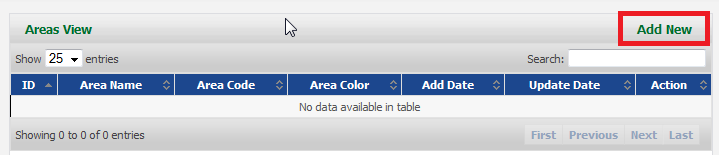


You can click on the **Edit** link to change the Program Cycles details or you can also delete the Program Cycles by clicking on cross sign next to edit link.

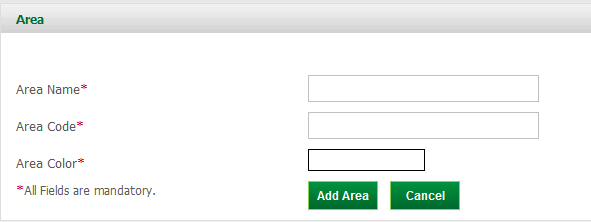
3.2.2.7**Resources** >**Area**

Using this option, you can manage the Areas. To go to the Areas dashboard page which shows list of all Areas and the actions that can be performed on these Areas, go to **Resources -> Areas.**

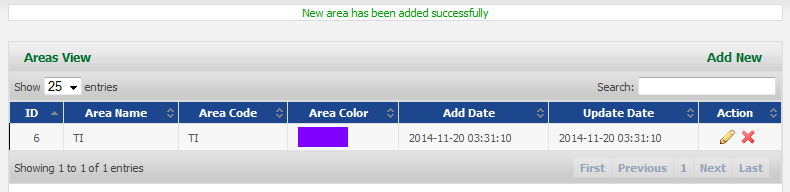
To add an Area, click on **“Add New”** link on the right hand side of Areas Dashboard.



This will open a page as below where Area details can be provided.



After the Area has been added, it will appear on the dashboard as below-



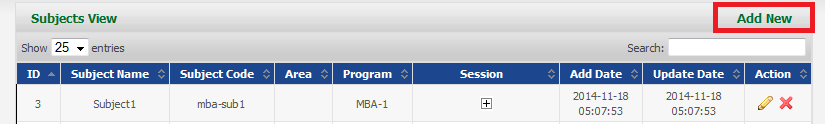
You can click on the **Edit** link to change the Area details or you can also delete an Area by clicking on cross sign next to edit link.

3.2.2.8**Resources** >**Subjects**

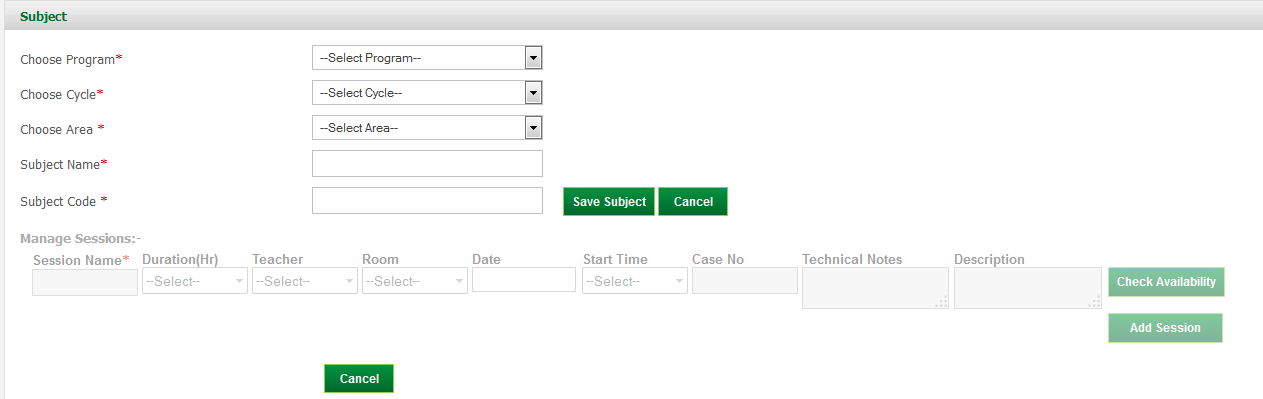
Using this option, you can manage the Subjects and their Sessions. To go to its dashboard page which shows list of all Subjects and their associated sessions, go to **Resources -> Subjects**

To add a Subject, click on **“Add New”** link on the right hand side of Subjects Dashboard.

A Session can only be created when its Subject has been added.



This will open a page as below where Subject details can be provided.

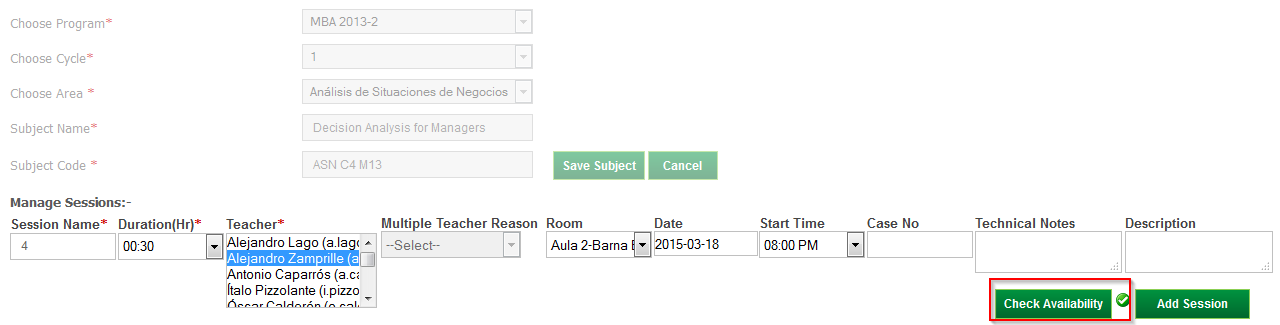


**“Save Subject”** will add the Subject and “**Manage Sessions**” section will get enabled. Now, sessions corresponding to the subject can be added.

Three types of activities can be created from this screen:

1. Reserved Activity
2. Semi Reserved Activity
3. Free Activity

To create a **Scheduled**/**Reserved** Activity, user will also have to provide all the fields. “**Session Name**”, “**Duration**”, “**Teacher**”, “**Multiple Teacher Reason**”, “**Room**”, “**Date**” and “**Start Time**” all are necessary to be filled. Thereafter, A reserved activity will be created depending upon the Teacher/Classroom/Program availability on that day and timeslot. A user can also check the availability of rooms, teachers and programs by clicking **Check Availability** button before adding the session.

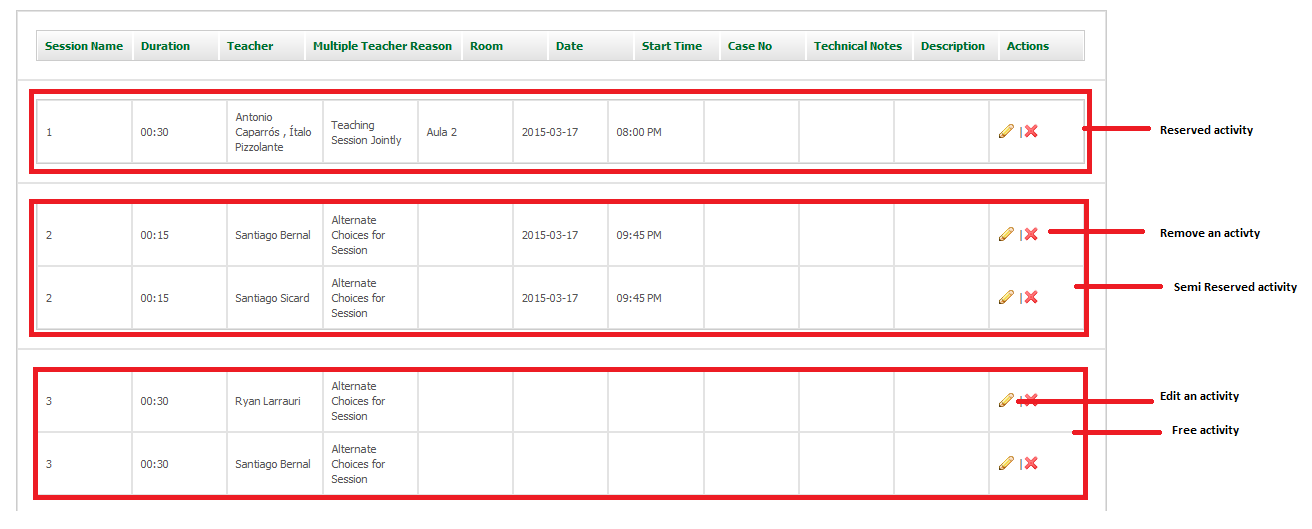


To create **semi reserved activity**, user will also have to provide “**Session Name**”, “**Duration**”, “**Teacher**”, “**Multiple Teacher Reason**”, **1 or 2 out of room, date and start time**. While creating semi reserved activity, program/teacher/classroom availability will not be checked.

