Timetable

Information and instruction

The program is designed for manual and automatic layout of work schedules by task, executive groups and available rooms. The usefulness of the program has been verified during many years of arranging the timetable in the faculty of a higher educational institution.

It is possible to plan the arrangement of both lectures (carried out simultaneously by several groups) and exercises and projects, carried out by individual groups.

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Basic features of the program

- Division into groups, positions and tasks.
- Division into cycles (e.g. days) and smaller units (e.g. hours)
- Automatic and manual control of the distribution of tasks over time
- Conditions, allowing division into individual managers (teachers), assigned to groups of tasks
- Occupancy controls for groups, positions and managers
- Reservation of groups and positions and import of reservations from other projects
- Presentation of the results of task scheduling in vertical and horizontal form, with the possibility of distinguishing a group of tasks of one executive unit (e.g., the workplace)
- Wide range of control over the graphic form of presentation
- Export of results in the form of BMP, JPG, CSV, ICS files and printing
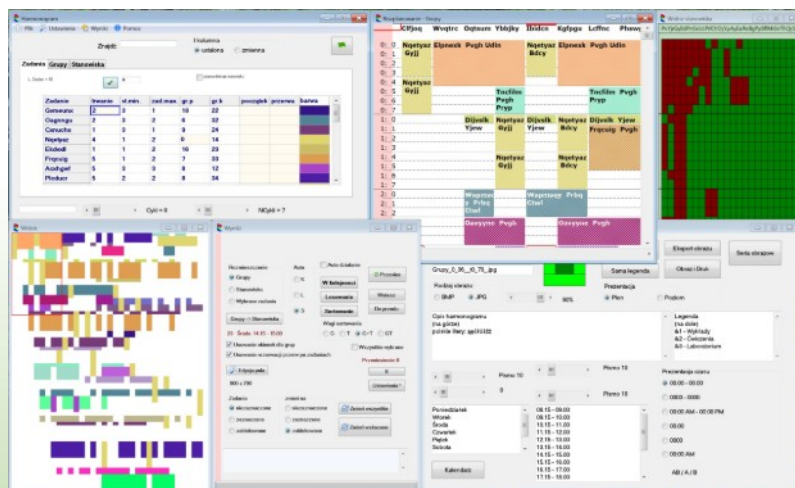- Calendar of allocation of individual cycles (e.g. days) from the plan to days in the year

Table of contents

Features of tasks, groups and rooms

The various elements of the plan are described in the tables by a series of characteristics, the fulfillment of which is a prerequisite for the execution of a correct scheme of action

Each task has the following features:
- name
- duration,
- the minimum number of positions for its implementation
- the maximum number of simultaneous implementation of a given task in the plan
- the range of groups to carry out a collective task (such as a lecture)
- the initial moment of placing tasks in the schedule
- taking into account the break, associated with the task
- color assigned to the task

Each group is characterized by:
- name
- a list of tasks to be performed
- the number of necessary completion of each task

Each position (room) is described by:
- name
- list of tasks to be performed
- the way of its application: excluded, possible or necessary

Elements of control during the layout of the plan

Main window of the program

It defines the main parameters of tasks (subjects), groups of performers (students, pupils) and rooms, intended for the implementation of tasks (lessons).

main menu

industry nomenclature
and language options

tabs of objects
and their characteristics

number of cycles (automatically increased)

number of hours in a cycle (e.g. day)

Tasks tab

Lessons, lectures, exercises and projects, carried out by individuals or teams of performers, pupils or students, can be considered as tasks.

finding a job by name   changing the width of the name column

blocking a job during a break

entering values   moving the highlighted
to a task group   tasks in the table

Edit task features:
- duration,
- number of minimum rooms needed
- maximum number of simultaneously performed tasks
- the range of groups (gr.p - gr.k) for a collective task (e.g. lecture), set in the "Groups" tab
- the beginning of the start of the task (subject) in the plan
- break
- colors (select the range of tasks and assign in the - **Settings** - **Visual parameters** - lower part of the window, indicated colour number and "**To objects**" button)
  The color is created in the lower left part of the "**Visual parameters**" window.

  The last column of the table "**Subjects/Lessons/Tasks**": **state** is used to inform about errors in planning and give the reason why the item does not appear in the plan distribution:

T=0	: declared zero execution time
Groups=0, **Classes=0**, **Persons=0**	: no groups/classes/persons to perform the subject/task
NRooms<NRmin	: number of available positions/rooms is less than the number required by the subject/task
NSubjects_max<1, **NTasks_max<1**	: the maximum number of subjects/tasks performed simultaneously is less than one
Cycle<T	: the execution time of the subject/task is not within the time of one cycle/day

Names of tasks, groups and rooms can be entered in the main menu option: **Settings** - **Names**.

