

Automated Scheduling and Timetabling software AutoSched

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It is an easy to use but powerful program. It can be used for weekly scheduling or exam scheduling in various educational institutions, and in other cases, such as for scheduling conferences.

The main concepts of the program:

Days - for which the maximum number of hours is set (you can use any time intervals).

- Personnel - the name is given
- Groups - the name is set, the maximum complexity of classes per day, the beginning and end of working time.
- Resource types - the name is given. This can be, for example: "Class on the 2nd floor more than 30 seats" or "Cabinet of Physics" etc.
- Resources - each resource has a name, number and list of associated types of resources
- The key concept in the program is the Subject, which has the following properties:
 - Name
 - Lesson duration in your chosen time intervals (e.g. academic hours)
 - The number of lessons to be scheduled for all days
 - The maximum number of lessons in one day.
 - The difficulty of the class in points from 1 to 100, so that the overall complexity of classes per day does not exceed the specified for the group
 - The required time (from to) to plan the lesson at intervals. If you do not need - leave the zeros, the program will choose itself.
 - Priority: First - the program will try to make the lesson first during the day, the last - respectively the last.
 - List of groups for which classes are held (optional)
 - List of staff who hold classes (optional)
 - List of resources to conduct the class (optional)
 - A list of the types of resources you need (optional). You don't have to set specific resources in the resource list, you can only set the type. If you specify a specific resource in the resource list and type, the program will reserve both.
 - Days are a list of days on which classes can be held (optional). If set, the program will plan the class only on specified days, otherwise - on any of the days on the list of days.
- *In all of the above forms, the "Import" button has been added. - to import text data into the program. The file is plain text, field delimiters are tab characters. Maybe Unicode encoded. Such a file is easy to create using Excel. Number and meaning of columns in the file - corresponds to the columns in the form with which you work, headings are not required. File may have less columns than in the form - for example, only "Id" and "Name".*

- The subject list corresponds approximately to the curriculum. All this allows you to plan, for example, things like:
 - lessons of varying duration, such as double lessons
 - dividing the class into subgroups - a lesson for which several teachers, classrooms and one class are assigned
 - reserve the time of teachers (classrooms, groups) - an occupation for which only a teacher (classroom, group) is assigned
 - events - several groups, teachers, etc.
- All objects in the program have a unique number.
- Once you enter all of the above data, click the "Calculation" button. You can wait for the program to shut down and open a page in the browser with the results (you can save it, print it, etc.) or click "Stop" if you want to get a result faster. The program tries to schedule all the tasks by completing all the set restrictions during all days so that it all takes as little time as possible.
- If you click on the "data folder" link, you'll open the explorer window with the folder where the program data is stored, file: AutoSched.dat. You can save it or delete it (a new blank will be created).

The speed of the program depends on both the power of your computer and the number of activities planned.

The maximum program limit is approximately 5,000 intervals. But for such volumes you need a very powerful computer with a lot of memory. For 1000 - a good enough laptop.