Student Lifecycle Management: Attendance Tracking Cookbook

Applies to:

All described functionality is based upon Student Lifecycle Management (SLCM) with ERP6 Enhancement Package 4 (EHP4).

Summary

This cookbook describes how Attendance Tracking is configured in Student Lifecycle Management and how it is used to track absences for students, to maintain class attendance, and also to calculate appraisal for students.

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Introduction

In Student Lifecycle Management (SLcM) students can book modules which are being appraised after the student has completed them. In addition to module booking, integration into Training and Event Management (TEM) is provided. This enables SLcM to make use of the event booking function in the context of a module booking. For certain events it may be necessary to record the attendance of students at each occurrence of the event if attendance is a pre-requisite for passing a certain module. Students can be appraised (passed or failed) based on attendance; such appraisal can be achieved by maintaining data in the following three different areas:

1. Pre-Excused Absence

2. Maintain Attendance

3. Calculate Appraisal

1. Pre-Excused Absence

1.1. General Functionality

A maintenance screen for pre-excused absences is available in the student file, where absences can be maintained each time they occur. The creation of pre-excused absences updates the attendance for the relevant events, which is reflected in the Web user interface (UI).

The pre-excused maintenance screen is mainly for use by registrars or administrators.

For example, if the student says that he or she is missing class for a particular reason, you can maintain this information using the pre-excused absence screen. During this period if there are any attendance-relevant events that the student is supposed to attend, the event occurrences that fall in this particular period are marked with the reason specified.

You can go to the pre-excused absence tab in the student file and create a record for a student based on the time period and the reason for absence.

Before creating the pre-excused absence, the different absence reasons must be maintained in Customizing as described in section 4.1.

The types of absence reasons that are used for attendance tracking are as follows:

|		
E	**Excused Absence**	(Student is excused for not attending the class)
T	**Tardy Reason**	(Reason why a student appeared late in the class)
U	**Unexcused Absence**	(Student is not excused for not attending the class)

Pre-excused absences can only be of the type excused absence ('E') and you need to mark it in Customizing. Only then will these reasons appear in the list box while you are creating the pre-excused absence. The excused absence reasons marked as *Withdrawal* or *Class Cancelled* do not appear as a pre-excused absence.

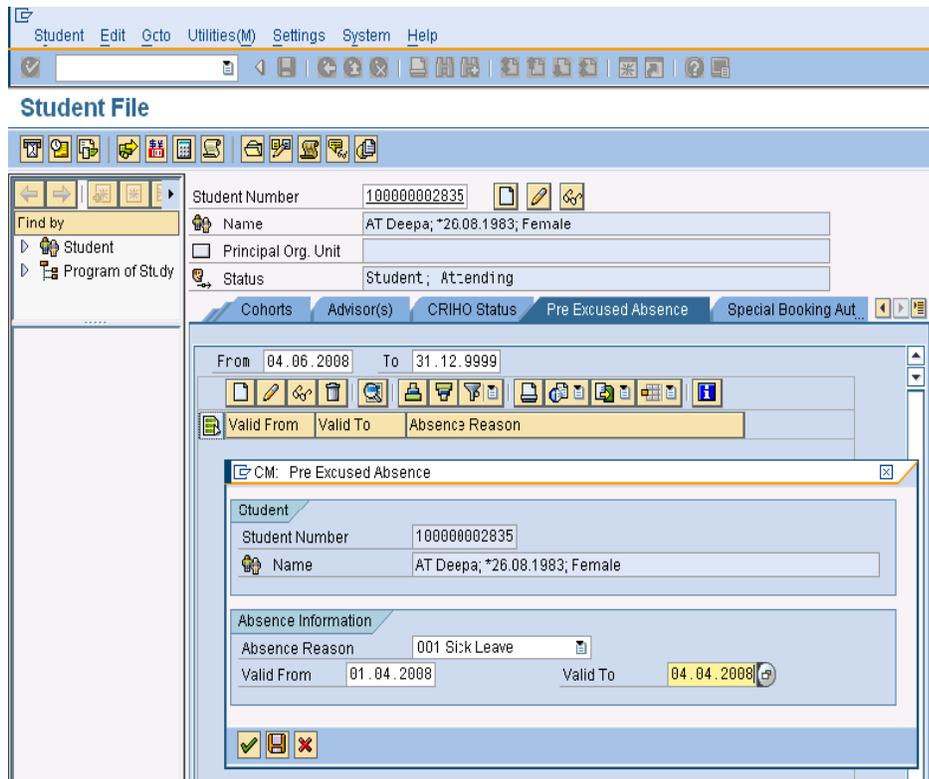## 1.2. Steps for creating a pre-excused absence

1. Go to the relevant student file and select the tab for Pre-Excused Absence.
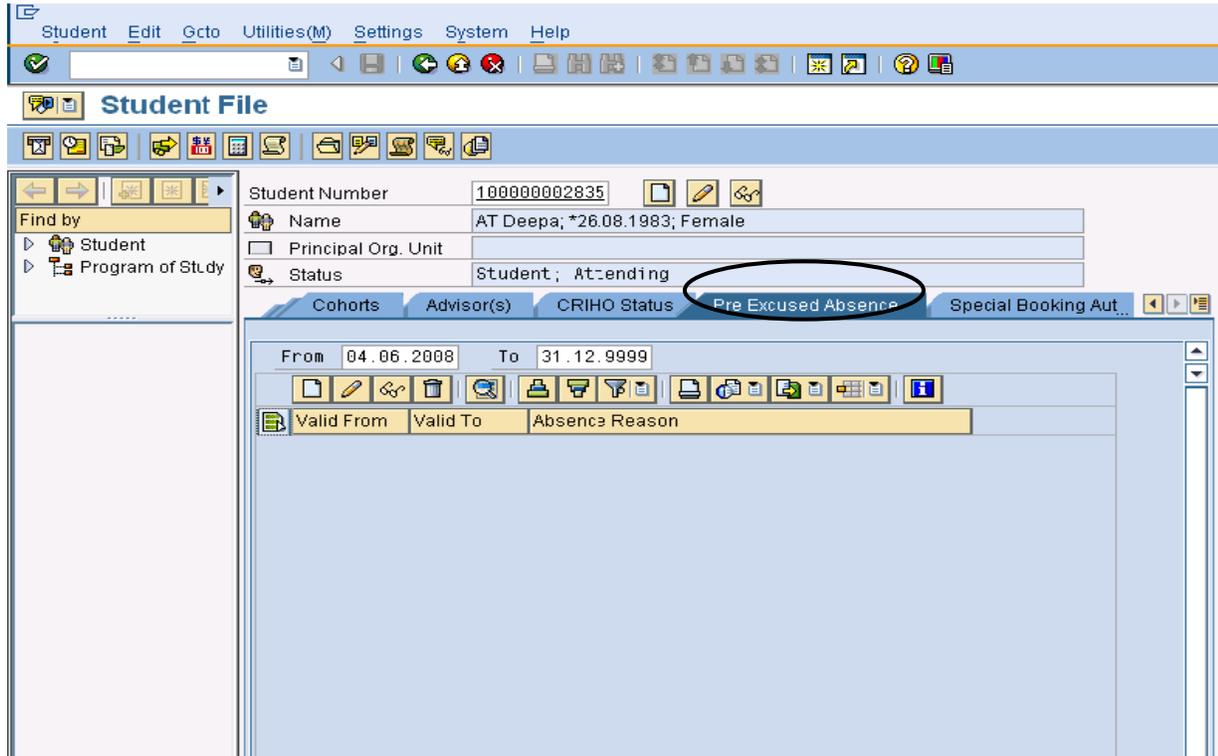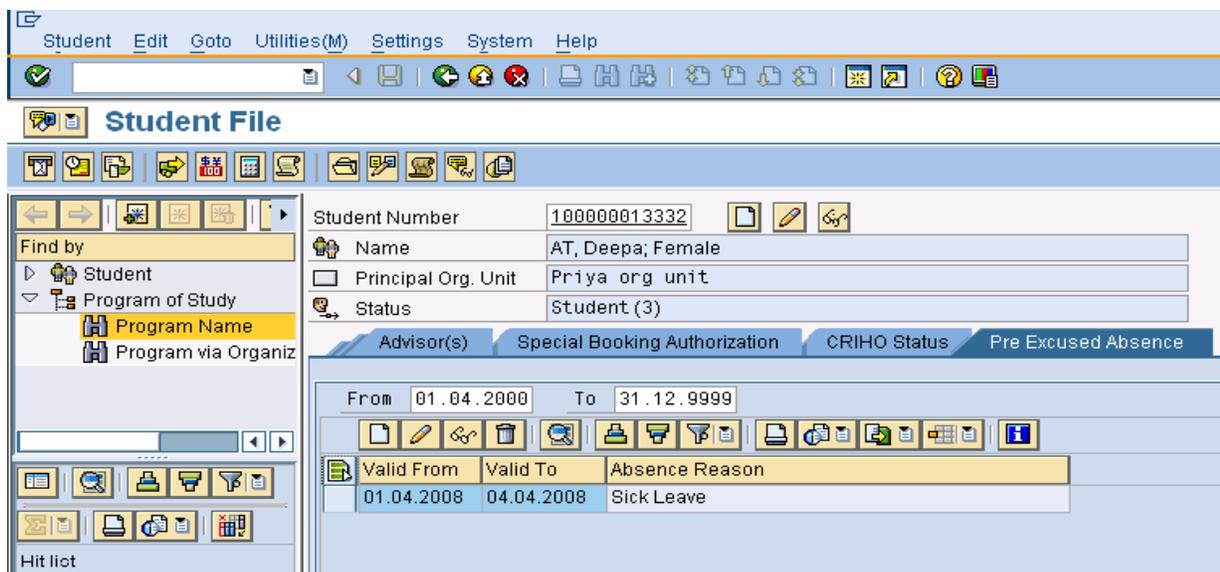

2. Now click the *Create* button.
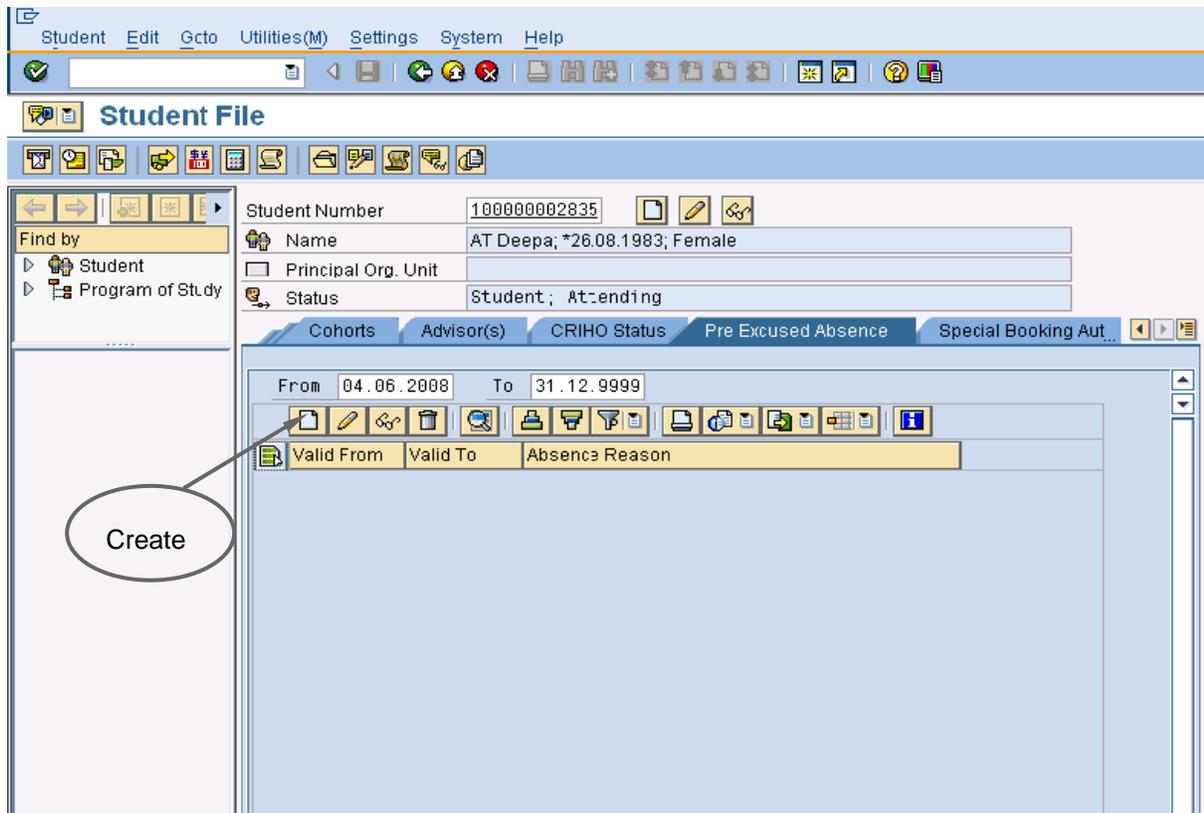
3. Create a record by selecting the absence reason. Enter the time period for which the student will be absent. Save the record.
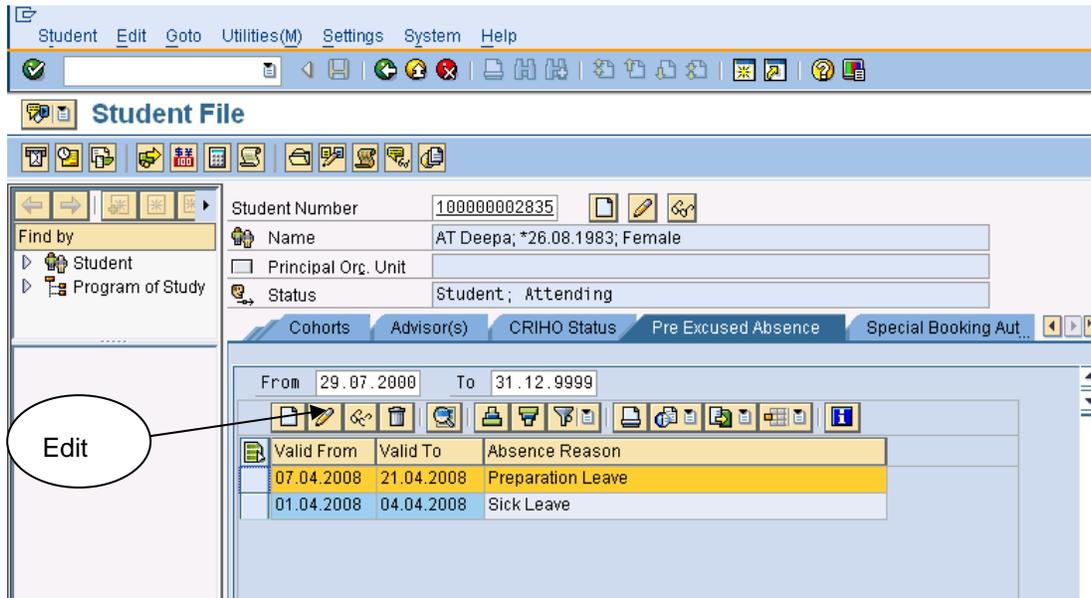

4. You can see the created record under the *Pre-Excused Absence* tab as shown below.

5. You can also edit or delete existing records if needed. For example, if there is already a record for a time period and you cannot create another record for the same time period, you can update the existing record.