Groups tab

Defines information on how many times a certain task must be performed by a certain group of students, pupils or other performers.

moving the highlighted groups in the table
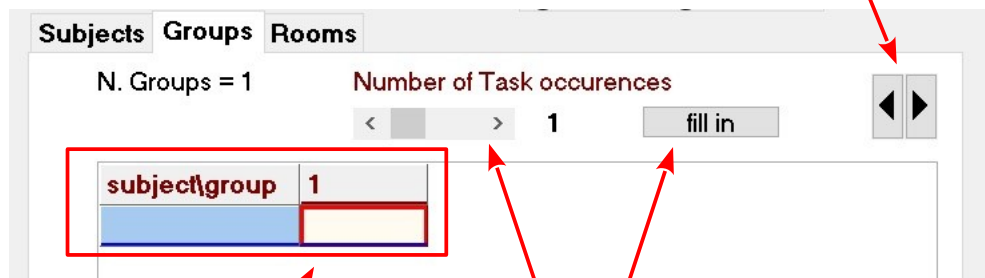
table of the number of task completion
by individual groups

filling marked
with the given value

Groups tab sub-menu (available under the right mouse button):

inserts the selected range of groups
for the assignment of a collective task (e.g. lecture)

inserts a group before the indicated one
inserts a task before the indicated one
duplicates settings to a new task

deletes selected groups
deletes selected tasks
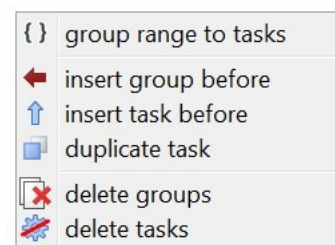
Note ! The actions are irreversible. Be sure to save the project regularly.

Rooms tab

Provides information on the possibility or necessity of using a particular room or room for a particular task, lesson, subject or other activity.

moving the highlighted rooms in the table

job classification table (rooms) for individual tasks

value allocation for marked rooms and tasks
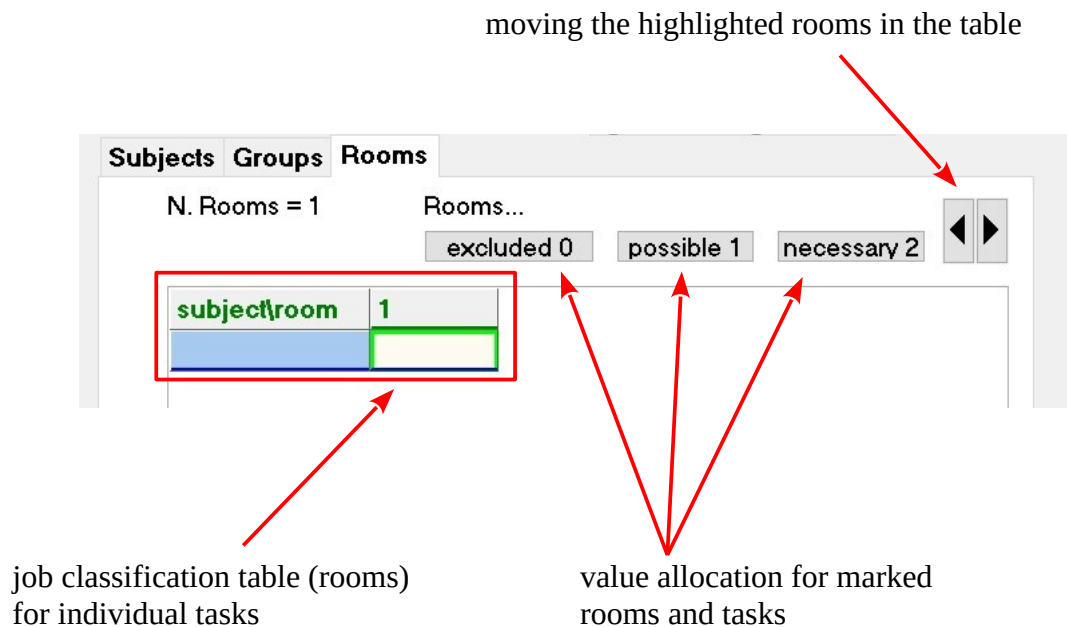
Sub-menu of the **Rooms** tab (available under the right mouse button)

inserts a room before the selected one

deletes selected rooms

Note ! The actions are irreversible. Be sure to save the project regularly.