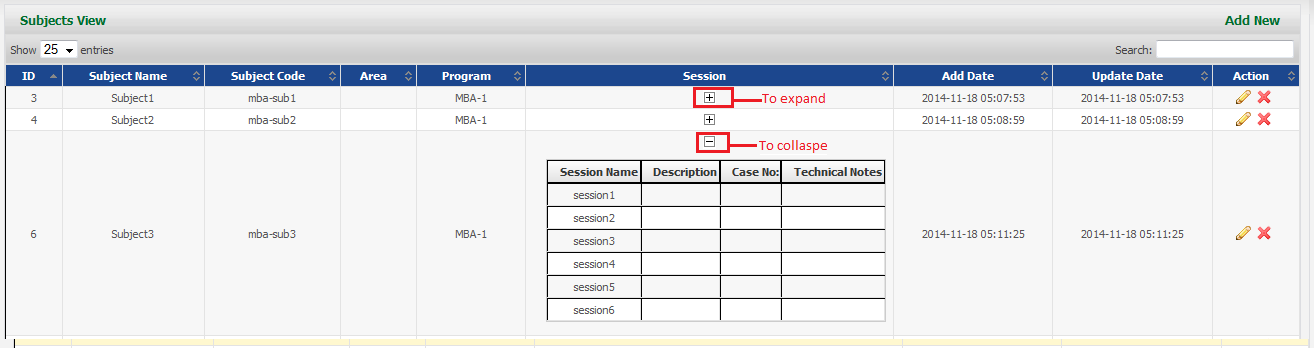
To create a **Free activity,** user have to provide“**Session Name**”, “**Duration**”, “**Teacher**” and “**Multiple Teacher Reason**”.

While creating an activity, a teacher assigned can be single or multiple. If multiple teachers are selected, **multiple teacher reason** dropdown box will get enabled with options **Teaching session jointly** and **Alternate choice for session.** If user selects **teaching session jointly**, single activity will be created with both teachers allocated to the same session at same time in same room. If user selects **Alternate choice for sessions,** then multiple activities will be created and out of those multiple activities, only one will be allocated by the algorithm. Reserved activities cannot be created with the option **Alternate choice for sessions** whereas the free and semi reserved activities can be created.

All Reserved/Unreserved/Semi reserved activities can also be seen in **Resources** ->**Teacher Activity** View.



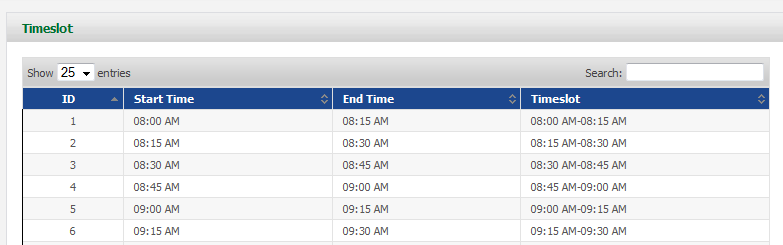
After the Subject/Sessionshave been added, it will appear on the dashboard as below-



You can click on the **Edit** link to addmore Sessions or you can delete the Subjects and their corresponding sessions by clicking on cross sign next to edit link.

3.2.2.8 **Resources** >**Timeslots**

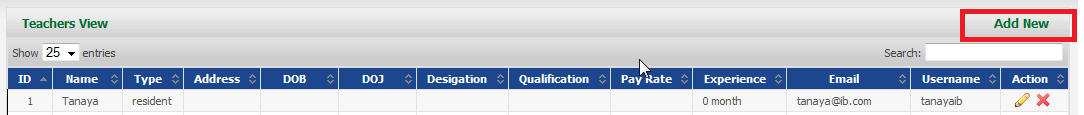
Using this option, you can only View the Timeslots. To go to its dashboard page which shows list of all Timeslots in the system, go to **Resources ->Timeslots.** This will show the dashboard as below-



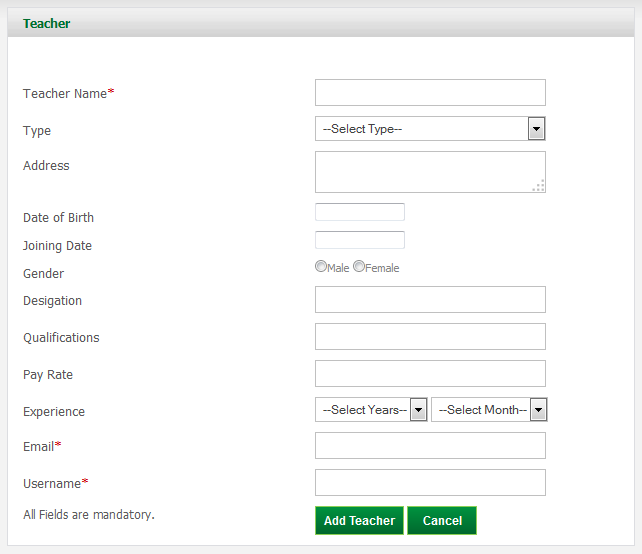
3.2.2.9**Resources** >**Teachers**

Using this option, you can manage the Teachers. To go to its dashboard page which shows list of all Teachers and the actions that can be performed on these Teachers, go to **Resources ->Teachers.**

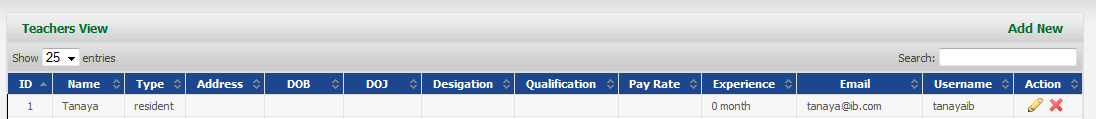
To add a Teacher, click on **“Add New”** link on the right hand side of TeacherDashboard.

****

This will open a page as below where Teacher details can be provided.

****

After the Teacher has been added, it will appear on the dashboard as below-

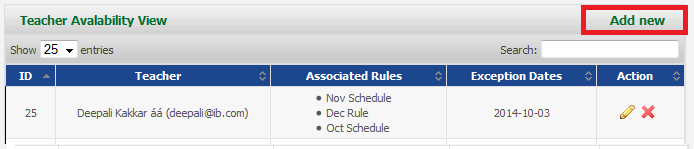
****

You can click on the **Edit** link to change the Teacher details or you can also delete the Teacher by clicking on cross sign next to edit link. But, it should be noted that, **Email ID** and **Username** cannot be edited.

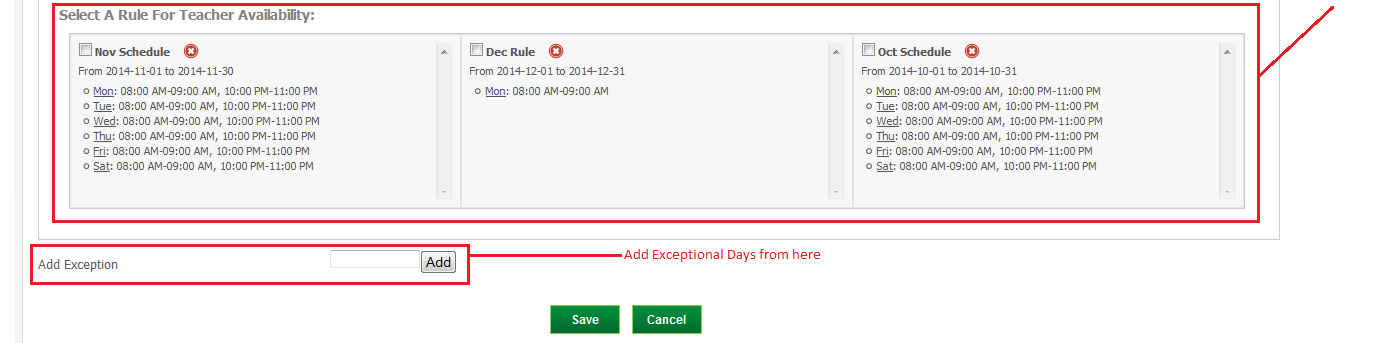
3.2.2.10**Resources** >**Teacher Availability**

Using this option, you can manage the Teacher Availability. To go to its dashboard page which shows the availability of Teachers and the actions that can be performed on these Subjects, go to **Resources ->Teacher Availability.**

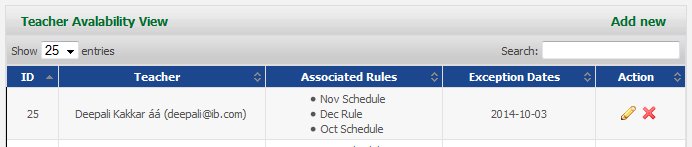
To add a Teacher Availability, click on **“Add New”** link on the right hand side of Teacher AvailabilityDashboard.



This will open a page as below where Areas details can be provided.