To update a record, select the record to be edited as shown below

Choose the *Edit* button and change the pre-excused reason or the date. *Save* the record.
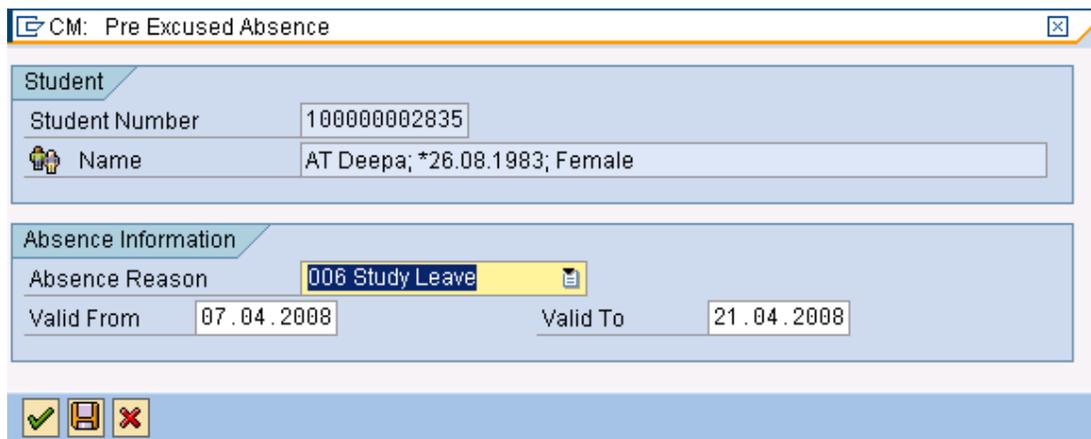
If attendance is already maintained for some of the event occurrences for the date range specified in the pre-excused absence, a maintenance screen box showing this appears while you are updating the relevant record. The maintenance screen box contains an SAP List Viewer (ALV) showing the following information:

- Module Name
- Event Package
- Event Name
- Event Date
- Event Time
- Absence Reason Old
- Absence Reason New
- Attendance Completed Flag

The system only updates those event occurrences selected by you in the maintenance screen box and it creates activity documents.
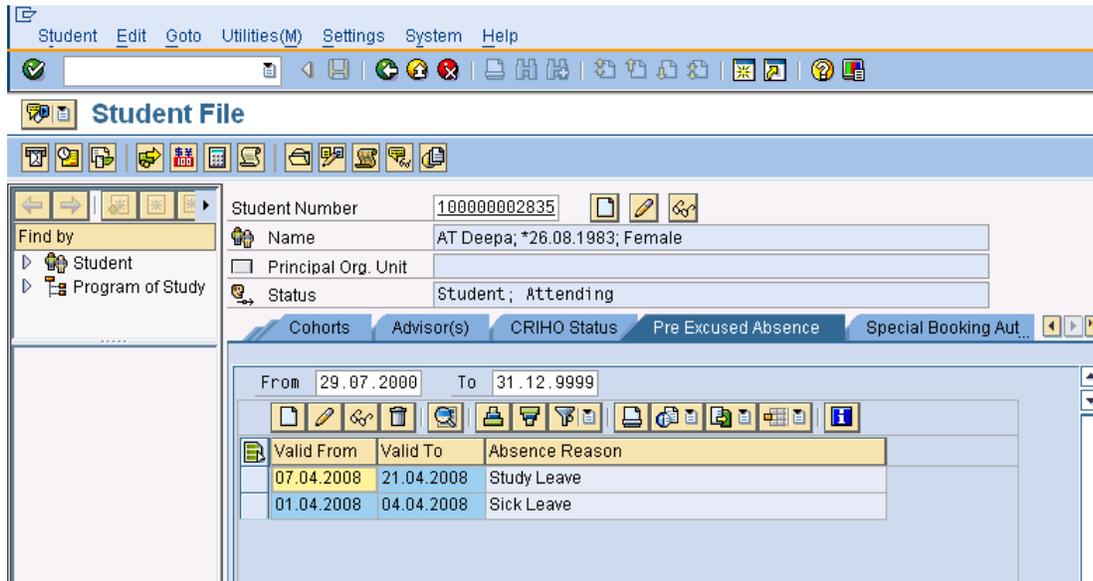

The selected records are displayed with the new pre-excused absence reason as shown below.

1.3 RFC's

RFCs are offered to create, change, read, and delete pre-excused absences. The RFCs have the following interface:

Absence reason and a validity period including time and date

Use the following RFCs:

- **HRIQ_ATPREEXCABS_CREATE_RFC -** to create pre-excused absences.
- **HRIQ_ATPREEXCABS_CHANGE_RFC -** to change pre-excused absences.
- **HRIQ_ATPREEXCABS_GET -** to get pre-excused absences.
- **HRIQ_ATPREEXCABS_DELETE_RFC -** to delete pre-excused absences.

The function modules given above do not return any message if the function is executed successfully.

In the event of failure, the system displays an internal table with error messages.

2. Maintaining Attendance

2.1. General features of Attendance Maintenance

A web-based user interface (UI) is available where instructors can maintain attendances as well as absences for each occurrence of an event. You need to set up the following steps to start maintaining attendance.

1. Link a person with your system user name.
    a) Go to transaction **PA30** to create a person.
    b) In *Direct Selection*, type Communication as the Infotype, see below, and select the *Create* button.

c) Select sub type **0001** in the maintenance screen box shown and specify your user name as shown below. Go to the *Save* button to save entries.

2. Now create events with class occurrences where you (having a person associated with your system user name) are the instructor. Note that the event types of these events need to have the *Att. Compulsory* checkbox selected. This is maintained in the *Category* infotype of the event type.
3. Book these events for certain students. These events will be displayed in the attendance tracking Web UI

This Web UI should be used only to enter the absence of the student for a particular class. If no reason is specified, the student is considered as present for that particular class. Only absences of the student are stored in the database.

If the class is canceled for any reason, the students who are supposed to attend the class are marked with the particular class cancellation reason. You maintain class cancellation reasons in Customizing (see 4.1)

Only one reason at a time can be marked as a class cancellation reason. In addition, the reason must be of type 'Excused absence'.

For each occurrence of an event, class attendance should only be maintained if the *Attendance Required* indicator is set for the event type. This can be maintained in the *Category* infotype of the event type by selecting the *Att. Compulsory* checkbox. Attendance can also be switched on globally using a general Customizing setting given below.

Go to the transaction SPRO -> *Student Lifecycle Management -> Processes in Student Lifecycle Management -> Attendance Tracking -> Switch on attendance Tracking globally*. Set the setting value to 'X'.

If the setting value is set to 'X', you do not need to select the *Att. Compulsory* checkbox in the event type.

This Customizing enables you to maintain the class attendance for all the events irrespective of whether the *Att. Compulsory* check box is checked or not. Attendance can be maintained only for students for whom attendance tracking is relevant and they would appear on the maintenance screen. By default, attendance is maintained for all students. You can make students irrelevant for attendance tracking by implementing the Business Add-In (BAdI) HRPIQ00ATSTUDENT_ATTEND. To implement this BAdI, follow the Customizing path given below.

Go to transaction SPRO -> *Student Lifecycle Management -> Processes in Student Lifecycle Management -> Attendance Tracking -> Business Add-Ins (BAdIs) -> BAdI: Check Student's Relevance for Attendance*.

If attendance tracking is not relevant for the student, parameter C_ISNOTRELEVANT must be marked as 'X' for the student.

Each student's attendance is recorded every time the class occurs. If a student is absent for a class, an absence reason is specified. When the student is present, no data is maintained, but the status for the class attendance indicates that data is completed.
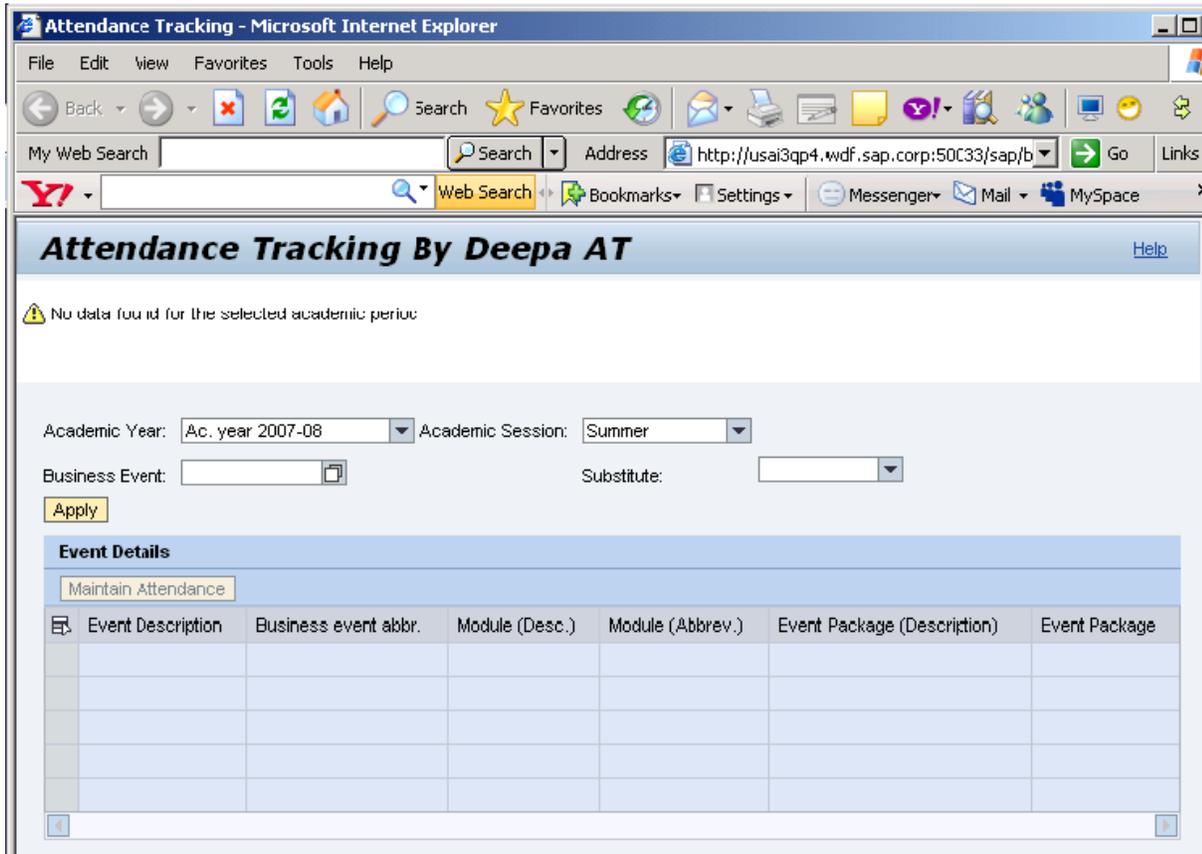
Steps for maintaining attendance on the *Attendance Tracking* maintenance screen:
1. Go to transaction SE80 and enter the package name PMIQ_EXT_IAP.
2. Go to PMIQ_EXT_IAP -> Web Dynpro -> Application Configurations ->

   PIQAC_ATTENDANCE_TRACKING.

3. Right click **PIQAC_ATTENDANCE_TRACKING** and choose *Test*.

   The system displays the Web UI as shown below.

4. Select an academic year and session and choose the *Apply* button. If you are a substitute for an instructor, select that instructor's user name from the dropdown list, and choose the *Apply* button. A list of events is displayed for which you are either an instructor or a substitute, as shown below.
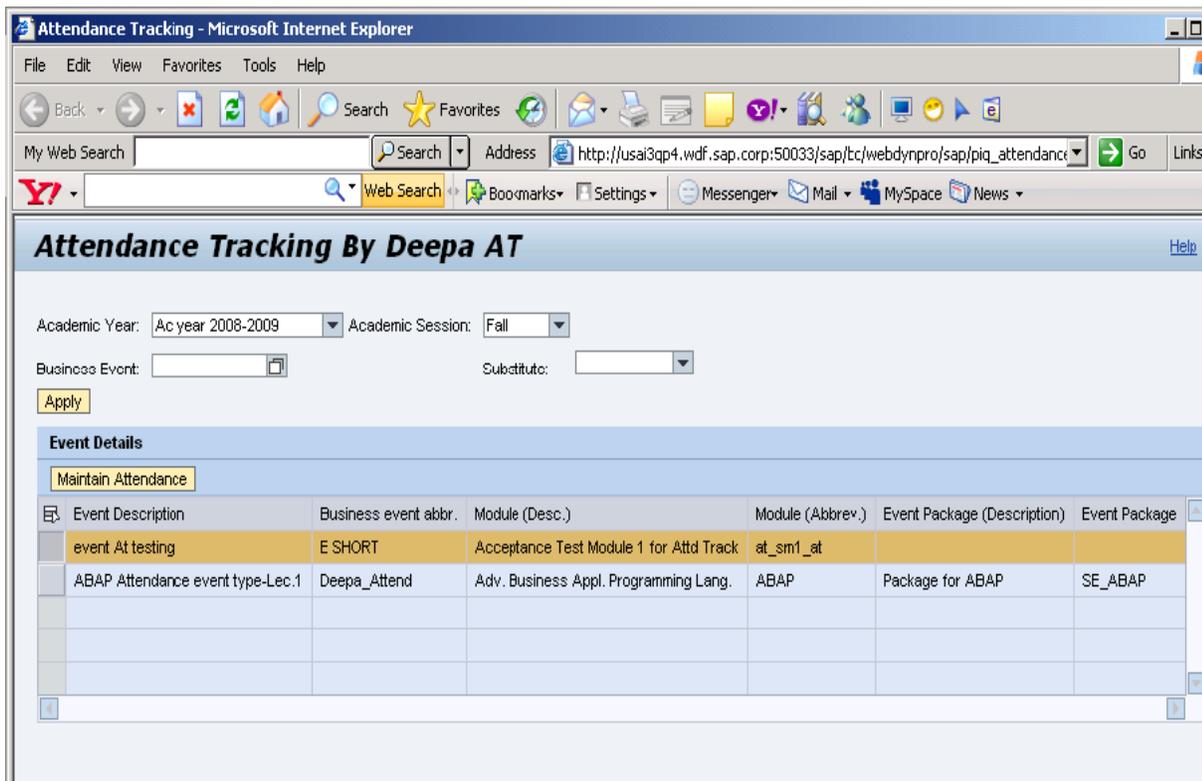
5. Select the event from the list for which you want to maintain attendance and choose the *Maintain Attendance* button. The maintenance screen shown below appears then.