Main menu

It defines communication, parameter settings of the timetable project, control of its implementation and export of results.

File Settings Results Help

create, read and write project

control of plan parameters with graphics settings

help and information

plan execution with presentation and export of results

Main menu - File

Creating a new project

Reading an existing project: *.txa, *.txb

Reading a project from the list of previously loaded

Reading the illustrations only into the project from the catalog

Saving the current project: *.txa, *.txb

Saving the project under a new name: *.txa, *.txb

Reading occupied groups or positions
from another project *.txa

File | Settings | Results
- New
- Open
- Open project...
- Images for the project
- Save
- Save as...
- Busy groups or rooms

Main menu - Settings

Names of tasks, groups and positions
Conditions for managers
(They cannot perform simultaneously,
 listed in the task lists)

Parameters for controlling the dimensions of symbols, typefaces
and presentation colors
Selected tasks for presentation of the work of the unit (plant)

Reading the previous setting of the program windows

Saving the current program window setting

Settings | Results | H
- Names
- Assumptions
- Visual settings
- Choosen tasks
- Load window settings
- Save window settings

Main menu - Results

Controlling the distribution of tasks in groups, rooms
and selected tasks for presentation
Automatic and manual control

Error report and plan validation control

Export and printing of the plan

Exporting the plan including the calendar

Three-dimensional layout of the plan

Main menu - Help

Description of the workflow of the program

Basic information

Edit the names of tasks, groups and rooms

Main menu - Settings - Names

Naming the objects is necessary for the correct arrangement of the timetable.

reading from a text file

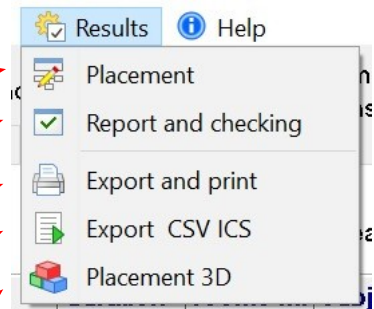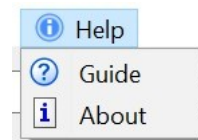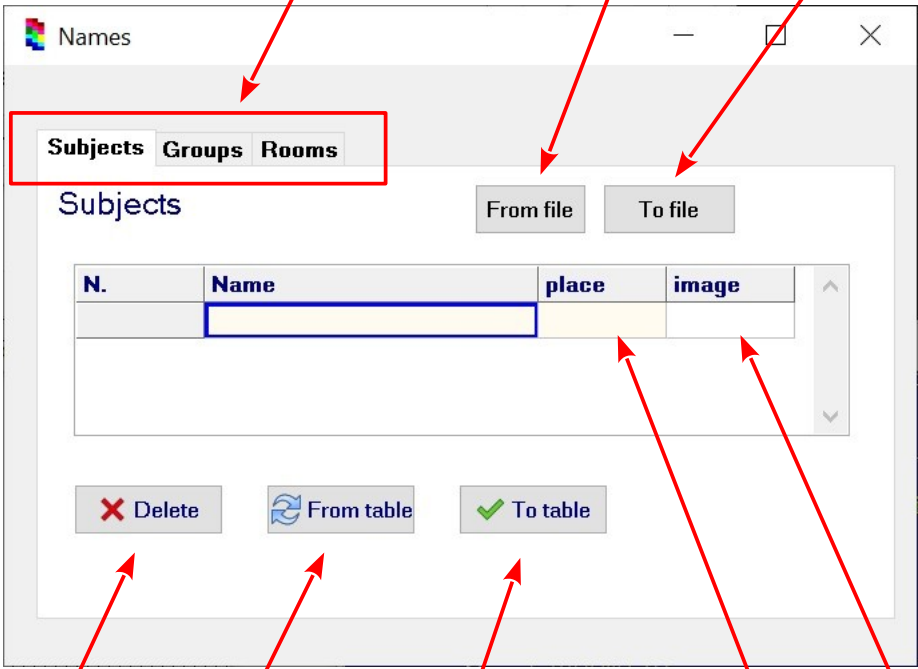bookmarks with objects   write to text file

deleting the marked   placement in the table (diagram)

loading from the table   the place of marking the object
                                                           with an illustration
                                                           (optional)

illustration file
(optional)

Under the right mouse button is an optional menu for selecting the file of the illustration denoting the object and setting this illustration in relation to the object emblem in the timetable diagram.