After the Teacher Availability has been added, it will appear on the dashboard as below-

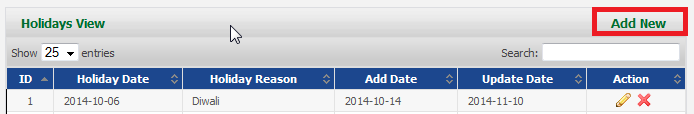


You can click on the **Edit** link to change the Teacher Availability details or you can also delete the Teacher Availability by clicking on cross sign next to edit link.

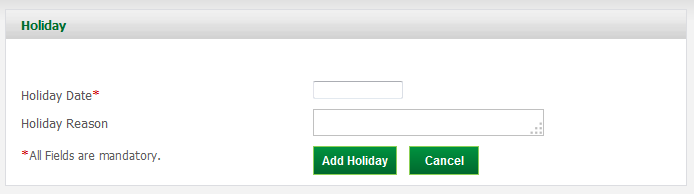
3.2.2.11**Resources** >**Manage Holidays**

Using this option, you can manage the Holidays. To go to its dashboard page which shows list of all Holidays and the actions that can be performed on these Holidays, go to **Resources ->Manage Holidays.**

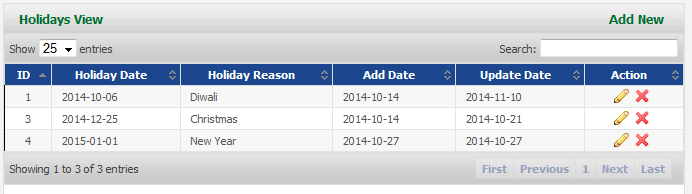
To add a Holiday, click on **“Add New”** link on the right hand side of Holidays Dashboard



This will open a page as below where Holidays details can be provided.



After the Holiday has been added, it will appear on the dashboard as below-



You can click on the **Edit** link to change the Holiday details or you can also delete the Holiday by clicking on cross sign next to edit link.

3.2.2.11 **Resources** >**Teacher Activity**

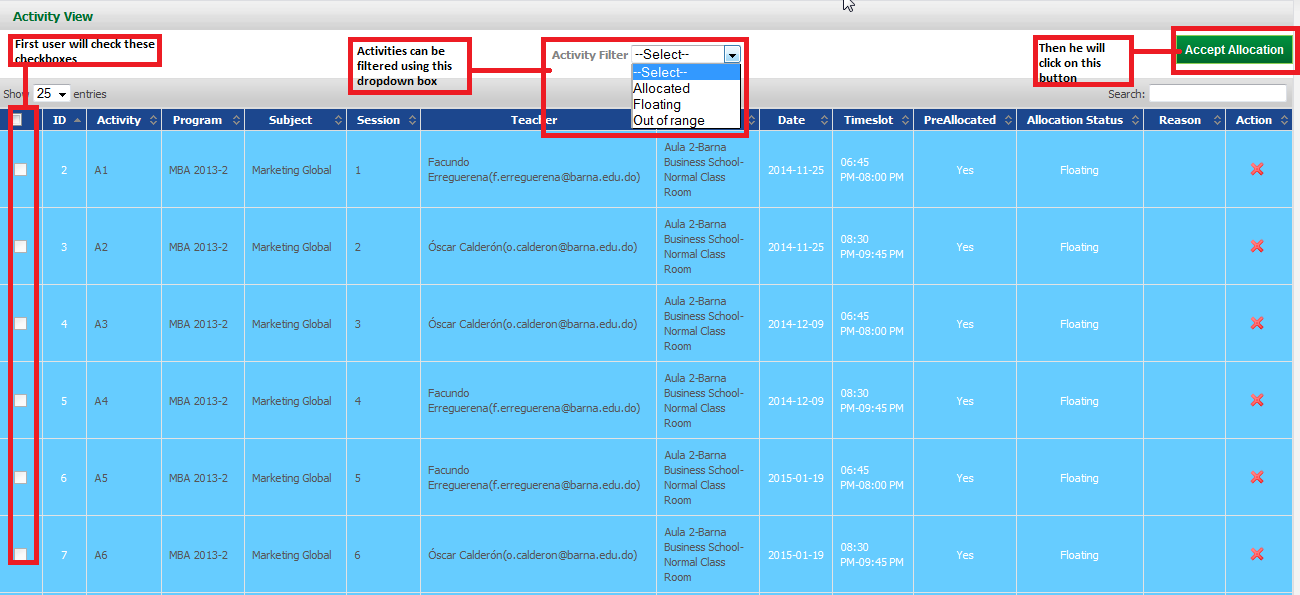
It will provide the list of reserved, unreserved and semi reserved activities which were created during session management in the different color with their allocation status.

* **Blue** color shows that these activities are scheduled outside the timetable range and hence cannot be allocated
* **Red** color shows the unallocated activities after the generation of timetable
* **Green** color shows the allocated activities after the generation of timetable
* **White** color shows for those group of activities out of which 1 activity gets allocated during timetable generation. This is used for the case of multiple teachers taking a same session.



At the top corner of right hand side “**Accept Allocation**” button exists .The use of this button is to make the unreserved activities reserved.

For this user will check the checkboxes of those activities which he wants to make reserved and then click on **Accept Allocation button**.



User can also filter the activities based on the options given in the activity filter dropdown box.

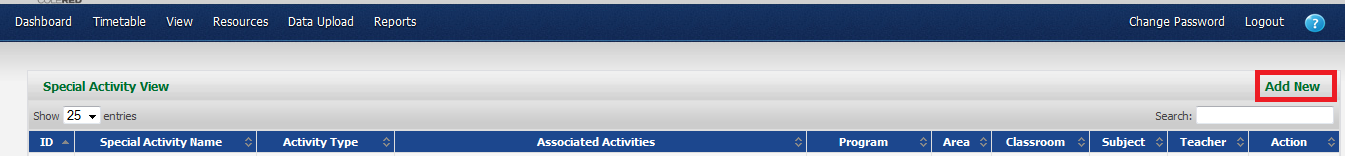
3.2.2.12 **Resources** >**Special Activities**

Using this option, you can manage the special activities. Go to **Resources -> Special Activities** to open this page. Here you can manage the special activities in a university.

Special Activities can be:

1. Recess Activity: Recess activities are program specific. Each program will have one or more recess activities for a day
2. Group Meeting: Group Meetings are not program specific. There can be a single or multiple group meetings scheduled for a day
3. Adhoc Activity: Adhoc Activities are not program specific. There can be a single or multiple adhoc activities scheduled for a day

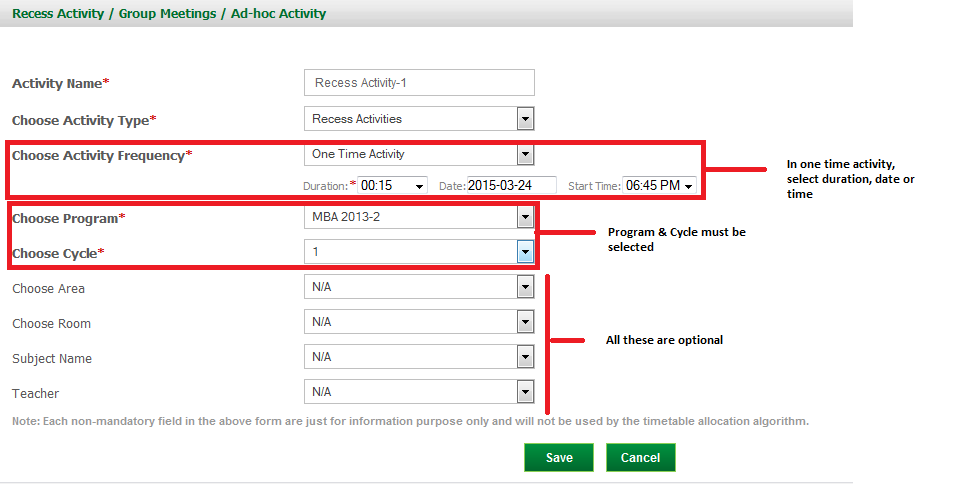
To add a special activity, click on **“Add New”** link on the right hand side of special activity Dashboard