- The header shows the following event information:
  - Module Name
  - Module Abbreviation
  - Event Name
  - Event Type
  - Begin Date
  - End Date
  - Rooms
  - Instructor Name.

- All the dates where the event is scheduled are marked with different colors in the calendar.

  - **Green** - All event occurrences for which the *Class occurrence attendance completed* checkbox is selected (meaning maintenance of attendance is completed for that class).

  - **Red** - All past event occurrences (before the system date) for which the *Class occurrence attendance completed* checkbox is not selected (meaning attendance is not complete for one or more of the classes on the same date).

  - **Yellow** - For events that occur in the future (after the system date) for which *Class occurrence attendance completed* checkbox is not selected (meaning the attendance was completed for classes scheduled for future dates).

6. Now select a date from the calendar on which you need to maintain attendance.

   a) If there is more than one occurrence on the same day, a radio button is displayed for each event occurrence. You can view and maintain attendance details of the event occurrence by selecting the radio button. For example: if there are two occurrences on the same day, one from 8 am to 9 am and one from 11 am to 12 pm, you see two radio buttons as shown below.
   b) Class details, such as class date, time, and teachers are displayed.
   c) A list of students who booked the event is displayed. If a student has already requested a pre-excused absence and this has been maintained by the registrar, this absence reason on the selected date would be displayed in non-editable mode, as shown below.

7. Check the *Class occurrence attendance completed* checkbox to complete class attendance for the class on the selected date. If there is more than one occurrence on the same day, you need to select each of the radio buttons and then check the *Class occurrence attendance completed* checkbox to complete the attendance.
8. Display *Canceled Bookings*

   The *Canceled Bookings* button displays the list of all students who canceled their bookings for this event. You cannot maintain attendance for these students. Select a date and then click on the *Canceled Bookings* button and choose the *Show* option. The students with the canceled bookings are displayed in the list with the booking status *Booking canceled* as shown below.

   If you click *Canceled Bookings* and select *Hide*, the list of students with canceled bookings is no longer displayed.

	April 2008	May 2008	June 2008	

	Total Exc.	Total Unex.	Total Tardies	Note Status	Event Date	Class Duration	Booking Status
	7			📝	15.04.2008	10:00:00 - 11:00:00	Booked
	6		1	📝	15.04.2008	10:00:00 - 11:00:00	Booked
	7			📝	15.04.2008	10:00:00 - 11:00:00	Booked
	5				15.04.2008	10:00:00 - 11:00:00	Booking Cancelled
	1	4			15.04.2008	10:00:00 - 11:00:00	Booking Cancelled

9. Notes

With the note feature instructors can maintain notes for a particular student. On the list which displays the students registered for an event, you see buttons for creating, changing, and displaying notes. These buttons are enabled only when a student is selected from the list. The *Create a note* button is disabled if a note already exists for a student. In this case, you can only change or display the note as shown below.

You create a note by selecting a student and clicking the *Create Note* button. A dialog box appears with student name and event name as shown below.

Student Note ▫ ✕

Note Context

Student Name	Khatri, vikram
Event Name	ABAP Attenda
Note Type	Attendance Note

Text

Short Title ABAP Attenda

Comments

Save   Cancel

You can enter comments for this student for the given event and then save the note. Once you have saved the comments, it cannot be edited. The 'Short Title' here displays the Event name.

9.1 Change a note

Select a student and click the *Create Note* button. A dialog box will appear, showing previous comments from the instructor. You can enter comments in the appropriate space, as shown below, then save the note.

Student Note ▫ ✕

Note Context

Student Name	Khatri, vikram
Event Name	ABAP Attenda
Note Type	Attendance Note

Text

Short Title	ABAP Attenda
Previous Comments	Last Changed by KAMALASANAN On 21.07.2008 / 13:58:49 :
	Vikram did not submit the assignment on time
Comments	Project was excellent

Save   Cancel

9.2 Display a note

Select a student and click the *Display Note* button. A dialog box appears (see below) showing previous comments along with the person's name who made the change and the date and time of the change.
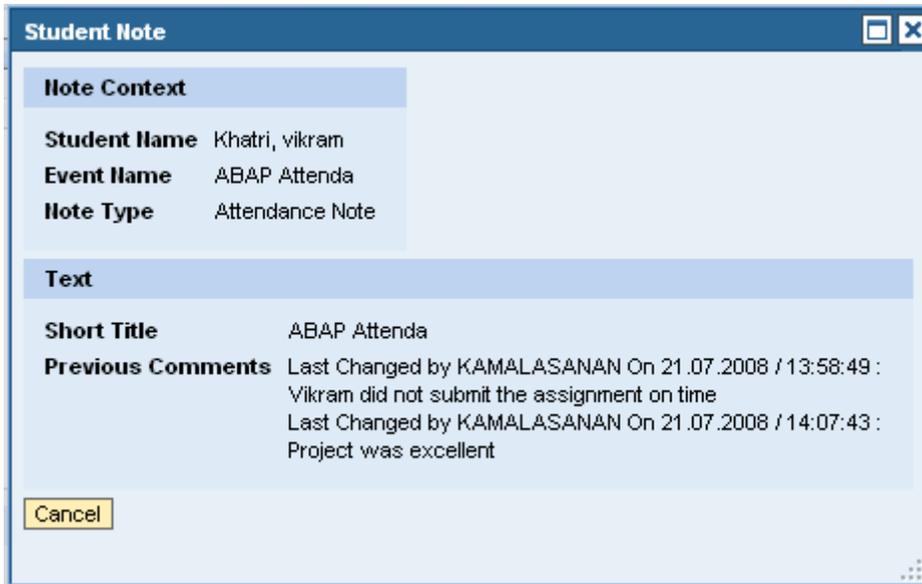
10. You can also create absence reasons for students, but this should be done before completing the attendance for the selected date. For each student you can maintain an absence (excused or unexcused) or a tardy reason. You can either select an absence or a tardy reason for a student for a selected class occurrence from the list box as shown below.

11. A student can withdraw from an event and you can specify the date for which this becomes valid. For example: the student will not attend classes from a particular day on until the end of the event. You

can maintain the student's reason for withdrawal and subsequently all dates after the specified one will be marked with the withdrawal reason.

12. If you want to record the absence reason for all students in case a class is canceled, you maintain this information by selecting class cancellation as reason. This will then be entered for all the relevant students, except those who had already withdrawn from the class.

13. If you select a student from the list and access the *Attendance Overview*, a list is displayed showing that student's complete attendance for an event, along with details like attendance completed or not for that day, number of excused absences, number of unexcused absences, and number of absences due to tardiness.

    You can also select the withdrawal reason from this overview screen. All occurrences thereafter are then marked with withdrawal reasons, but you need to save the data after making the changes. If the student had already withdrawn from the classes, the list box with the withdrawal reason in the *Attendance Overview* screen is disabled, as shown below.

Attendance Overview

Student Name	K, Deepa	Event Name	event1 for
No. of Unexcused Absences	0	No. of Excused Absences	182
No. of Tardies	1	Event Booking Status	Booked
Withdrawal Reason			

Attendance Overview

	Event Date	Start Time	End Time	Absence Reason	Withdrawal Reason	Tardy Reason	Attendance Completed	Pre Excused
	19.05.2008	08:10:00	08:15:00	Casual Leave ▼				
	26.05.2008	08:10:00	08:15:00			Tardy reason1 ▼		
	02.06.2008	08:10:00	08:15:00				X	
	09.06.2008	08:10:00	08:15:00				X	
	16.06.2008	08:10:00	08:15:00		Withdrawal		X	
	23.06.2008	08:10:00	08:15:00		Withdrawal		X	
	30.06.2008	08:10:00	08:15:00		Withdrawal		X	
	07.07.2008	08:10:00	08:15:00		Withdrawal ▼			
	14.07.2008	08:10:00	08:15:00		Withdrawal ▼			
	21.07.2008	08:10:00	08:15:00		Withdrawal ▼			

Save | Cancel

2.2 Attendance Maintenance by Substitutes

Substitutes who are replacing another instructor need to be able to maintain attendance on behalf of that person. The following steps describe how substitutes maintain attendance for those events.

2.2.1 Maintain Substitute

1. To activate the substitute feature the relevant customizing entry must be maintained (see section 4.10 Maintain Substitute)

> a) If the setting value is "*", all the users for whom you are a substitute are shown in the Web UI.
> b) If the setting value is 'ATTR' all the users for whom you are a substitute with the profile that has the task 'ATTR' are shown in the Web UI.
> c) If setting value is " " then the substitute feature is inactive.

2. To enter another instructor as substitute, the following prerequisites must be fullfilled:

> a) Link a person P with his or her user name. Follow Step 1 above to assign the user to the person.
> b) Go to transaction PIQ_MAINT_SUBSTITUTE, select the relevant user name, and click the *Create Substitute* button or press F5.

Create

c) Select your user name as a substitute and specify a validity period for the substitution. Select the profile for attendance tracking and check the *Substitution Active* checkbox as shown below. Then save the data.
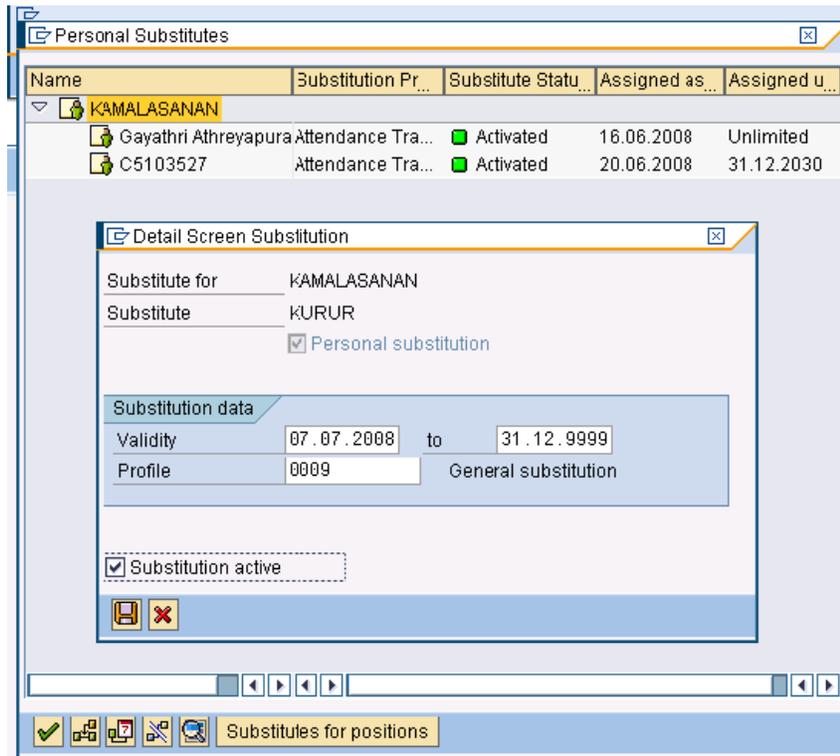
Note: During this, you have the option of specifying a profile. If you do not specify a profile for any assignment, all substitutions are considered. If you specify a profile with the task 'ATTR' for Attendance Tracking, only those profiles are considered.

d) Profiles are maintained in Customizing (see section 4.8 create profile for substitute)

e) Create an event with a schedule where the user (having a person associated to his or her system user name) is the instructor. Note that the event type of these events needs to have the *Att. Compulsory* checkbox checked. This can be maintained in the *Category* infotype of the event type.

f) Book these events for the students required. These events are then displayed in the attendance tracking Web UI

2.2.2 RFCs

RFCs are offered to create, change, and read attendance:

- **HRIQ_AT_ATTENDANCE_CREATE_RFC -** to create attendance.
- **HRIQ_AT_EVENTATTEND_CHANGE_RF** - to change attendance.
- **HRIQ_AT_EVENTATTEND_GET_RFC -** to retrieve pre-excused absences.

These function modules do not return any message if the function is executed successfully. In the event of failure, it returns an internal table with error messages.

3. Calculating Appraisals

Regular course attendance can represent a requirement that students have to fulfill in order to pass a course (module). If a student has low attendance, s/he could receive a grade which leads to failing a course.

After the attendance for all the events has been maintained, you can appraise students based on the attendance result. You can determine the minimum attendance required for the student to pass the module and implement a method on how to calculate the attendance of the student.

Individual attendance data is stored on the database for each event occurrence. To make it available for appraisal, a calculation rule is performed and the result is transferred to a particular appraisal type.

If there is more than one event in the module where attendance is required, the attendance is aggregated into one appraisal. The attendance can only be transferred if all occurrences were maintained in full. You can transfer data from the attendance tracking to appraisal via transaction PIQSMFU and calculate the appraisal data there.

When individual attendance data is transferred from an event to the module appraisal, an attendance calculation rule must be derived. The attendance calculation rule, attendance scale, and threshold value are stored in a (new) Infotype 1723 - *Attendance Calc. Rules*. This Infotype can be used for the *Module* and *Organization* object types, as shown below.

1. Define a calculation rule

Every module might have a different way of calculating attendance and different thresholds. To define the calculation rule, threshold value and scale for your module, follow the following steps:
a) You can create your own calculation rule. To do this, go to transaction SM30, enter table/view T7PIQATCALCRULE, and maintain the new calculation rule in this table.
b) Assign the calculation rule to your module or to the organization unit offering the module. Go to transaction PP01. Maintain Infotype *Attendance Calc. Rules* (1723). You need to specify both the threshold value and the scale as shown in the figure below.

2. Derive the calculation rule for a module

a) Customers can define their own implementation for deriving the calculation rules for a module. Otherwise, the system calls a default implementation. This default implementation derives the calculation rule from Info type 1723 of the module. If 1723 is not maintained at module level, it reads Infotype 1723 from the organization offering the module

Attendance calculation rules are defined in IMG (see section 5.2 Define Attendance calculation rules)

It is necessary to define calculation rules, which are later used to transfer data to the appraisal. SAP does not deliver calculation rules, just sample coding which customers can use for their own implementation.

In the sample coding, the number of attended events is divided by the number of event occurrences, and compared with the threshold value. If the calculated value is lower than the threshold, the grade is set to *Failed.* Otherwise it is set to *Passed.*

3. Define the implementation for the calculation rule

a) You need to implement BAdI HRPIQ00AT_ST_ATTEND_CALC. This BAdI is filter dependent and the filters are the calculation rules defined in table T7PIQATCALCRULE. You need to have an implementation with the filter as your calculation rule.