Note ! Marking with illustrations the objects of the plan
                 is not necessary for its arrangement.

Position of the illustration in relation to the object emblem

Loading an image illustrating an object
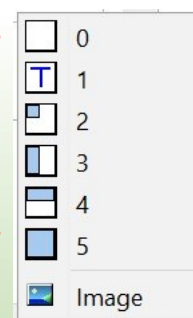
Conditions for task managers (optional)

They refer to tasks that cannot be performed simultaneously
or must be performed in a specific order.

Main menu - Settings - Assumptions

Number of task exclusion lists

Set the type of condition:
None, Separately, in Order

In each box, a list of exclusionary
Tasks along with the name(e.g., the name of the manager)

inclusion of selected tasks in the presentation
(does not change the basic presentation of the plan
diagram)

The menu under the right mouse button allows you to
select tasks for groups, in which they cannot be
implemented at the same time (for example,
implemented by a certain teacher or employee):
- *Separately*
or they should be done in the set order:
- *in Order*.

Similar to the *Names* item from the previous subsection,
it is possible to illustrate the tasks of each condition
e.g., with portraits of performers (optional).

The selection of tasks to groups and the group names are determined when the option is selected: **Assumptions: list subjects** from the menu, associated with the given row of the **Assumptions** table:

Name of the list of mutually exclusive tasks
(e.g., the person conducting the listed tasks, lessons)

Tasks from the main table to select
(they will appear in the list of excluded tasks)

Set the order of tasks,
if the condition is of this nature
(in Order)

Approval or cancellation
of the settings you have made

Parameters of plan diagram graphics

Main menu - Settings - Visual parameters

controls font in the program

adjusting the dimensions of the font
to schema block ranges

writing backups

column width
in the basic table

font dimension of tables

main font name

expanded text activation

dimensions and typeface
parameters of the scheme

dimension of the task in
the diagram (indicate the
lower right corner of the
of the selected dimension
in the field)

jump every one unit
or smooth movement

drawing vertical lines

display of cursor
markings in the diagram

color settings
(RGB 0-255)

Visual settings

Columns width in table = 96

Tables Font: 9

☑ Backup copies
each 0 min

ᵃA Controls Font

MS Sans Serif

☐ Character size adjustment

☐ Extended text   ☐ Fuzzy   < > ☑ Bold ☐ Italic

	Active	Size	Bold	Italic	Colour	Auto	Graf
Header: Groups	V	11	-	-		-	-
[] Subjects	V	11	-	-		-	-
[] Rooms	V	11	-	-		-	-
[] Assumptions	V	11	-	-		-	-
Cycles	V	11	-	-		-	-
Cycle units	V	11	-	-		-	-
Title	V	11	-	-		-	-
Legend	V	11	-	-		-	-

Dx= 100; Dy= 30; Dt= 10; Rxy= 5   < >   Picture:

abcdefgh
ijklmnopq
rstuvwxyz
.12345678
90.ABCDE
FGHIJKLM
NOPQRST

☑ Jump Dx, Dy   ☑ Pointer   ☐ Change in numbers   ▭ Background

☐ Vertical lines

To palette ⬇   To subjects ➡

01	02	03	04	05	06
07	08	09	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30

Subjects scope:

FGHIJKLM
NOPQRST

☑ Jump Dx, Dy ☑ Pointer ☐ Change in numbers [Background]

☐ Vertical lines

To palette ⬇   To subjects ➡

01	02	03	04	05	06
07	08	09	10	11	12
13	14	15	16	17	18
19	20	21	22	23	24
25	26	27	28	29	30

Subjects scope:

selected range of tasks

to be colored
(from the main table)

indicated
color

background parameters of the
scheme (optional)

allocation of the indicated hue
from the palette to the selected tasks

placement of the set color in the palette
(30 colors)