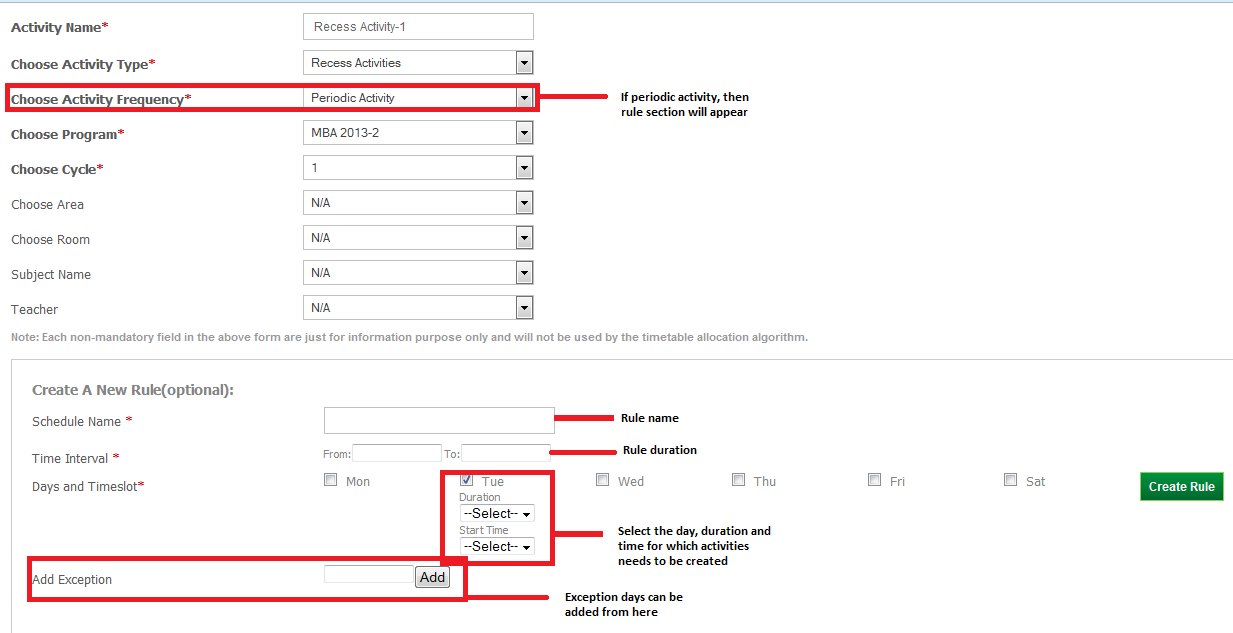
This will open a page as below where special activity can be added into the application.

**Recess Activity:**

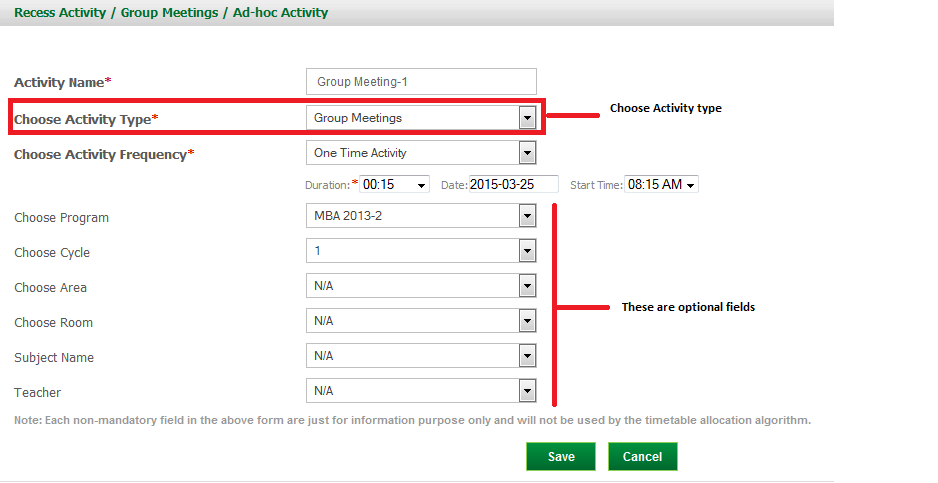
Activity can be one time or periodic activity. If user selects one time activity, then dropdown boxes for duration, date and time will appear and user has to provide the duration, time and date for the recess activity

****

If user selects periodic activity from the dropdown, then section for adding rules will appear to the user. User can give a rule name, duration, day, and time on which the multiple recess activities needs to be created during a given time interval. Exception dates can also be added.

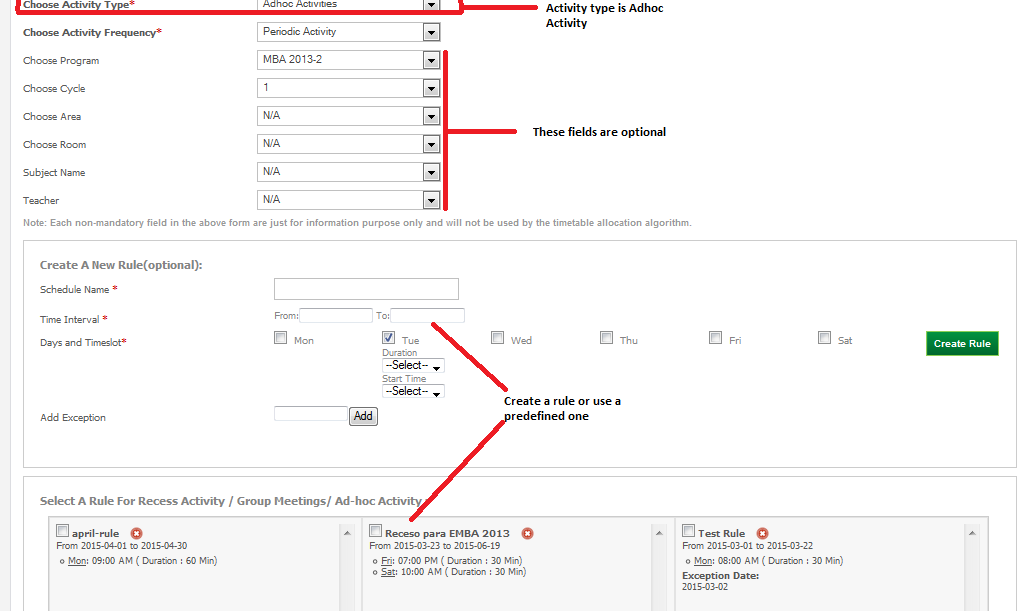
****

**Group Meetings**

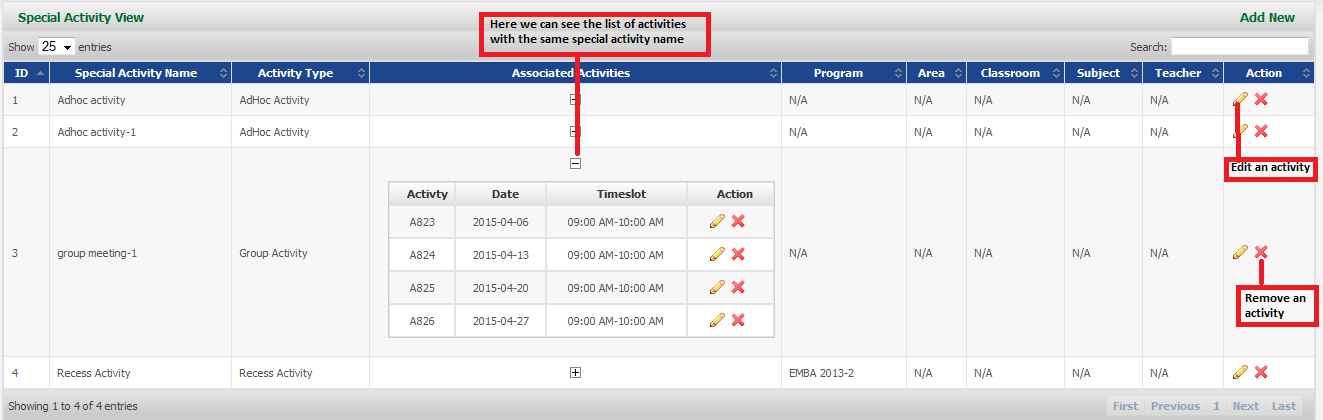
****

**Adhoc Activity**

We can create a new rule for adding activities or can use a predefined rule to add more activities into the system

****

After special activities are added into the system, the list of special activities can be seen here

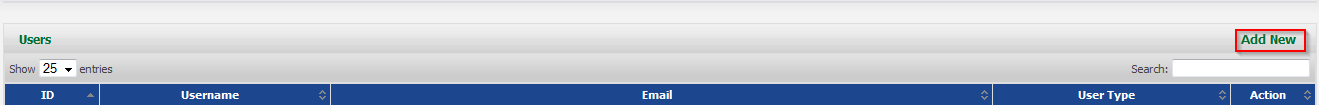


3.2.2.13 **Resources** >**User Management**

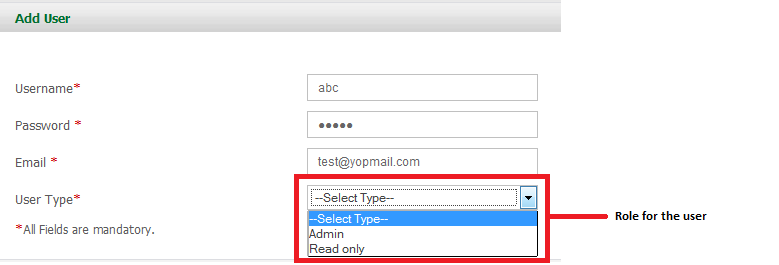
Using this option, you can manage the users of the application. Go to **Resources -> User Management** to open this page. Each user of the application will belong to some role. There are three types of roles defined:

1. Superadmin
2. Admin
3. Read only users

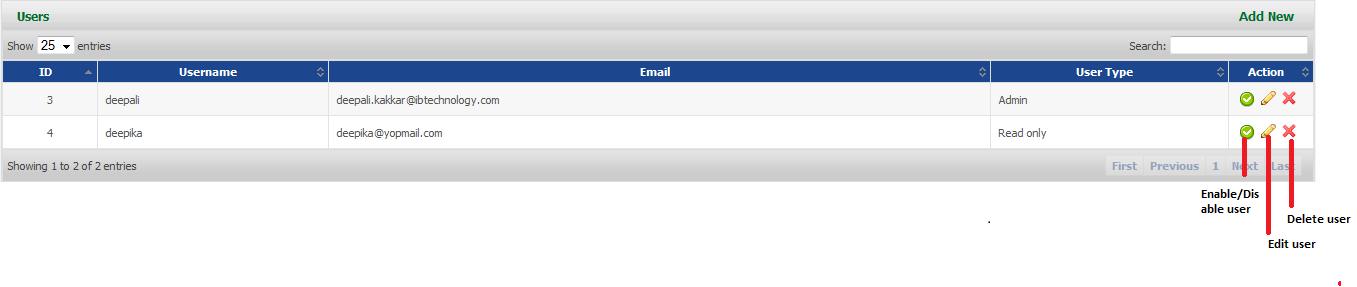
To add a new user, click on the Add new button given on the top right corner of the User Management dashboard.



A page will open up, where more users can be added into the system

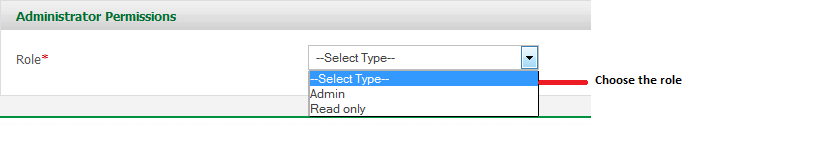


After adding the user, the system will redirect the control to the user listing page, from where user can be edited, deleted, enabled/disabled

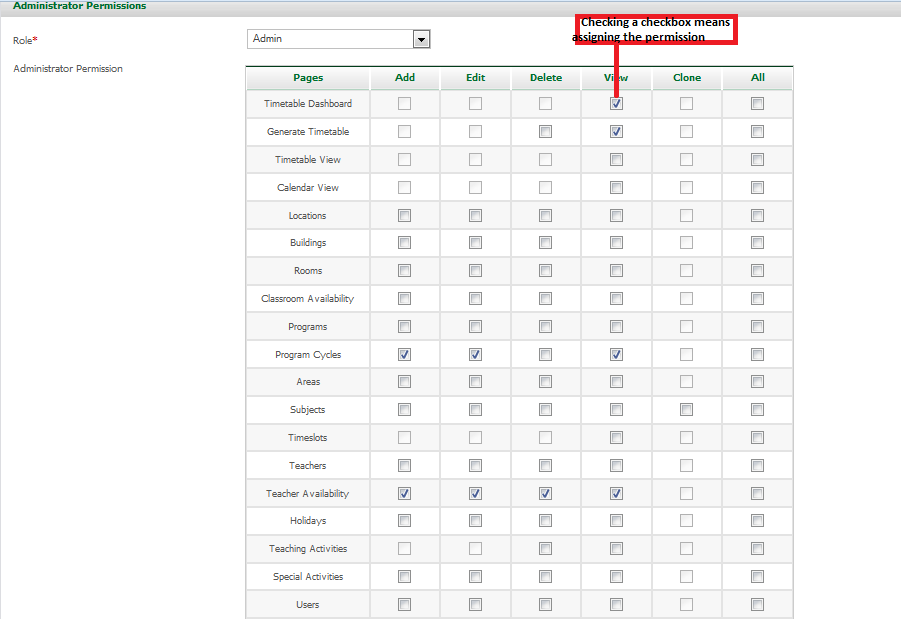


3.2.2.14 **Resources** >**Role Management**

Using this option, you can manage the roles/permissions assigned to the users of the application. Go to **Resources -> Roles Management** to open this page.



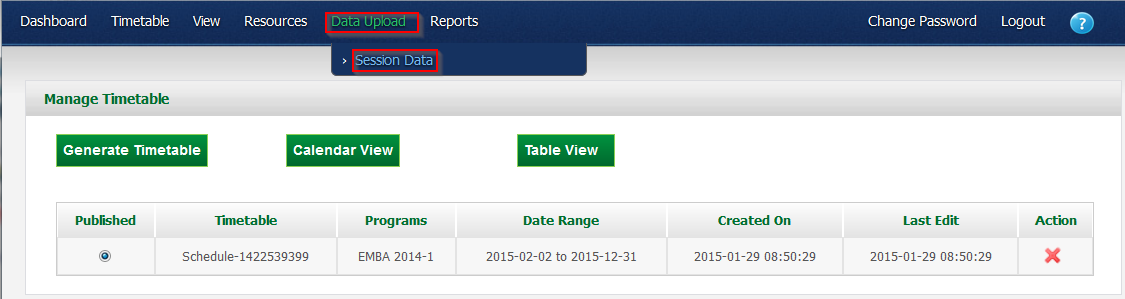
Once the user will choose the role from the dropdown, permissions assigned to the corresponding role will be shown below



Here for admin, “**View**” permissions of dashboard page is set, means the page is accessible to the user. If the “**View**” permissions of dashboard page is unset, then the page is not accessible to the user and **page not found** error will be displayed to the user

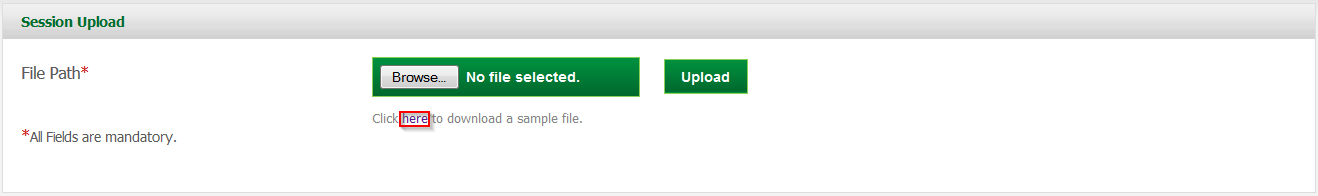
3.2.3 Data Upload Menu

This menu item provides the functionality to upload activities data like as (combination of session name with program, teacher, area, classroom etc.). Data Upload is the main menu link given in the menu bar.



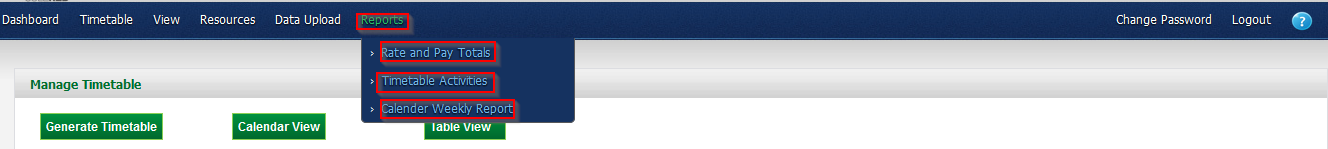
3.2.3.1 Data Upload >Session Data

This option lets a user to upload the activities directly by using the select file and then upload. Also user can find the sample file to enter data in the file because format of file should be same as sample file otherwise file will not be upload .System will through error.



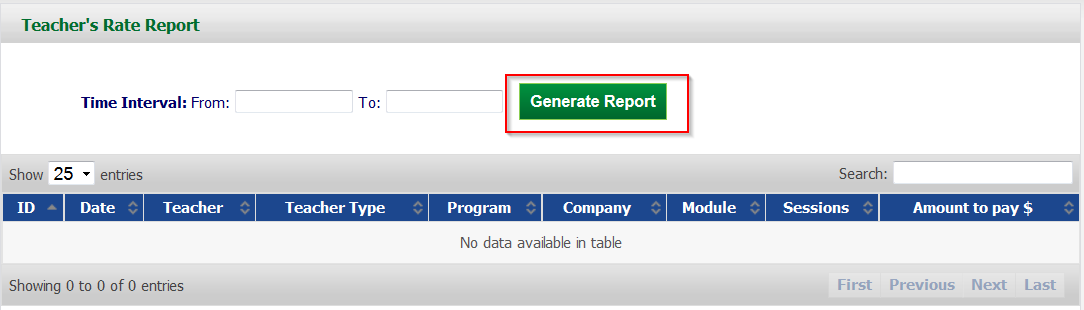
3.2.4 Reports menu

This menu item provides the functionality to generate the report of timetable activities and teacher rate report within the time range.