The BAdI is accessed in IMG (see 5.3 Set up Derivation for Attendance Calculation Rule)

4. Create appraisal type

After creating the calculation rule, you need to have an appraisal type for storing the attendance result. This appraisal type should be used specifically for the attendance result. To create appraisal types, follow the following steps in Customizing (see 4.5 Define Appraisal Type for Attendance):
a) Define appraisal types
b) Specify which appraisal type you are using for holding the attendance result

5. Define IO Semantics (4.3 Define IO Semantics for Attendance Tracking)
6. Set up new appraisal template in Customizing (see 4.5 Define Appraisal Type for Attendance)

a) The appraisal template must contain an appraisal type (maintained in the above customizing) that is used to hold the attendance result. It must be assigned directly below the top result, otherwise the calculation does not work.
b) Assign the key figure GCAA to the top appraisal. This key figure evaluates the appraisal result. In the appraisal template, no weighting needs to be assigned to the appraisal type being used for attendance.

7. Assign the Appraisal template to your module. Go to transaction PP01 and maintain the Appraisal template in Infotype *Evaluation* as shown below.

If the student fails the attendance requirement, the top appraisal can be set to a special failed grade specifying that the student has failed the module due to low attendance.

The special grade symbol is maintained in customizing.

a) Go to IMG (see *4.4 Define Failed Grade Symbol for Attendance*)

b) You need to implement the BAdI to ensure that the system accepts the grade symbol, which is not part of the specified scale. Go to chapter 4.4 Define Failed Grade Symbol for Attendance.

Follow the steps below to calculate the appraisal:

1. Go to the transaction PIQSMFU. Enter your module name, academic year, and session and click *Find Students* as shown below.

2. On the right side, the appraisal template is displayed. Select the top appraisal.

3. Select the student for whom you have maintained the attendance. Click the *Calculate* button.

If the sub appraisal result relevant for attendance is:

- o **Failed**, the top appraisal should be set to the special grade symbol.

- o **Passed**, the top appraisal should **not** consider attendance, but should consider the rest of the appraisal and calculate the result based on that.

8. Last Day of Attendance

In transaction PIQSMFU a new field called *last day of attendance* has been added to the ALV in the appraisals tab. This ALV displays the student's details along with his or her grades for the sub appraisal, as well as the top appraisal. The *last day of attendance* field is updated only for students whose attendance is completed. This could be done by calculating the top appraisal for a student.

The field is filled with the date the student attended the class for the last time. For example: If the class was scheduled from April 1, 2008, to June 30, 2008, but the last time the student attended the class was June 15, 2008, this last day of attendance will have the value 15.06.2008 during appraisal calculation.

4. Customizing

4.1 Maintain Absence Reason for students.

Different types of absence reasons can be maintained which would typically be used by a registrar or an instructor. Only one absence reason can be used as withdrawal reason and one reason can be used for class cancellation reasons. A tardy reason can never be a withdrawal reason. Follow the following customizing path to create absence reasons as shown in the figure below:

Student Lifecycle Management -> Processes in Student Lifecycle Management -> Attendance Tracking -> Define Absence and Tardy reasons

4.2 Maintain Attendance for all Events in the System

Attendance tracking can either be switched on as global setting for any events in Customizing or it can be activated on event type level. If you switch it on at the event type level, any events related to the event type become relevant for attendance tracking. Follow the customizing path as shown below:

Student Lifecycle Management -> Processes in Student Lifecycle Management -> Attendance Tracking -> Switch on attendance tracking globally.
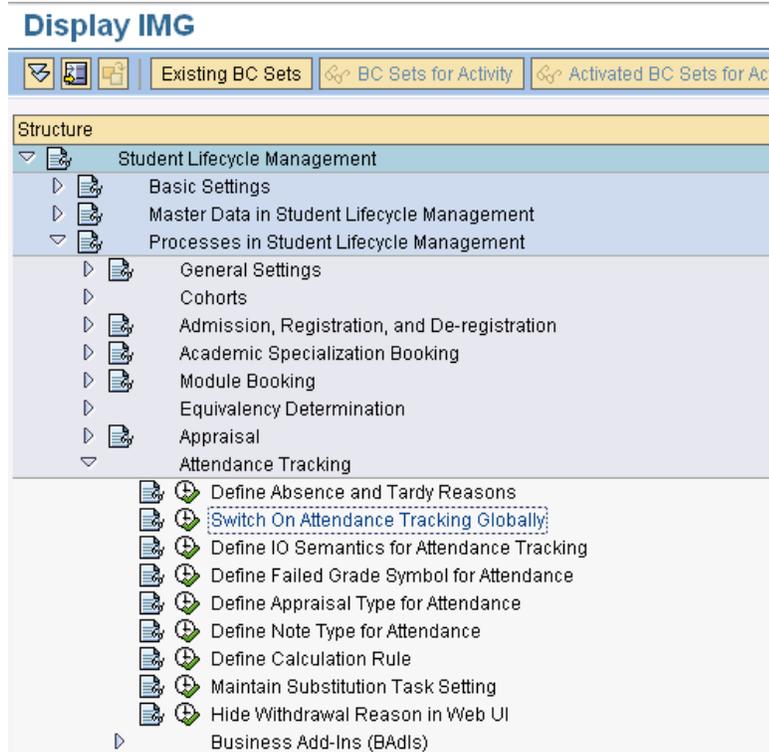
To switch on attendance tracking globally, you need to maintain the Setting Value 'X' in Customizing:
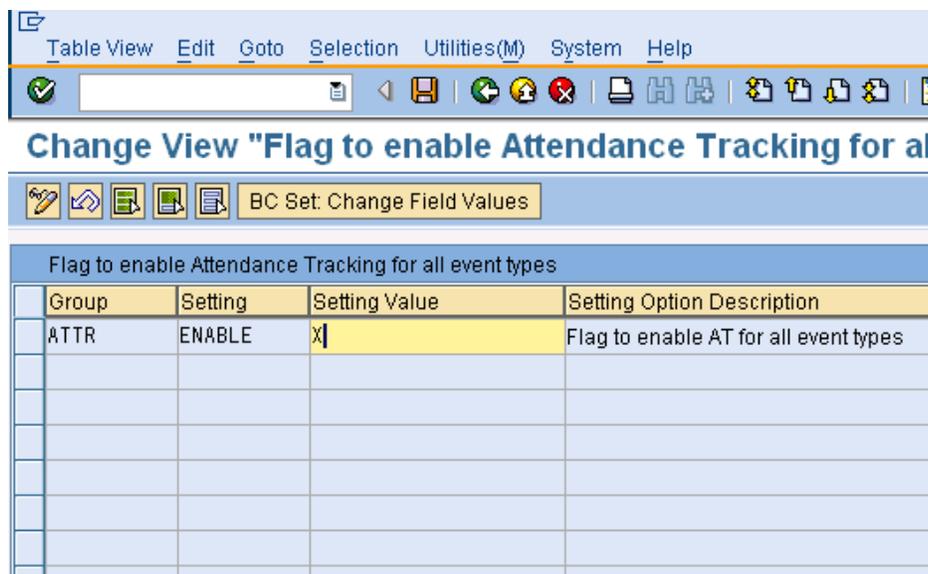
4.3 Define Input/Output Semantics for Attendance Tracking

You set up IO semantics in Customizing. The entries are later then used for your attendance appraisal type. The system maps the type to these IO semantics. The mapping is based internally on the attendance appraisal type. The IO semantics are available in the PI calculation when you calculate the overall module result to identify the attendance appraisal type. To define I/O semantics, follow the IMG path:

Student Lifecycle Management -> Master Data in Student Lifecycle Management -> Key Figures -> Define Input/Output Semantics of Key Figures
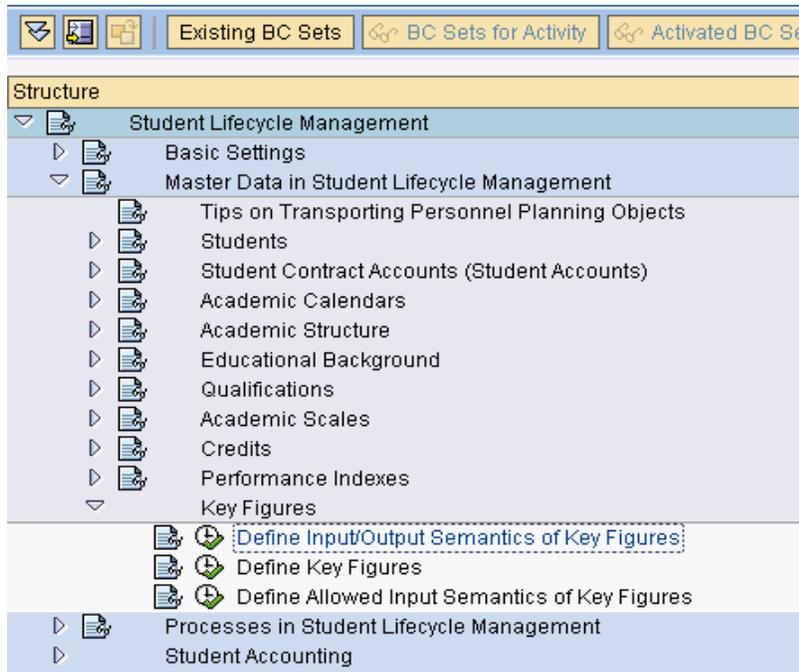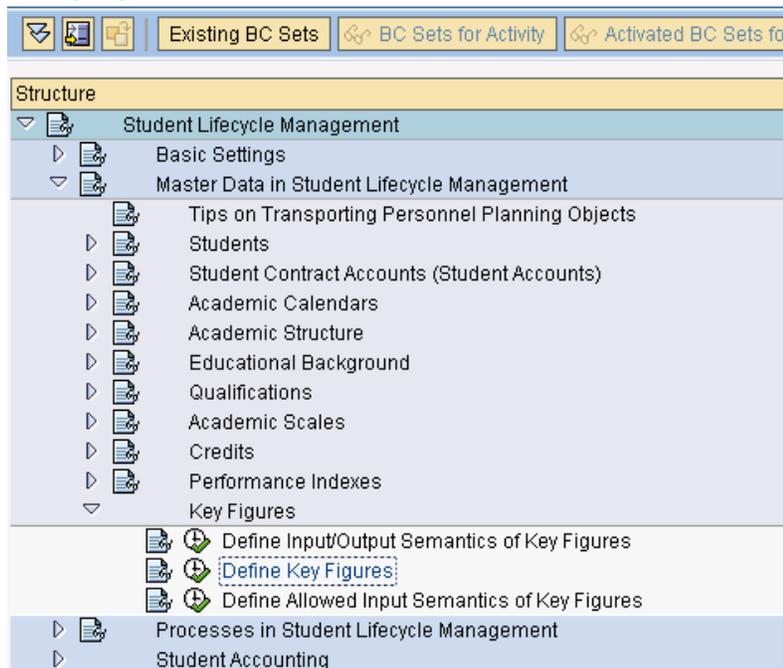

To create a key figure for attendance calculation, follow the IMG path which is shown in the figure below:

Student Lifecycle Management -> Master Data in Student Lifecycle Management -> Key Figures -> Define Key Figures
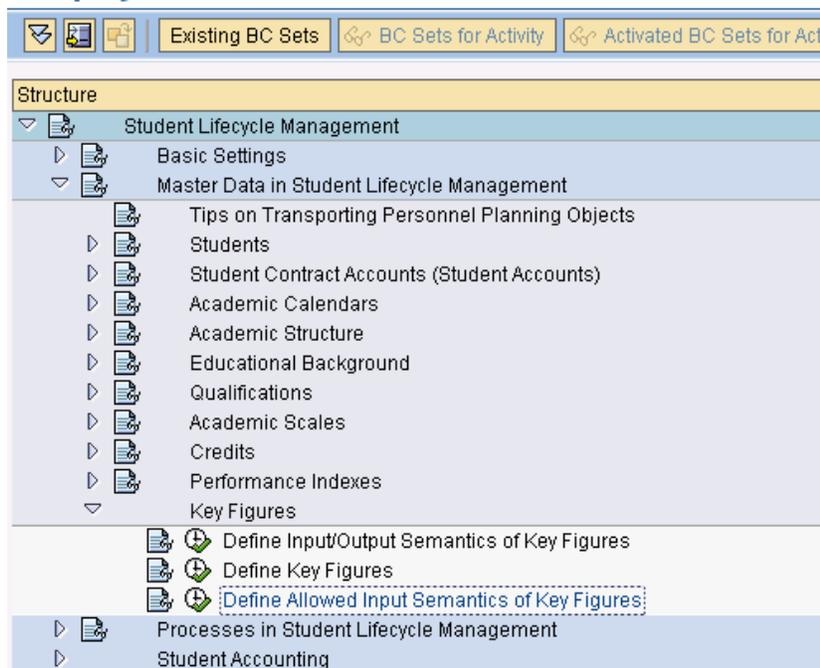
To define allowed I/O semantics of Key figures go to