enable controls for changing the number of objects in the tables of tasks, groups and positions.
Note ! It is necessary to turn them off, after setting the ranges of the scheme, because reducing the
count is irreversible and will delete the last objects.
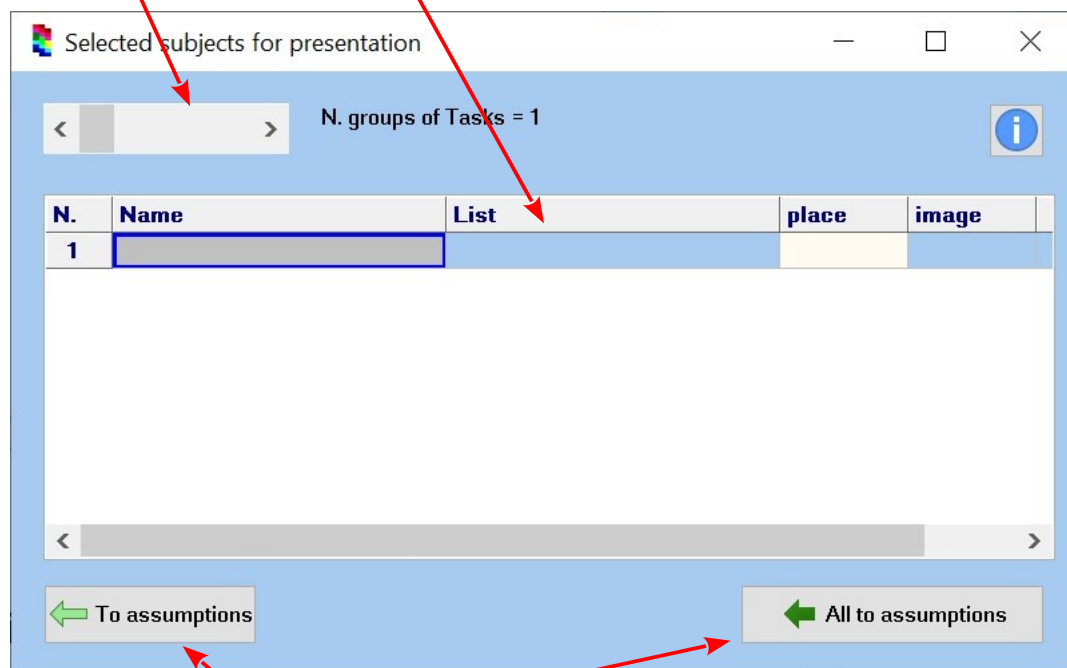
2024-04-20

Selected tasks for additional presentation (optional)

shown as part of the work, carried out by the executive unit
(e.g., workplace, department, chair)

Main menu - Settings - Selected tasks

Number of lists of selected tasks for presentation of the scope of work (e.g. department)
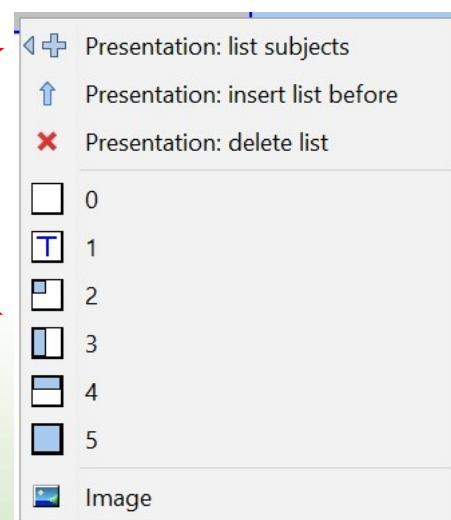
List of tasks for presentation in one column

attach selected tasks to assumptions

The menu under the right mouse button allows you to select tasks for groups, presented as individual columns.

As with the *Names* item from the earlier subsection, it is possible to illustrate the groups of tasks selected for presentation.
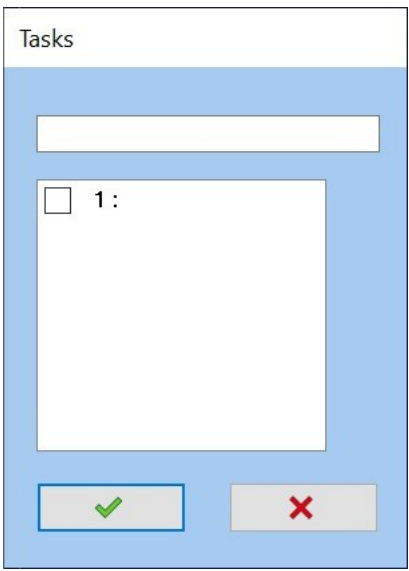
The selection of tasks to groups and the group names are determined by selecting the option: **Presentation: list subjects** from the menu, associated with the given row of the table Selected tasks for presentation:

Name of the list of presented tasks

Tasks from the main table to select
(they will appear in the list of presented tasks)