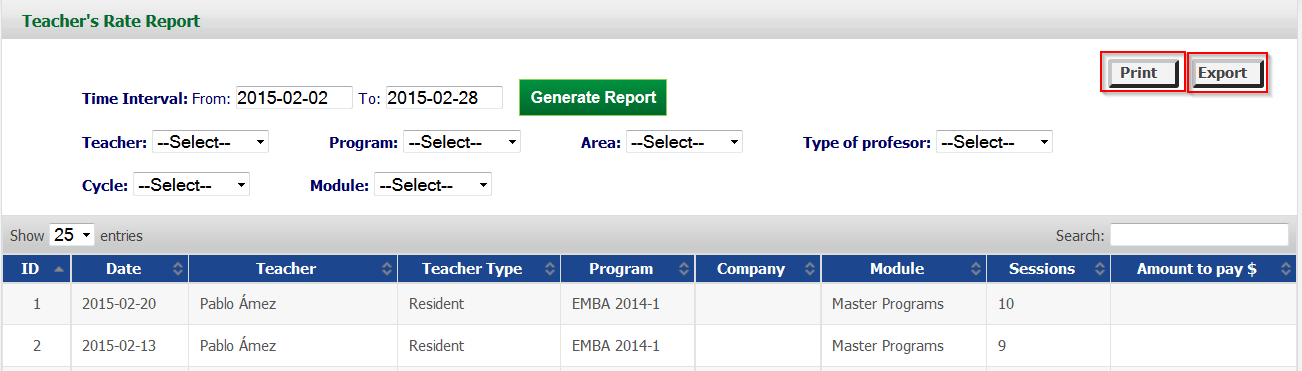


3.2.4.1 Reports >Rate and Pay Totals

This option lets a user to generate the teacher pay report within the given range. User need to provide the time interval then click on generate button .it will populate the list of teacher‘s pay within the date range



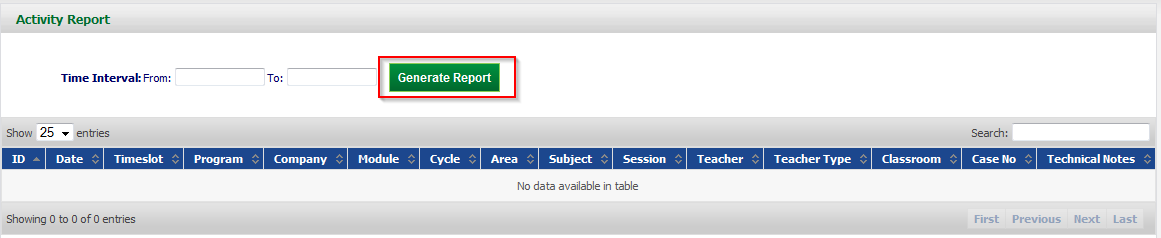
After the clicked on **“Generate Report “**  button, it will appear on the dashboard as below-



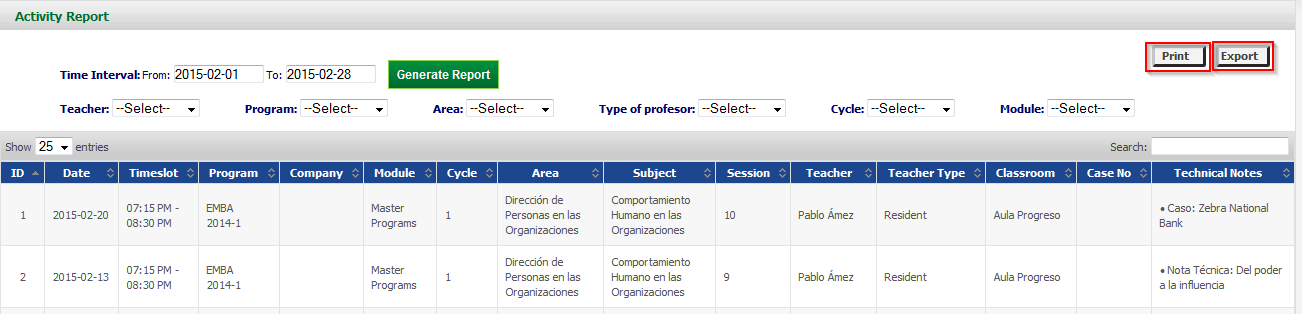
User can print the data table using print button and export the data in excel sheet which are placed on right hand side of dashboard image . Also User can filter the record into the data.

3.2.4.2 Reports >Timetable Activities

This option lets a user to generate the activities report within the given range. User need to provide the time interval then click on generate button .it will populate the list of activities within the given date range.



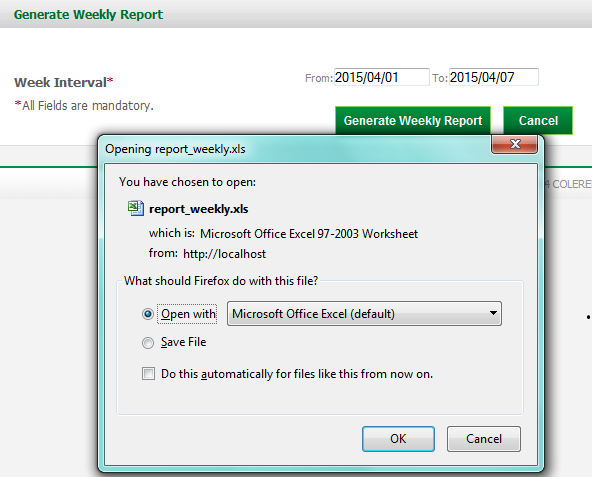
After clicked on **“Generate Report “** button, it will appear on the dashboard as below-



User can print the data table using print button and export the data in excel sheet which are placed on right hand side of dashboard image . Also User can filter the record into the data.

3.2.4.3 Reports >Calendar Weekly Report

This option will let the user to create a weekly report giving the details of the activities allocated with their allocation date, timings, room and teachers. User has to choose the start date and end date of the week and then click on the **Generate Weekly Report** button

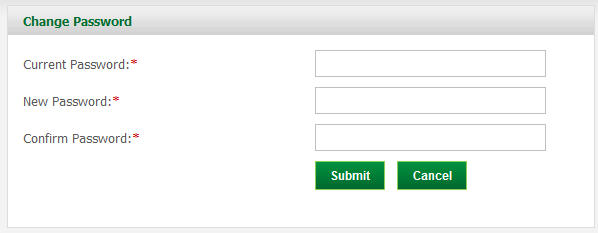


3.2.5Change Password

This option provides user with the facility of changing their password.



User will be asked for Old and New password.



Once the password has been changed, user can login with new credentials.

3.2.6Logout

To logout of the system, user can click on Logout link on any page.



3.2.7 View menu

This menu item provides the functionality to view the data. Sub menus are **“Program Cycles”, “Classrooms Availability”, “Teacher Availability”, “Activities” , “Timetable” , “Calendar”** .



3.2.7.1 View >program cycles

Please follow the Index Number 3.2.2.5 that is same for this.

3.2.7.2 View >Classrooms Availability

Please follow the Index Number 3.2.2.3 that is same for this.

3.2.7.3 View >Teacher Availability

Please follow the Index Number 3.2.2.10 that is same for this.

3.2.7.4 View >Activities

Please follow the Index Number 3.2.2.11 that is same for this.

3.2.7.5 View >Special Activities

Please follow the Index Number 3.2.2.12 that is same for this.