Student Lifecycle Management -> Master Data in Student Lifecycle Management -> Key Figures -> Define Allowed Input Semantics of Key Figures
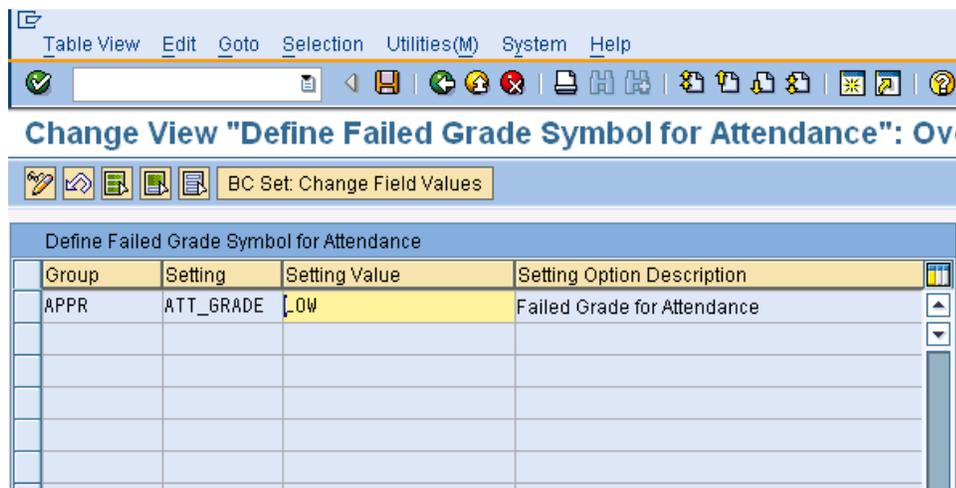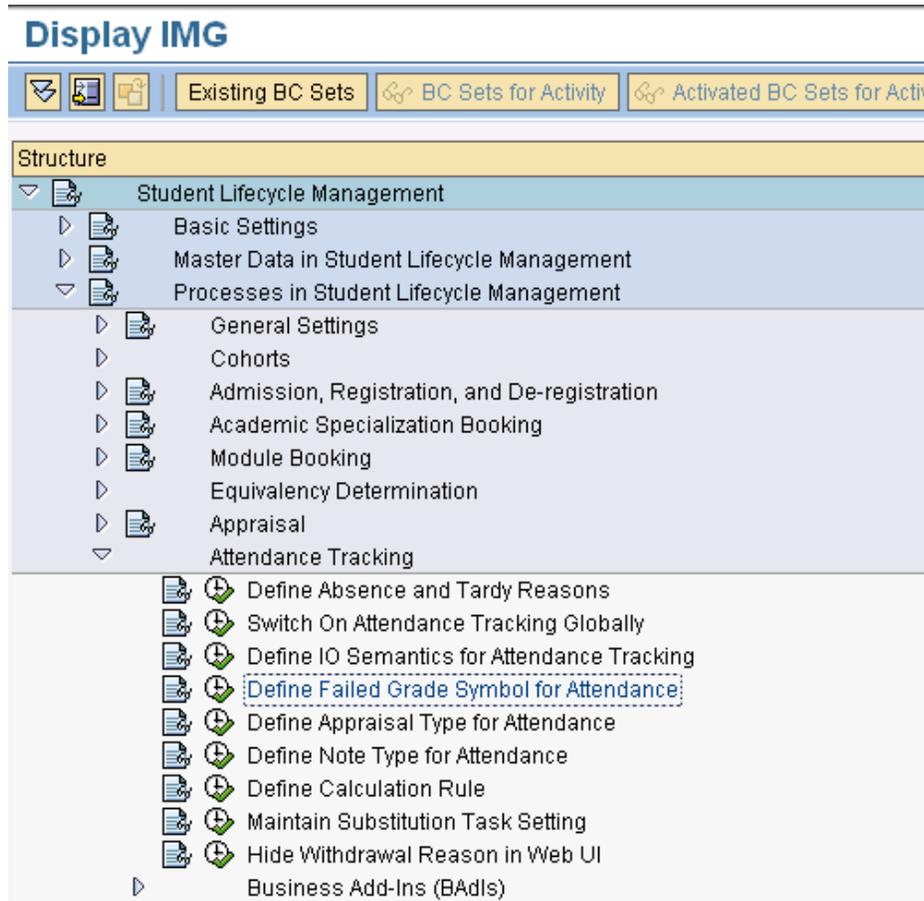

The IO semantics must be used for attendance tracking only and must exist once in the appraisal type which is used for attendance tracking.

Student Lifecycle Management -> Processes in Student Lifecycle Management-> Attendance Tracking-> Define IO Semantics for attendance tracking

Refer to the figure below.

4.4 Define Failed Grade Symbol for Attendance

When a student has failed attendance, you can set up the system in such a way that it sets a special grade in the top appraisal based on the attendance result. In this case you must maintain the relevant special grade symbol in Customizing. To define this grade symbol, follow the path:

Student Lifecycle Management -> Processes in Student Lifecycle Management-> Attendance Tracking-> Define Failed Grade Symbol for Attendance.

4.5 Define Appraisal Type for Attendance

The system performs a calculation on the individual attendance data for the events relevant for attendance. The calculated result is stored in a particular appraisal type set up for attendance tracking. This appraisal type has to be maintained in Customizing. To define the appraisal type, follow the path:

Student Lifecycle Management -> Processes in Student Lifecycle Management-> Appraisal-> Define Appraisal Types
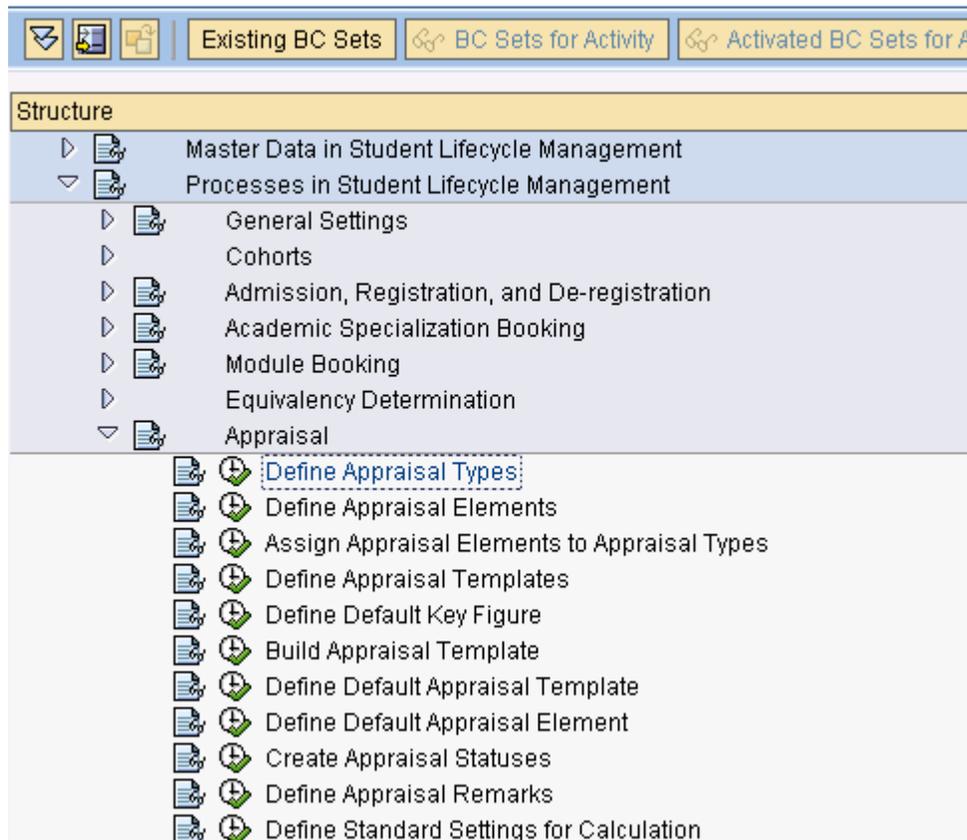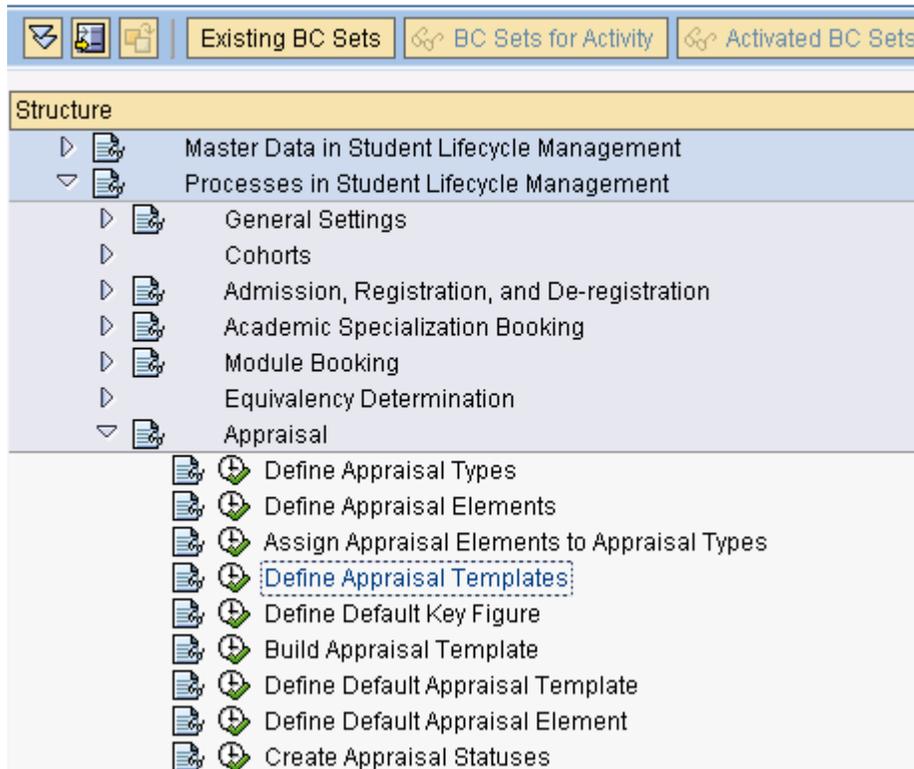

This appraisal type must be used only in the appraisal template and also has to be assigned directly below the top appraisal. To set up a new appraisal template follow the path:

Student Lifecycle Management -> Processes in Student Lifecycle Management -> Appraisal -> Define Appraisal Templates.
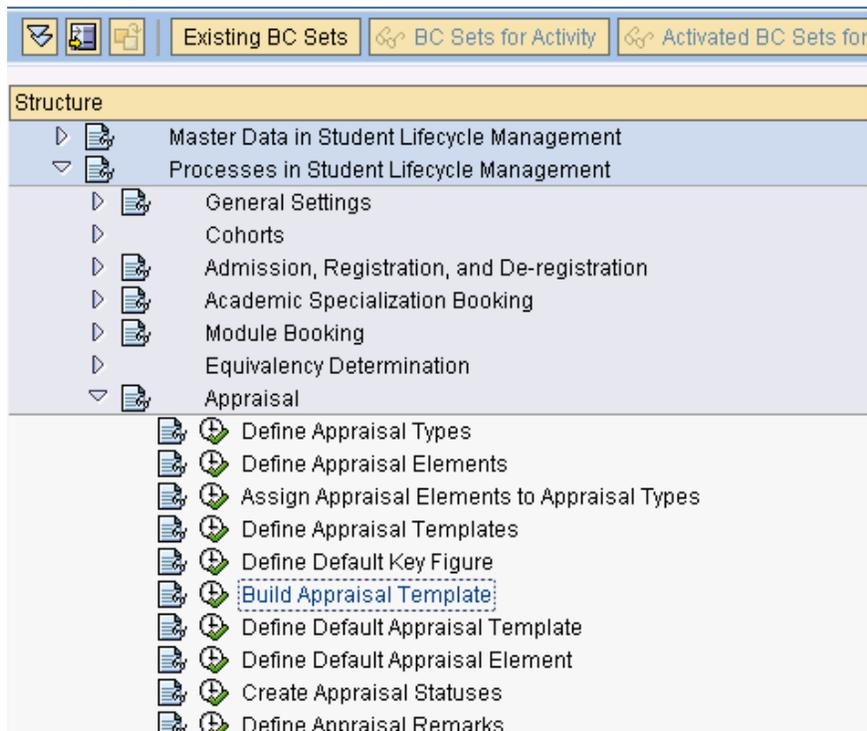
Display IMG

Existing BC Sets | BC Sets for Activity | Activated BC Sets

Structure

▷ Master Data in Student Lifecycle Management
▽ Processes in Student Lifecycle Management
  ▷ General Settings
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  ▽ Appraisal
      Define Appraisal Types
      Define Appraisal Elements
      Assign Appraisal Elements to Appraisal Types
      Define Appraisal Templates
      Define Default Key Figure
      Build Appraisal Template
      Define Default Appraisal Template
      Define Default Appraisal Element
      Create Appraisal Statuses

To build appraisal templates for the template created above, follow the path:

Student Lifecycle Management -> Processes in Student Lifecycle Management-> Appraisal-> Build Appraisal Template

Display IMG

Existing BC Sets | BC Sets for Activity | Activated BC Sets for

Structure

▷ Master Data in Student Lifecycle Management
▽ Processes in Student Lifecycle Management
  ▷ General Settings
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  ▷ Module Booking
  ▷ Equivalency Determination
  ▽ Appraisal
      Define Appraisal Types
      Define Appraisal Elements
      Assign Appraisal Elements to Appraisal Types
      Define Appraisal Templates
      Define Default Key Figure
      Build Appraisal Template
      Define Default Appraisal Template
      Define Default Appraisal Element
      Create Appraisal Statuses
   Define Appraisal Remarks

To specify which appraisal types you are using to hold the attendance result follow the path:

Student Lifecycle Management -> Processes in Student Lifecycle Management-> Attendance Tracking-> Define Appraisal Type for Attendance
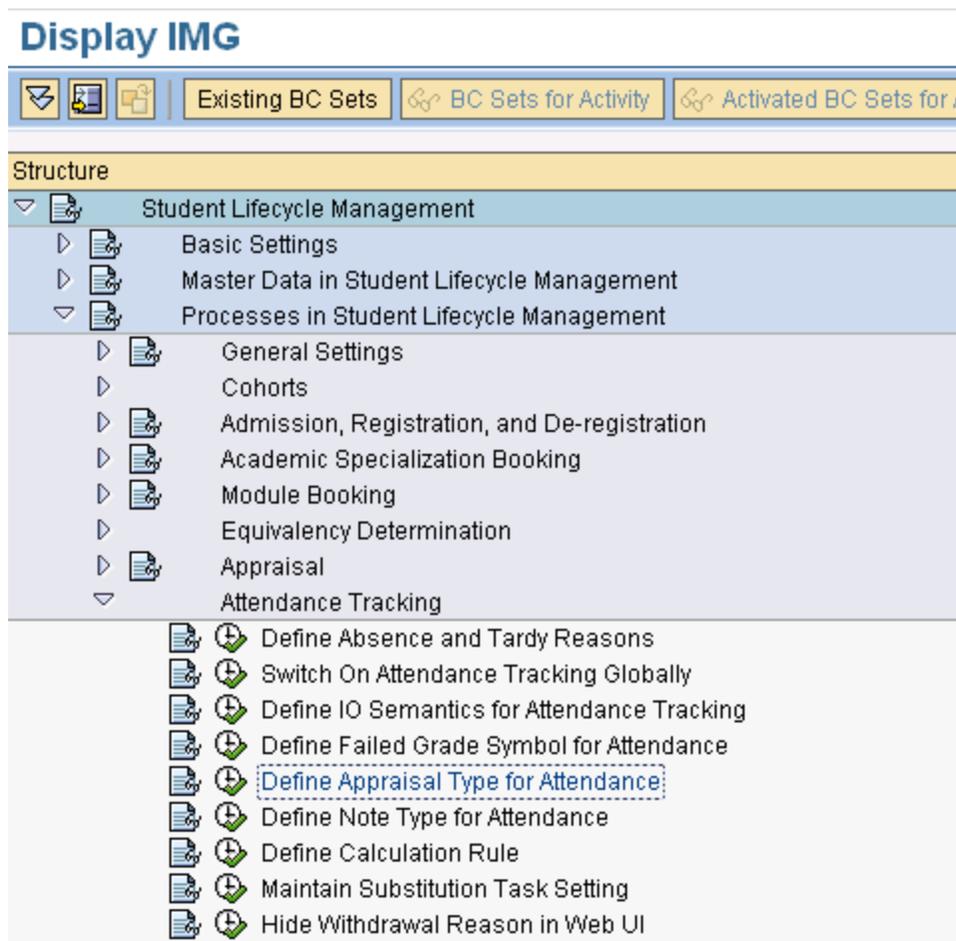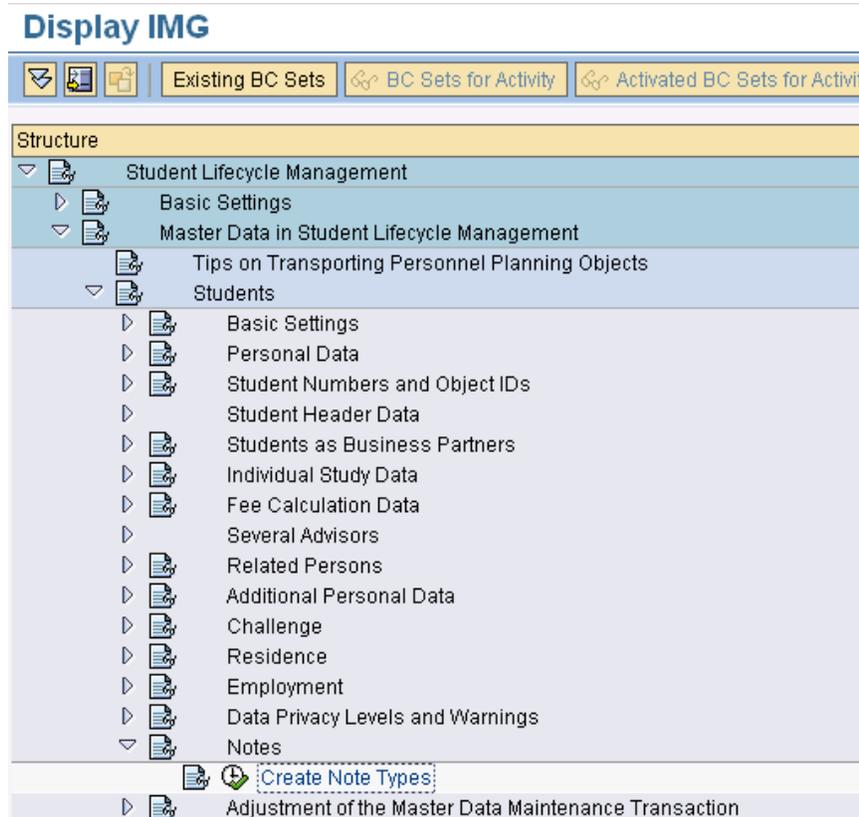

The system performs a calculation on individual attendance data for the events relevant for attendance. The calculated result is stored in this appraisal type. Enter the appraisal type that you have created above in the '*Setting Value'* field for the group 'APPR' as shown below.
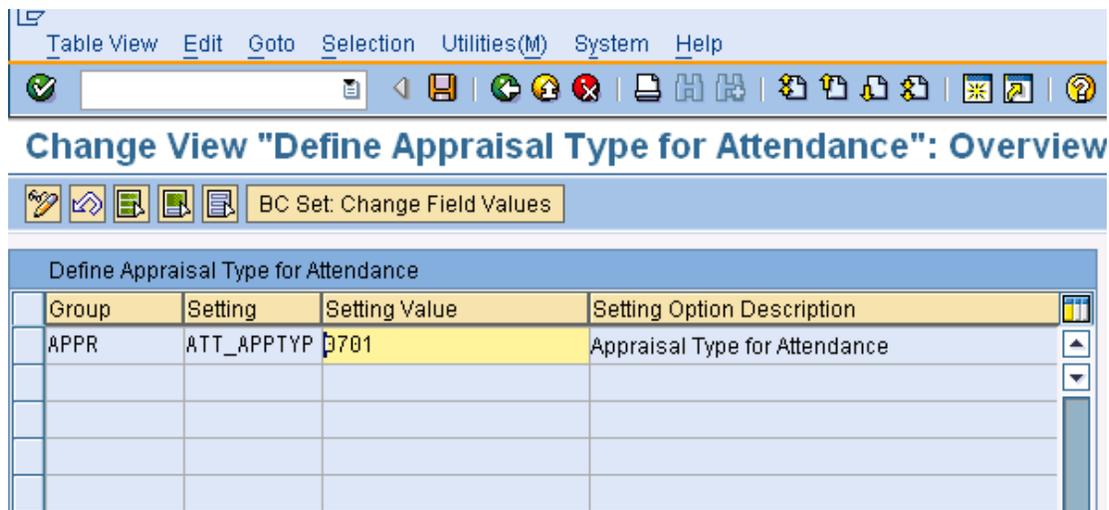
4.6 Maintain Note Type

You need to specify the note type to be used for attendance tracking. The note type you specify here should not have any note reference. To create note types, follow the path:

Student Lifecycle Management -> Master Data in Student Lifecycle Management -> Students -> Notes -> Create Note Types

Enter the note type you created above in the *Setting Value* field for the group 'ATTR' and setting 'NOTES'.
To enter this value, follow the path:

Student Lifecycle Management -> Processes in Student Lifecycle Management -> Attendance Tracking -> Define Note Type for Attendance

4.7 Maintain Task Classes

You can classify and group tasks according to your own criteria. A task can be classified when it is defined. Create a new class for attendance tracking, for example, with name 'ATTR'.

To create the class, follow the path

SAP Netweaver -> Application Server -> Business Management --> SAP Business Workflow -> Basic Settings -> Maintain task classes
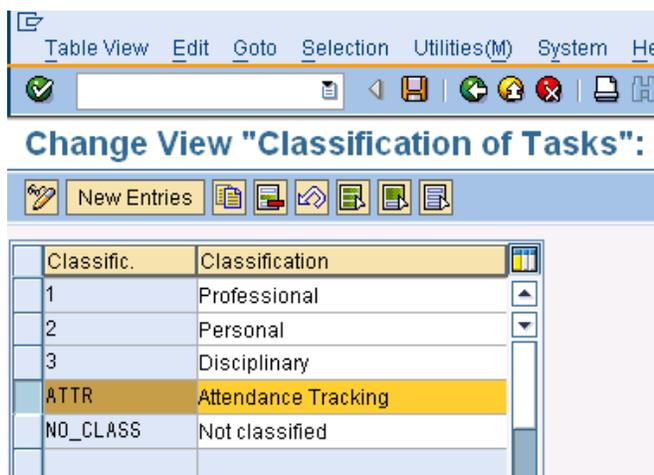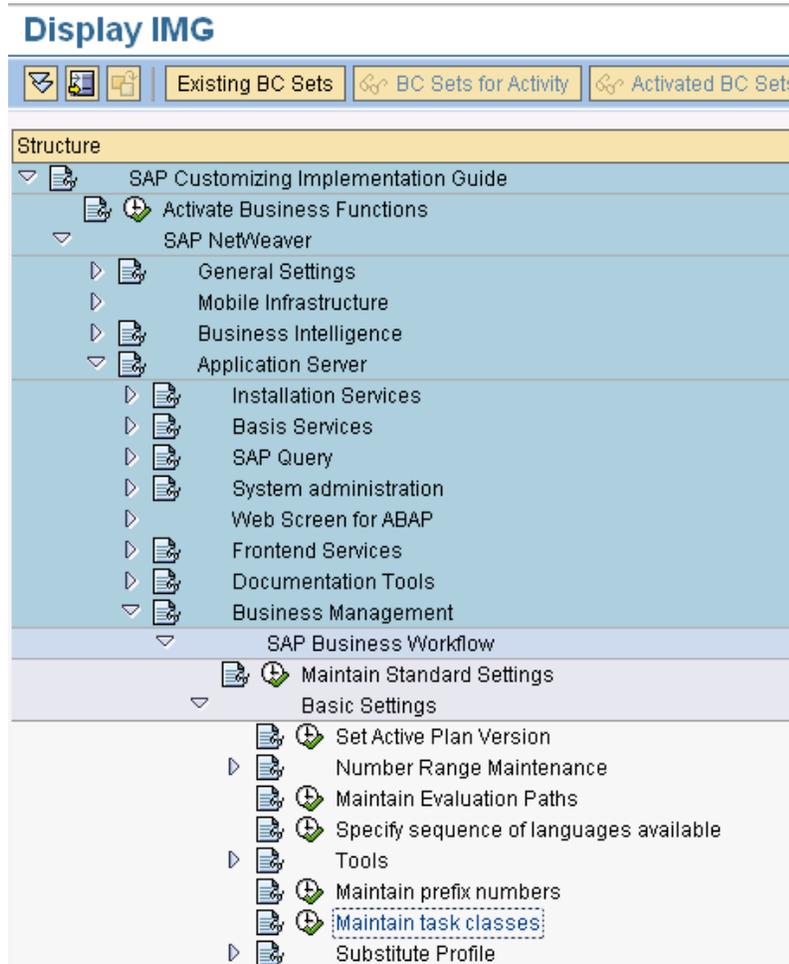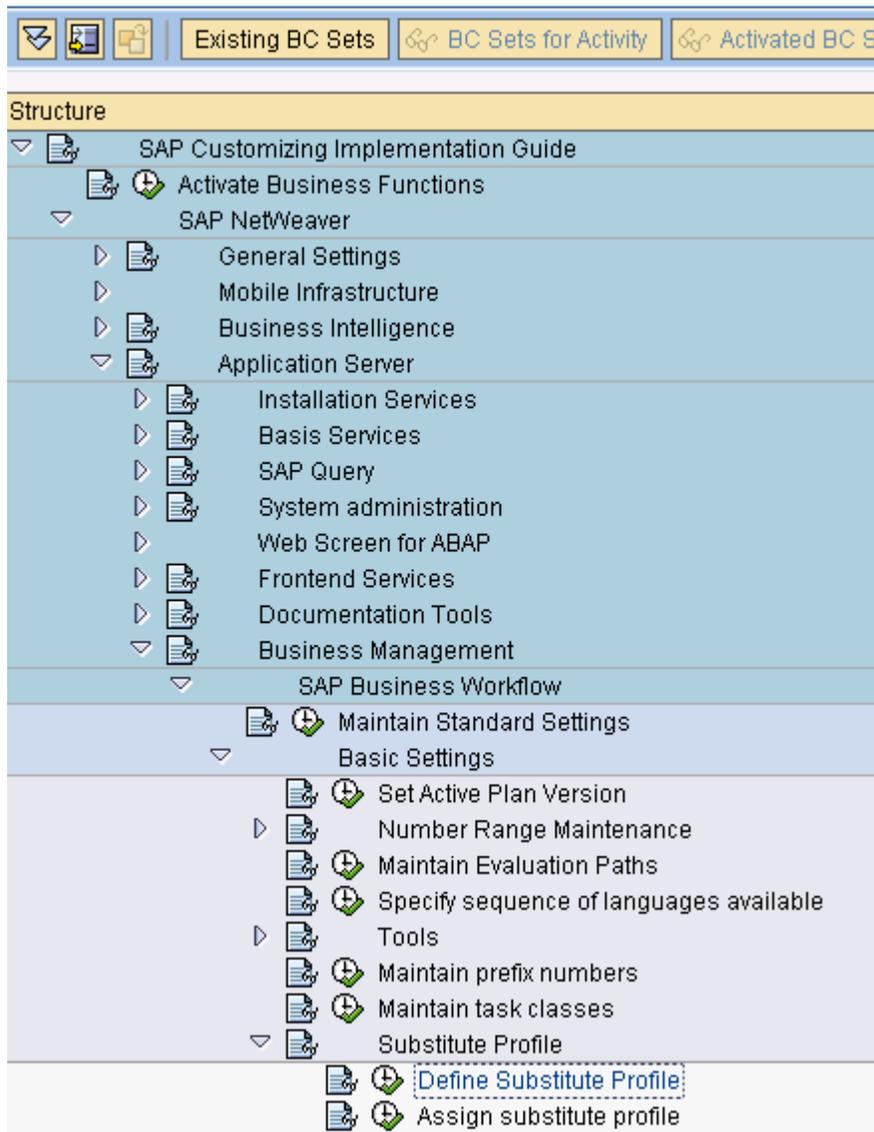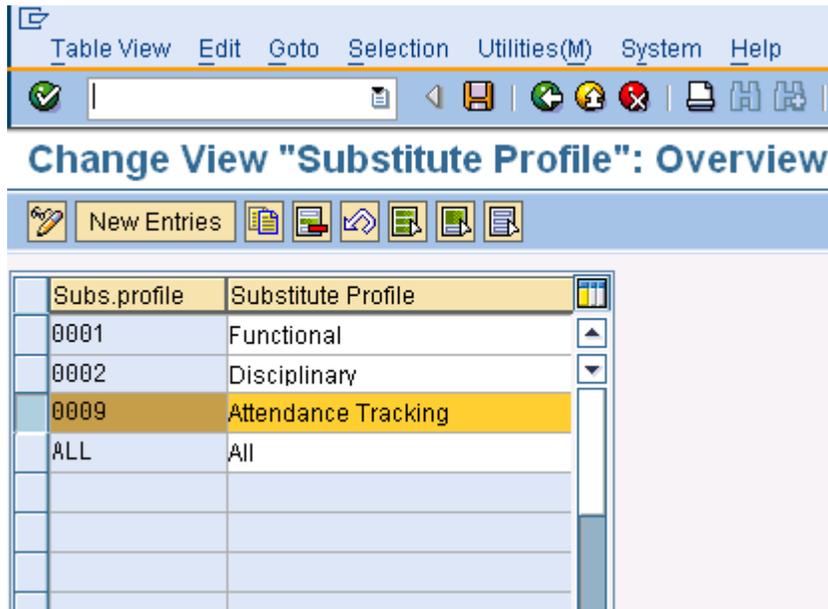
4.8 Create Profile for Substitute

Create new profile for attendance tracking. Assign an identification code for the proxy profile and describe it in the long text.

To create profiles, follow the path

SAP NetWeaver -> Application Server -> Business Management --> SAP Business Workflow -> Basic Settings -> Substitute Profile -> Define Substitute Profile

4.9 Assign Profile for Substitute

Here you determine which task classes should be grouped together in a profile. Allocate task class created for attendance tracking in Customizing No 7 (Maintain task classes) to the above created profile.

To assign a profile, follow the path.

Profiles can be maintained in Customizing by choosing SAP NetWeaver -> Application Server -> Business Management --> SAP Business Workflow -> Basic Settings -> Substitute Profile -> Assign Substitute Profile.

