**University Course Timetabling Data Format**

1. **Rooms**
2. **Instructors**
3. **Classes**
4. **Group Constraints**
   1. **Group Constraints Types**
5. **Students**

<!--University Course Timetabling-->  
<timetable  
version="2.4"  
initiative="puWestLafayetteTrdtn"  
term="2007Fal"  
created="Mon Mar 26 14:42:12 EDT 2007"  
nrDays="7"  
slotsPerDay="288">

|  |  |
| --- | --- |
| **timetable** root element | |
| **version** | Phiên bản |
| **initiative** | campus designation |
| **term** | Học kỳ (e.g., 2007Spr or 2007Fal) |
| **created** | Thời gian tạo file |
| **nrDays** | Số ngày học trên tuần (default is 7 days, Monday through Sunday) |
| **slotsPerDay** | Số khe học trên ngày (default is 288 = 24 \* 60 /5, 5 minute long time slots, going from midnight till midnight) |

**ROOMS**

<room id="201" constraint="true" capacity="48" location="489,468"/>  
<room id="202" constraint="true" capacity="40" location="488,473"/>  
<room id="203" constraint="true" capacity="39" location="488,473"/>  
<room id="54" constraint="true" capacity="51" location="437,411">  
<sharing>  
<pattern unit="6">FFFFFFFFFFFFFFF0000002200000000000000FFFFFFFFFFFFFFFFFFFFFFFFFF0000000000000000000000...</pattern>  
<freeForAll value="F"/>  
<notAvailable value="X"/>  
<department value="0" id="3"/>  
<department value="1" id="1"/>  
<department value="2" id="2"/>  
</sharing>  
</room>  
<room id="49" constraint="false" capacity="63" discouraged="true" ignoreTooFar="true"/>  
...

|  |  |
| --- | --- |
| **room**: definition of a room | |
| **id** | room id |
| **capacity** | Công suất (number of seats in the room) |
| **location** | room location coordinates *x,y* *- distance between rooms in meters: 10 \* ((x2-x1)^2 + (y2-y1)^2)^1/2* *- location attribute might not be present (e.g., for non-campus locations), distance between such a room and any other room are considered as infinite in such a case* |
| **ignoreTooFar** | - *true* if the distances between this room ant any other room should not be considered (no distance conflicts for this room) - *false* if the distances should be considered *(this is the default, when ignoreTooFar attribute is not present)* |
| **constraint** | - *true* if room constraint should be created *(default is true)*, - *false* otherwise (classes can overlap in time in this room) |
| **discouraged** | - *true* if the use of this room should be discouraged (a constraint minimizing the use of such room is posted for this room), - *false* otherwise *(default is false)* |

If a room is not available all the times or if there is a sharing between two or more departments defined for the room, the **sharing** element is present:

|  |  |
| --- | --- |
| **sharing**: room availability & sharing matrix | |
| **pattern** | Định nghĩa phòng có sẵn và thời gian chia sẻ: - Ma trận các khe thời gian trong vòng 7 ngày (typically for 30 minute periods) in the user interface, *unit* attribute defines the relation between these periods and the slots (e.g., unit="6" 1 kí tự cho ma trận định nghĩa cho 6 khe thời gian – mỗi khe thời gian là 5 phút). |
|  | |
| **freeForAll** | Định nghĩa khoảng thời gian rảnh (khoảng thời gian có thể sử dụng bởi tất cả các bộ môn) |
| **notAvailable** | Định nghĩa khoản thời gian bận (khoảng thời gian ko thể sử dụng bởi bất kì bộ môn nào) |
| **department** | transformation between the identification of the department in the sharing matrix (attribute *value*) and the department id (attribute *id*) |