3.2.7.6 View >Timetable

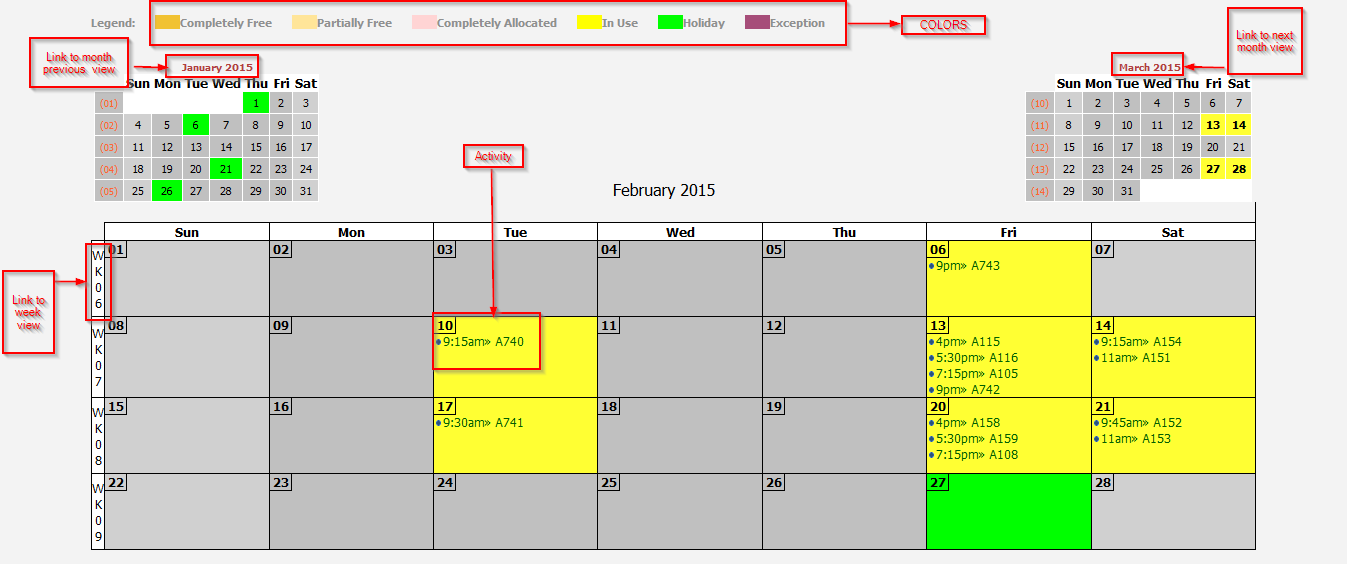
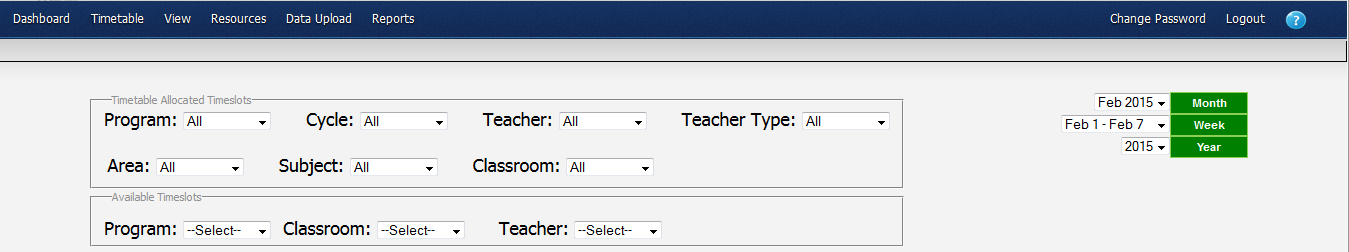
User can view the existing timetable data list like as below:-



3.2.7.7 View >Calendar

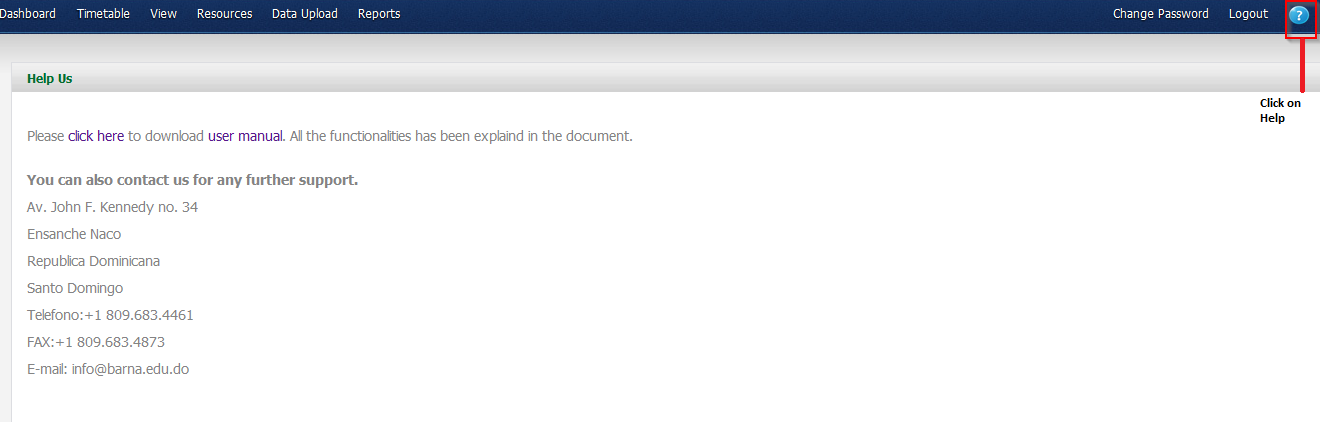
Calendar has four views (year, month, week and day) to show the timetable data .By default month view is opened after click on the “calendar “link.

**Month View:-**



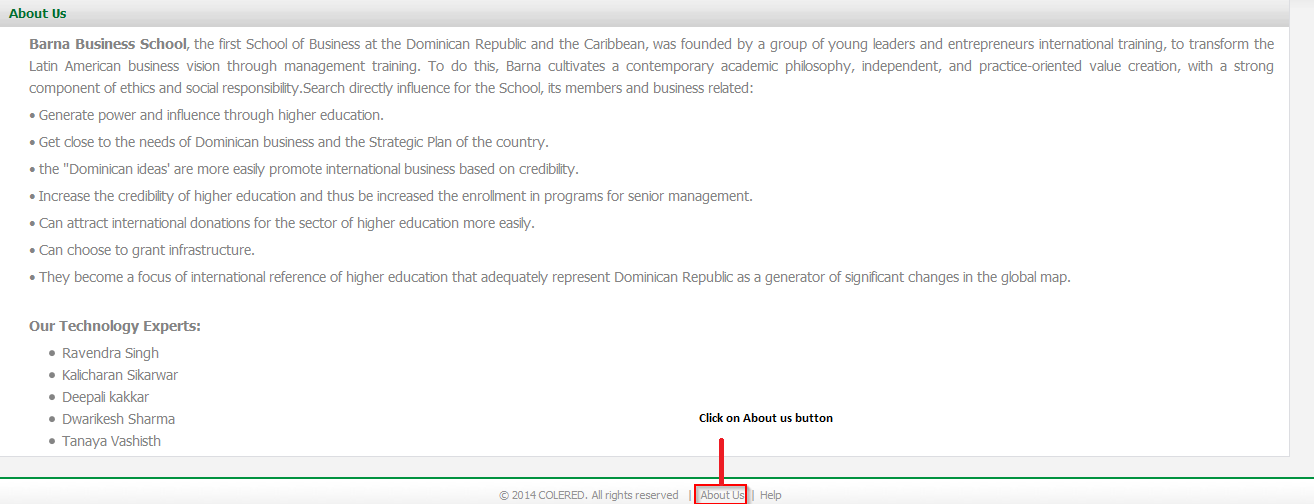
3.2.8 Help

Click on help button at the top right corner to take any help associated with the application



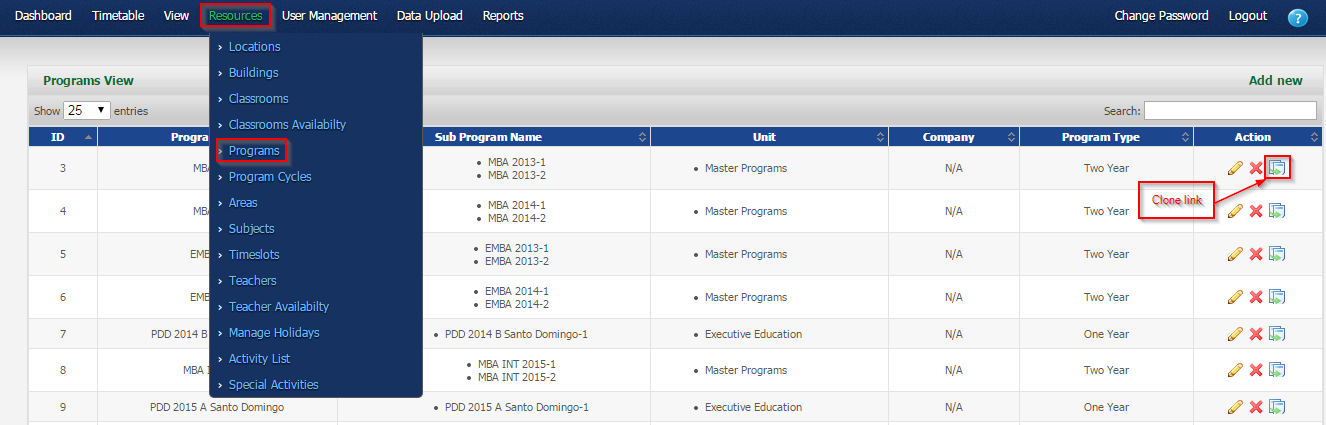
3.2.9 about Us

Click on the about us button in the footer to get the details about the application.



3.2.10 Program cloning

Using this option, you can manage the cloning of program. To go to the program dashboard page which shows a list of all program with cloning option in the action field.