Display IMG

| ▽ 🔄 🗗 | Existing BC Sets | 🔗 BC Sets for Activity | 🔗 Activated BC Sets |

Structure

▽ 📑 SAP Customizing Implementation Guide
  📑 🕐 Activate Business Functions
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    ▽ 📑 Application Server
      ▷ 📑 Installation Services
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      ▷ 📑 Frontend Services
      ▷ 📑 Documentation Tools
      ▽ 📑 Business Management
        ▽ SAP Business Workflow
          📑 🕐 Maintain Standard Settings
          ▽ Basic Settings
            📑 🕐 Set Active Plan Version
            ▷ 📑 Number Range Maintenance
            📑 🕐 Maintain Evaluation Paths
            📑 🕐 Specify sequence of languages available
            ▷ 📑 Tools
            📑 🕐 Maintain prefix numbers
            📑 🕐 Maintain task classes
          ▽ 📑 Substitute Profile
            📑 🕐 Define Substitute Profile
            📑 🕐 Assign substitute profile
         📑 🕐 Set up views for Business Workplace

Table View   Edit   Goto   Selection   Utilities(M)   System   Help

Change View "Definition of Proxy Profiles": Overview

| 🖉 New Entries | 📋 📥 🖎 📥 📥 📥 |

Subs.profile	Substitute Profile	Classific.	Classification
0001	Functional	1	Professional
0002	Disciplinary	3	Disciplinary
0009	Attendance Tracking	ATTR	Attendance Tracking
ALL	All	1	Professional
ALL	All	2	Personal
ALL	All	3	Disciplinary
ALL	All	NO_CLASS	Not classified

4.10 Maintain Substitute

Student Lifecycle Management -> Processes in Student Lifecycle Management -> Attendance Tracking -> Maintain Substitution Task Setting

a) If the setting value is '*', then all the users for whom you are a substitute are shown in the Web UI.
b) If the setting value is 'ATTR', then all the users for whom you are a substitute with the profile that has the task 'ATTR' are shown in the Web UI.
c) If setting value is " " then the substitute feature is inactive.
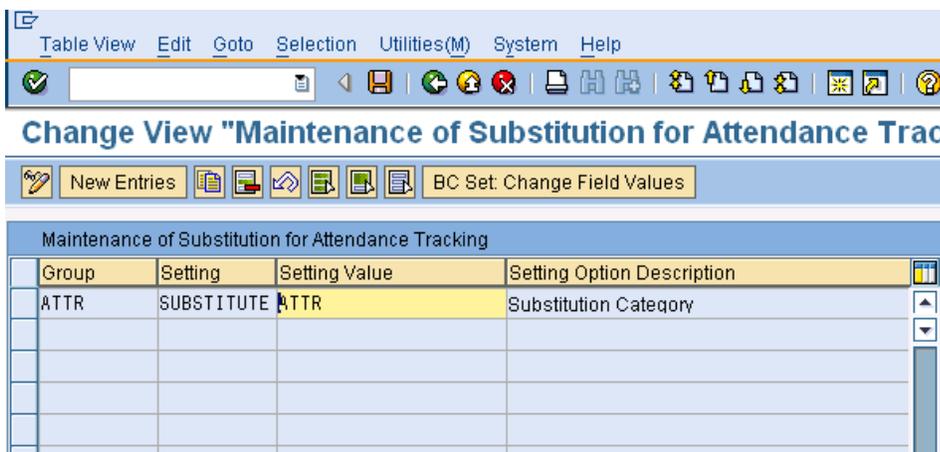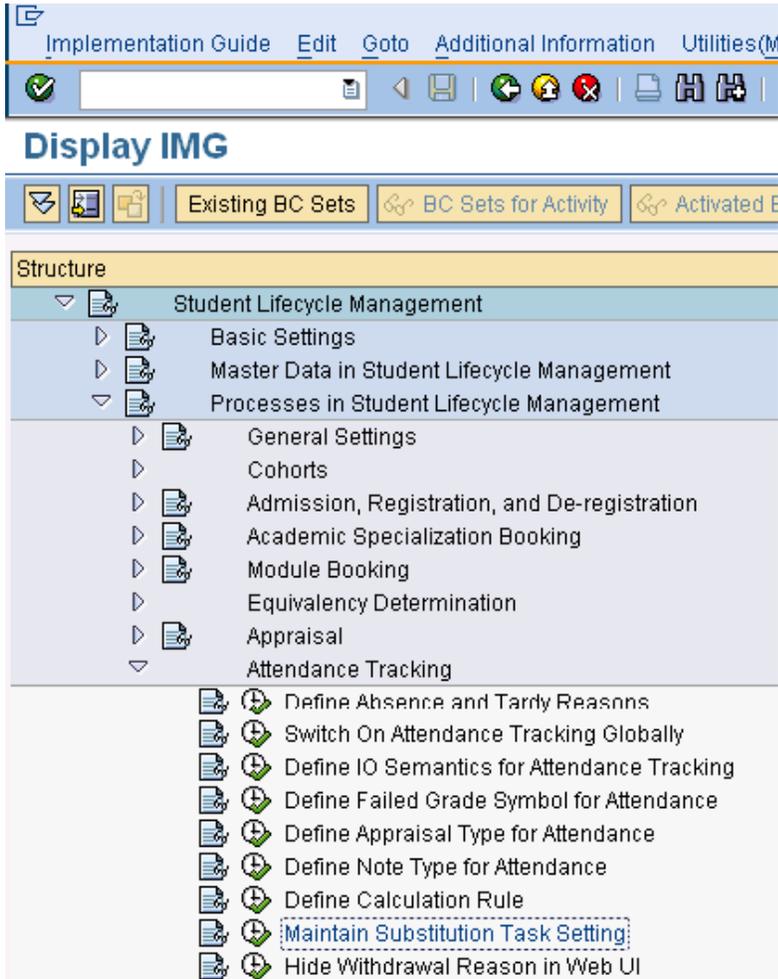
4.11 Hide Withdrawal Reason in Web UI

This customizing is provided to allow user to display the withdrawal list box in the Attendance Overview screen as shown in the figure below.

This withdrawal reason list box could be used to enable a student to withdraw from all the classes from the selected date onwards by selecting a reason from the dropdown.

You can either display or hide the list box by using the value for the *Setting Value* in Customizing as either blank or 'X' respectively.
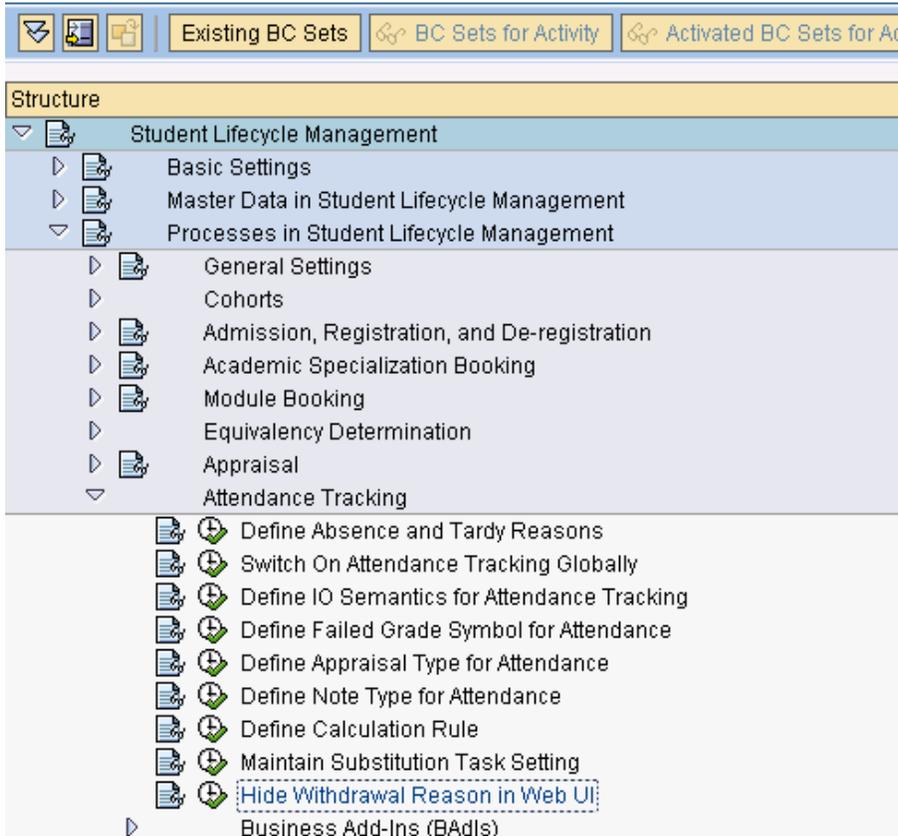
- Blank – means the withdrawal reason will be displayed in the list box in the 'Attendance Overview' screen.
- 'X' – means the withdrawal reason list box would not be displayed in the 'Attendance Overview' screen.

5. Customer Enhancements

5.1 Defining Students' relevant for Attendance Tracking

In some universities, students are exempted from attendance based on certain conditions, such as belonging to a particular group or a category. For example, a student's attendance in a sports group may not count for attendance and therefore not be appraised based on the attendance data.

You can exempt students from attendance tracking by implementing a BAdI. By default, attendance is maintained for all students. Once you have implemented this BAdI, you cannot see the students whose attendance data does not count in the Attendance Tracking maintenance screen.

To implement BAdI HRPIQ00ATSTUDENT_ATTEND, go to transaction SPRO and follow the path:

Student Lifecycle Management -> Processes in Student Lifecycle Management -> Attendance Tracking -> Business Add-Ins (BAdIs) -> BAdI: Check Student's Relevance for Attendance.

If the student's attendance is not relevant, mark the changing parameter C_ISNOTRELEVANT with an 'X in the BAdI implementation.
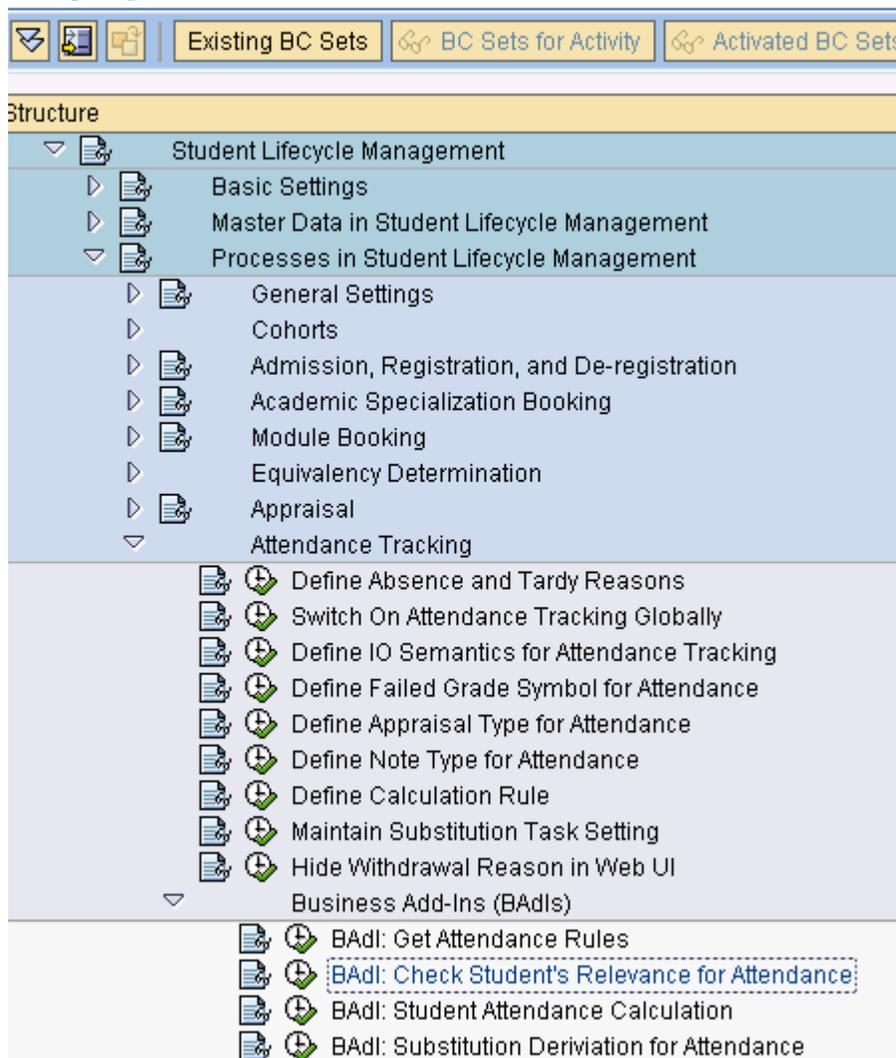
5.2 Define Attendance calculation rules

A filter-dependent BAdI must be implemented in Customizing to perform any attendance calculations. SAP delivers a sample implementation where the threshold value stored on infotype 1723 is compared with the attendance percentage for related events. In addition, the attendance rule, the threshold value and the attendance scale have to be maintained at infotype 1723. The scale can be set to a constant in the BAdI.

Student Lifecycle Management -> Processes in Student Lifecycle Management -> Attendance Tracking -> Business Add-Ins (BAdIs) -> BAdI: Get Attendance Rules.

5.3 Set up Derivation for Attendance Calculation Rule

To derive the attendance rule for attendance calculation, a BAdI can be implemented. The BAdI default implementation reads the calculation rule from infotype 1723 at the module and, if nothing found, from the offering org unit.