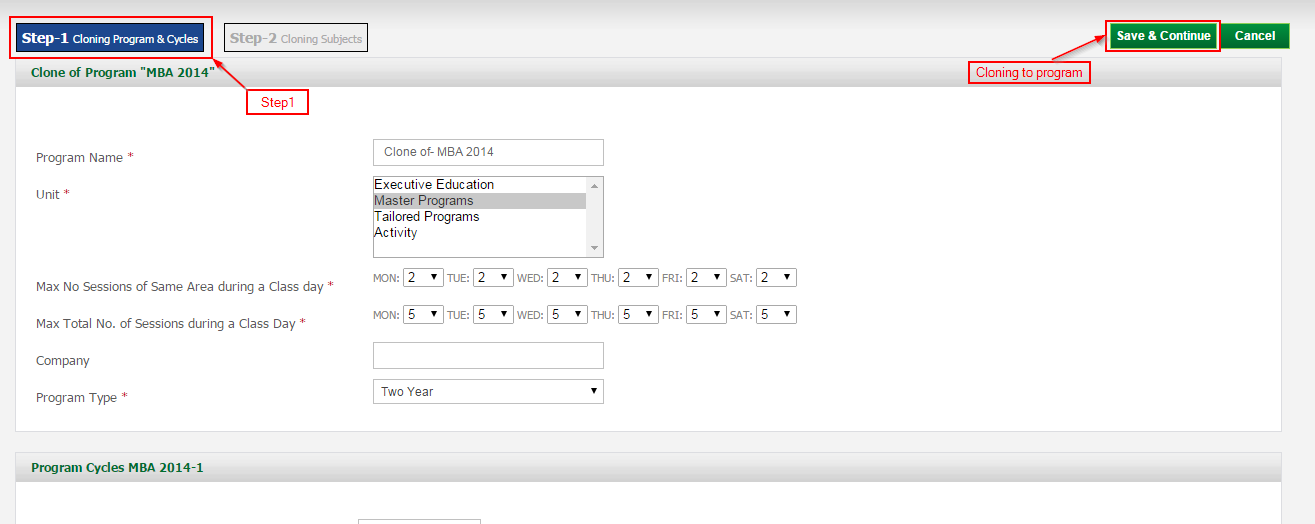
Go to **Resources -> Program**

To clone a program, click on **“clone icon”** link on the right hand in “Action” side of program Dashboard.

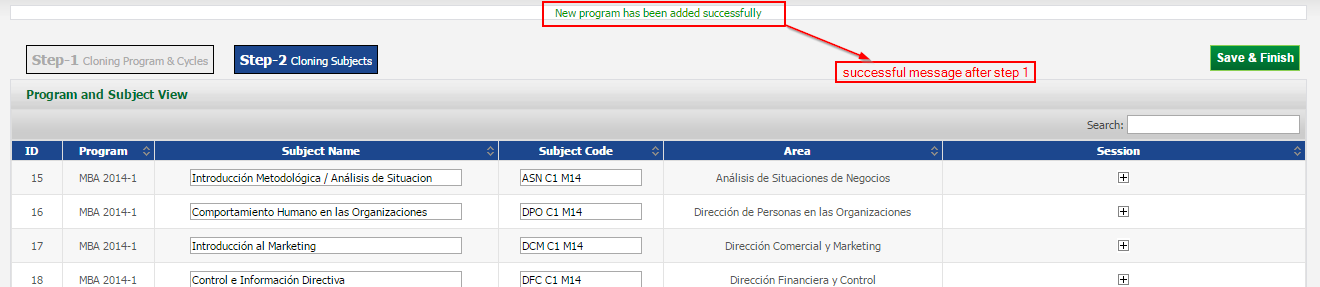
After click on the program cloning link user will redirect to a page in which all the information related to cloned program will be auto field at that page .Page as below :-

Program cloning has two steps to cloning of whole clone data of a program

**Step1:-**

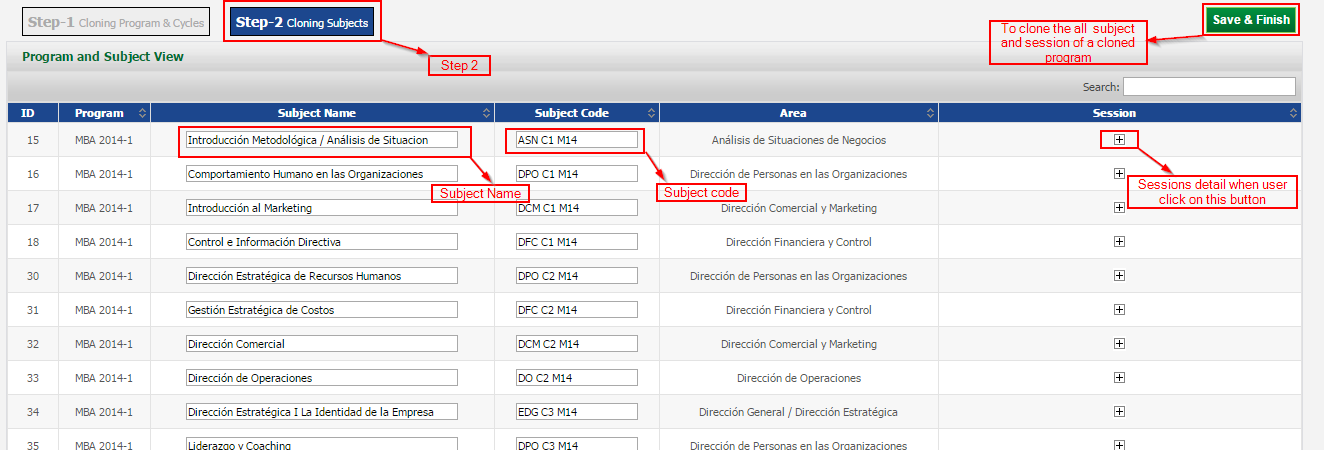


At this step user can clone only the program and its cycle data. When user exists at this page then step 1 image will be in dark blue color and step 2 in grey color where dark blue image shows that user on the current step. User need to click on save & continue button to clone the program and its cycle. After clicking on this button user will be redirect to page with a message “**New program has been added successfully**”. That means program and its cycle has been cloned successfully.



**Step2:-**

After the successful process of step 1 user will be redirect to at this page in which this page will be listed with all subject and its session of a cloned program.

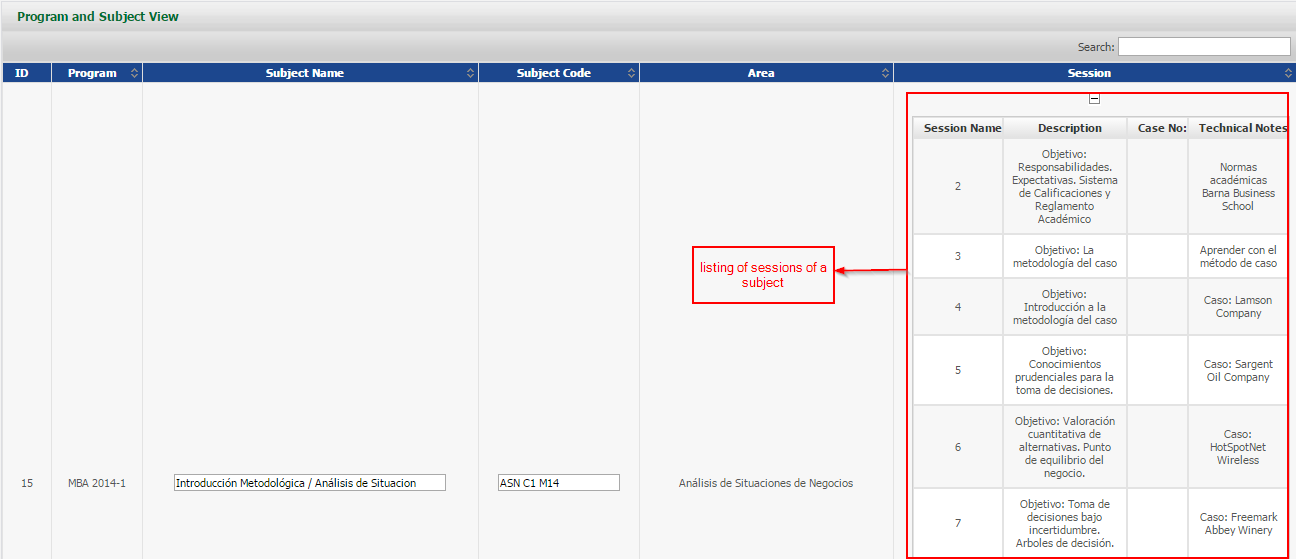


In the above image dark blue image is showing to user that now you are in step 2 and grey image is showing that you have done step 1.

At this page all subject and subject code will be in edit mode that means user can edit the subject and its name .Here ,Subject name is not mandatory to change but subject name is mandatory to make unique to clone new program .Because subject code is unique for each and every program .

To make succeed the step 2, User need to make subject code unique then click on “save & finish” button then system will alert a message to make sure user to clone. This will clone all the subject with its session into the database and user will be redirect to program view page with a message “**Program cloning has been done successfully**”.

Before continue step 2, User can look the all the session with respect subject by clicking on the plus button image like as below:-



If User does not make subject as unique and try to clone, system will throw a message with a subject code .like as below image:-