Student Lifecycle Management -> Processes in Student Lifecycle Management -> Attendance Tracking -> Business Add-Ins (BAdIs) -> BAdI: Student Attendance Calculation.
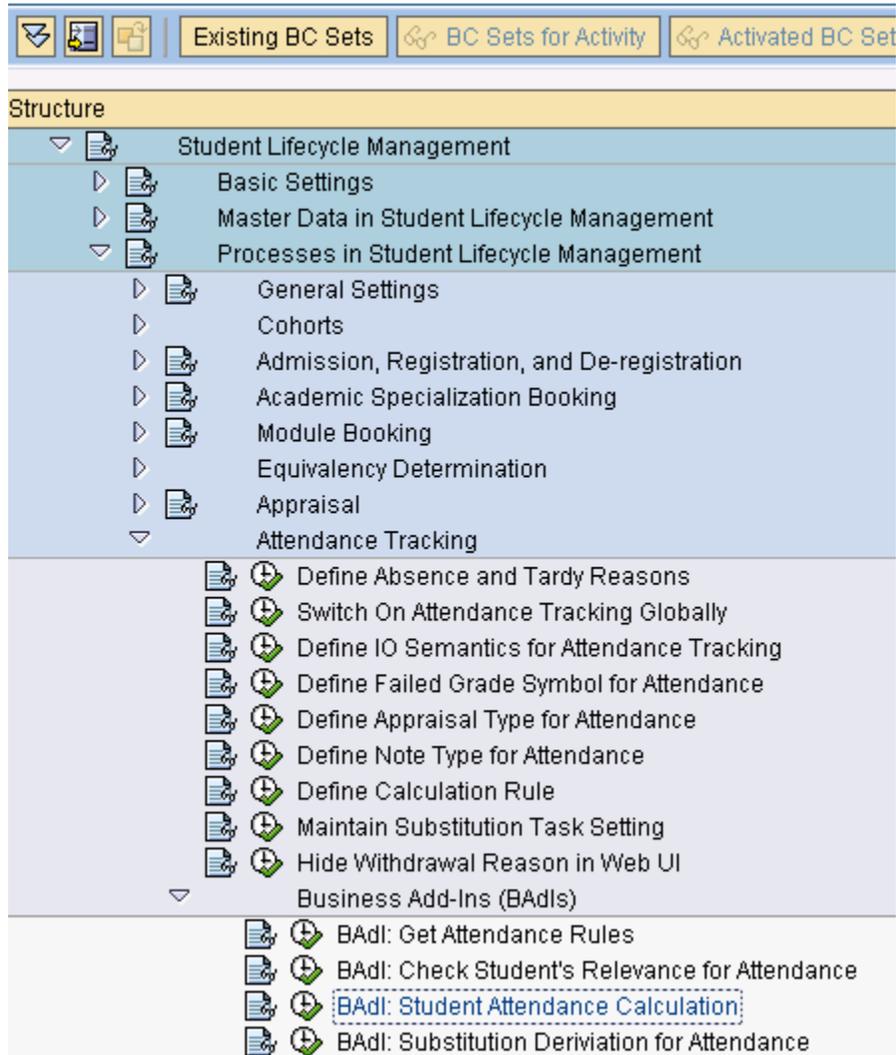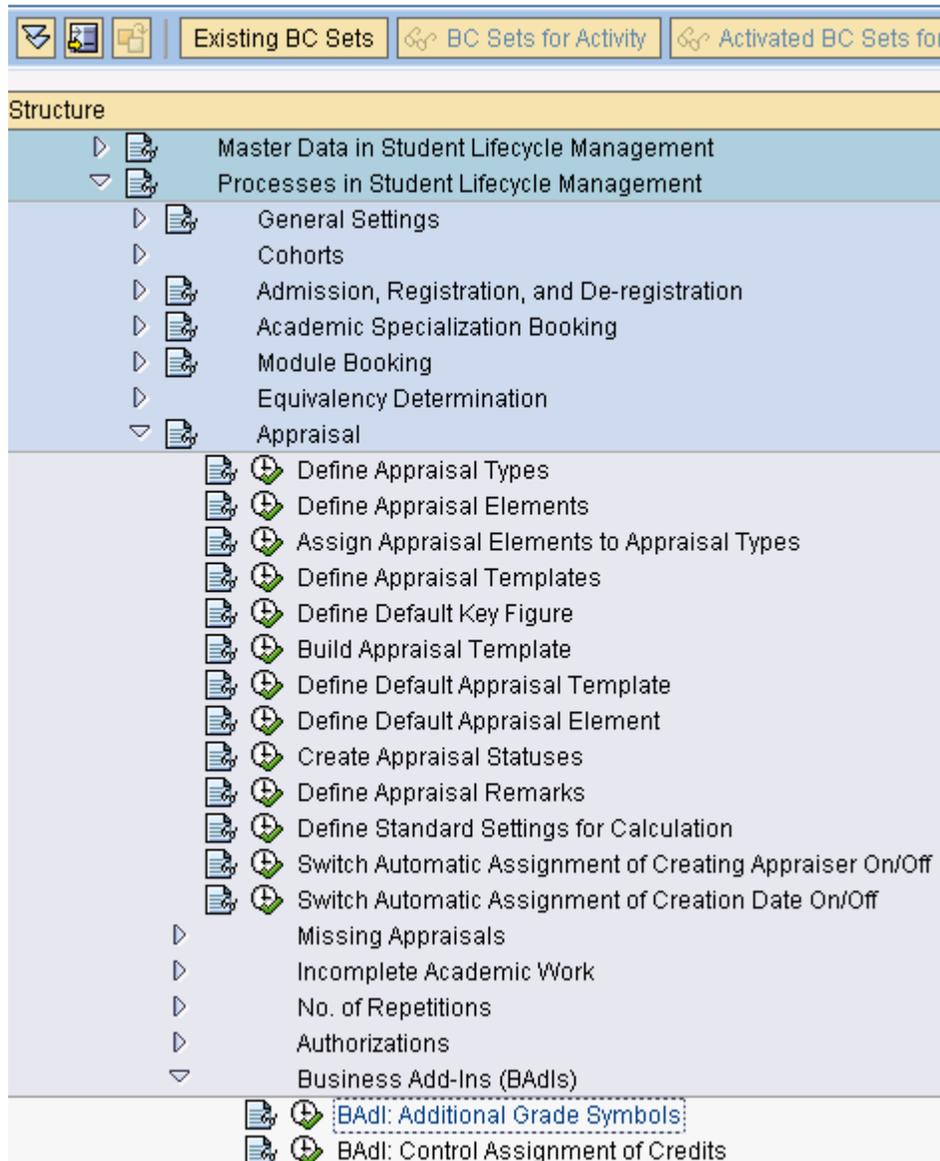
5.4 Set up special grade for failed attendance

When a student has failed attendance you can set up the system so that it sets a special grade in the top appraisal based on the attendance result. To achieve this, you must maintain the special grade symbol in Customizing. You must also implement a BAdI (Additional Grade Symbols) so that the system accepts grade symbols that are not a part of the scale. To implement this BAdI, choose

Student Lifecycle Management -> Processes in Student Lifecycle Management-> Appraisal-> Business Add-Ins (BAdIs) -> BAdI: Additional Grade Symbols.

Display IMG

Existing BC Sets	BC Sets for Activity	Activated BC Sets for

Structure
- ▷ Master Data in Student Lifecycle Management
- ▽ Processes in Student Lifecycle Management
  - ▷ General Settings
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  - ▷ Academic Specialization Booking
  - ▷ Module Booking
  - ▷ Equivalency Determination
  - ▽ Appraisal
    - Define Appraisal Types
    - Define Appraisal Elements
    - Assign Appraisal Elements to Appraisal Types
    - Define Appraisal Templates
    - Define Default Key Figure
    - Build Appraisal Template
    - Define Default Appraisal Template
    - Define Default Appraisal Element
    - Create Appraisal Statuses
    - Define Appraisal Remarks
    - Define Standard Settings for Calculation
    - Switch Automatic Assignment of Creating Appraiser On/Off
    - Switch Automatic Assignment of Creation Date On/Off
    - ▷ Missing Appraisals
    - ▷ Incomplete Academic Work
    - ▷ No. of Repetitions
    - ▷ Authorizations
    - ▽ Business Add-Ins (BAdIs)
      - BAdI: Additional Grade Symbols
      - BAdI: Control Assignment of Credits

5.5 Substitution Derivation for Attendance

You can use this BAdI to derive the substitutes for a user. This BAdI is called in the Remote Function Module HRIQ_AT_GET_SUBSTITUTES_RFC. There is a default implementation that derives the personal substitution, which is the direct substitution between users.

Student Lifecycle Management -> Processes in Student Lifecycle Management-> Attendance Tracking -> Business Add-Ins (BAdIs) -> BAdI: Substitution Derivation for Attendance.

Display IMG

| ▽ 🗐 🔒 | Existing BC Sets | BC Sets for Activity | Activated BC Se |

Structure

▽ Student Lifecycle Management
   ▷ Basic Settings
   ▷ Master Data in Student Lifecycle Management
   ▽ Processes in Student Lifecycle Management
      ▷ General Settings
      ▷ Cohorts
      ▷ Admission, Registration, and De-registration
      ▷ Academic Specialization Booking
      ▷ Module Booking
      ▷ Equivalency Determination
      ▷ Appraisal
      ▽ Attendance Tracking
         Define Absence and Tardy Reasons
         Switch On Attendance Tracking Globally
         Define IO Semantics for Attendance Tracking
         Define Failed Grade Symbol for Attendance
         Define Appraisal Type for Attendance
         Define Note Type for Attendance
         Define Calculation Rule
         Maintain Substitution Task Setting
         Hide Withdrawal Reason in Web UI
        ▽ Business Add-Ins (BAdIs)
            BAdI: Get Attendance Rules
            BAdI: Check Student's Relevance for Attendance
            BAdI: Student Attendance Calculation
            BAdI: Substitution Deriviation for Attendance
      ▷ Academic Records

5.6 Perform Appraisal Calculation

Individual attendance data is transferred to the appraisal process by pressing the calculate button in PIQSMFU. You can also start the calculation of the top appraisal including the attendance result. For this calculation a new PI calculation GRAT is delivered. This works in the same way as PI calculation GRAD, with the exception that the special grade symbol is set in the top appraisal if the student failed on attendance. If you would like to perform a different calculation, you can use the PI calculation as an example. However, you must set up a key figure that uses this PI calculation and assign this key figure to your top appraisal.

You can use this BAdI HRPIQ00SI2_PINDX_CAL for which default implementation has been provided. The implementation name is HRPIQ00SI2_GRAT. To access the BAdI, choose

Student Lifecycle Management -> Master Data in Student Lifecycle Management -> Performance Indexes -> BAdI: Performance Index Calculation
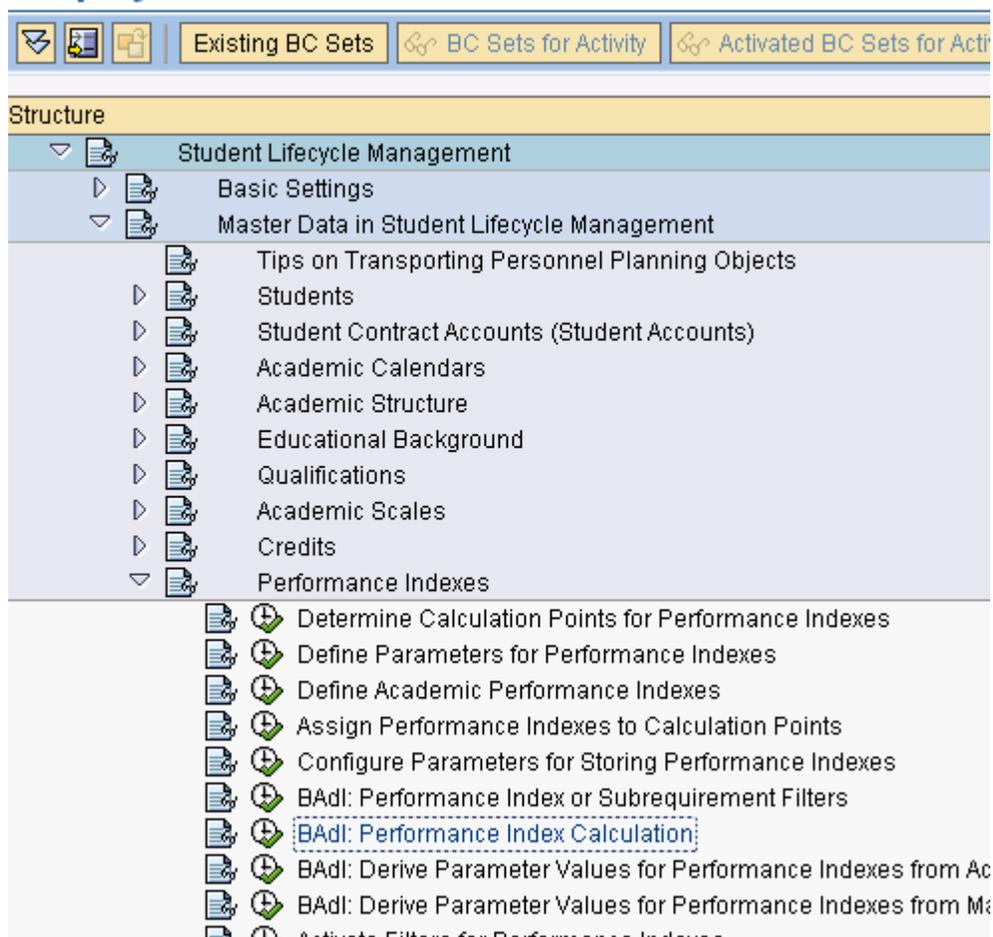
6. Additional Information

6.1 Different Scenarios

1. For those cases where attendance is incomplete, both the 'attendance completed' checkbox, as well as the 'class cancellation reason' list box are enabled.

2. For occurrences where the attendance completed flag is checked, the class cancellation reason list box is disabled. This is because a class can either be canceled or can have attendance complete but not both at the same time.

3. Once the attendance completed flag is checked for an occurrence, the list of students displayed also becomes non-editable.

4. Select a record from the list of students displayed on the second screen. The *Attendance Overview* button is enabled. Click the *Attendance Overview* button. The dialog box that opens up would be disabled if the attendance completed checkbox is checked.

5. Select a date for which attendance is not complete. Select a student from the student list. Now click the attendance overview button. Select a withdrawal reason and save the data. You will return to the second screen. Now either select the same date and occurrence or any future date or occurrence and click on the attendance overview button. The withdrawal reason list should be disabled.

6. When an occurrence on a date is selected and class cancellation reason is selected, then, by default, the class attendance is marked as completed for that occurrence.

7. If the absence reason is entered, then the functions *tardy reason* and *withdrawal reason* are disabled for the student for that occurrence, and vice versa.

8. If a class is canceled because a class cancellation reason has been selected, the user is still allowed to change the absence reason for a student.

9. If an absence reason or tardy reason is maintained for a student, and then a class cancellation reason is selected, then the absence reason or tardy reason would be overwritten by the class cancellation reason.

10. If a withdrawal reason is maintained for a student and then a class cancellation reason is selected, the withdrawal reason is not overwritten by the class cancellation reason.

11. For canceled bookings, the attendance overview dialog box appears only in the display mode.

12. For canceled bookings, the user cannot create or edit notes.

13. For future dates, if the occurrences are marked with attendance complete, the date is marked green in the calendar instead of yellow.

14. If a student who canceled the event is selected, then nothing can be edited but the user can view the existing notes and attendance by clicking the appropriate button

15. Attendance cannot be maintained for the students who canceled their attendance at the event

16. Anything changed in the dialog box is saved in the buffer and once the save button in the main attendance tracking screen is used, all the data is saved into the database.

6.2. Lock Objects

When you try to create a pre-excused absence as well as attendance at the same time, the event for which the attendance is to be maintained is locked. This is to ensure that two users do not edit the attendance or absence at the same time which would lead to data inconsistency.

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