Approval or cancellation
of the settings you have made

Controlling the course of laying out the plan

Main menu - Results - Placement

Four windows will appear:
> Results - scheduling control
> Arrangement - displaying the schema and moving tasks backwards and forwards
> > presents the layout for groups, positions and tasks selected for presentation
> Available rooms - status of occupied rooms
> Overview - summary view of the schema for better navigation

Results window
automatic scheduling by: order in the table, randomly or sorting, according to marked weights
(G - number of groups for a task, T - time of task completion)

approval of task transfer

error information

displaying
in the schema

transcription of
status of groups to rooms

removal of vacancy (breaks)
in group activities

deletion of breaks
reservations after tasks

emergency field editing

reclassification
groups of task blocks
(not marked, marked,
blocked)

1
moving a group of tasks
automatically to the nearest
free space
(backward or forward)

2
Automatic transfer
if all tasks match
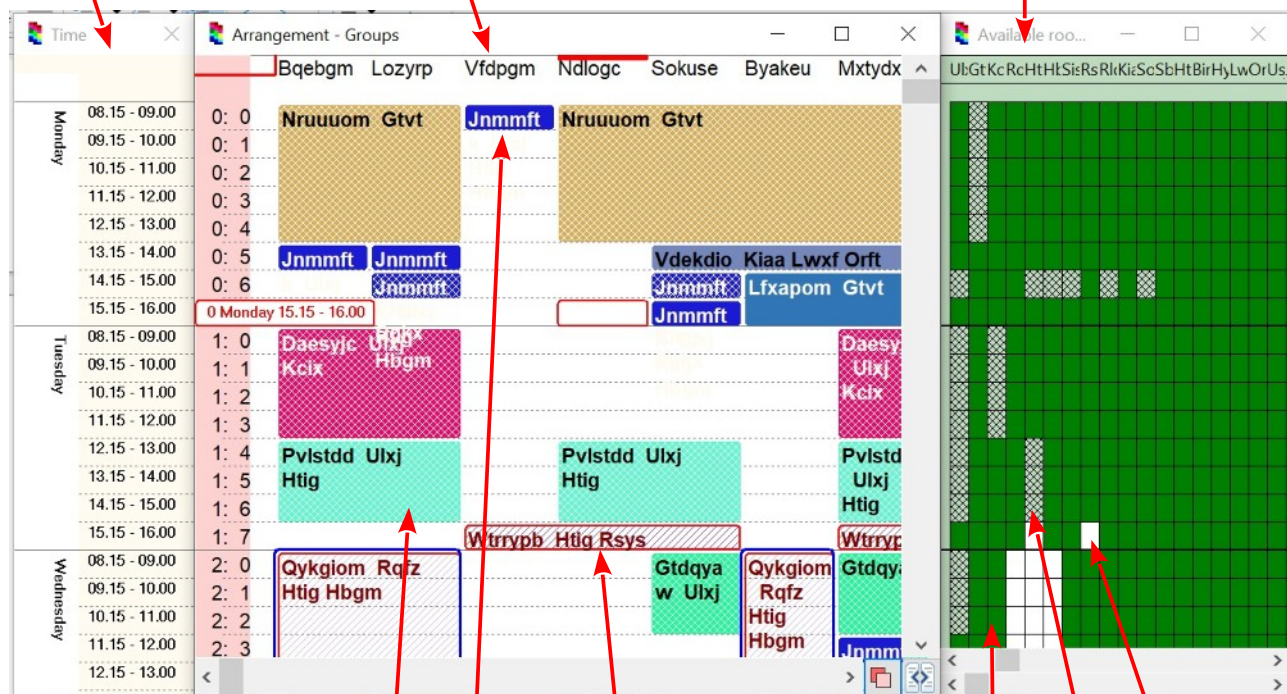
Arrangement, Vacancies and Time window

Presentation of the groups:

Class time   Group names   Room names

room markings: vacant, occupied,
under transfer
tasks

task blocks
with classification: blocked, unmarked, marked for transfer
(switching is done with the left mouse button in the block field)

Rooms presentation:

Room Names   Group Names

reservation of positions (rooms)
(using the left mouse button)

presentation of occupancy
of groups

panel switches
(vacant positions/groups, swapping sides)

In the **Arrangement** window there is a sub-menu (right mouse button),
which is used to collectively edit the selected area and change the number of cycles

Indication of area ranges
(upper left and lower right)

unblocking empty fields in the area

blocking empty fields in the area

changing the qualification of task blocks within the selection so,
as if they were clicked at the same time
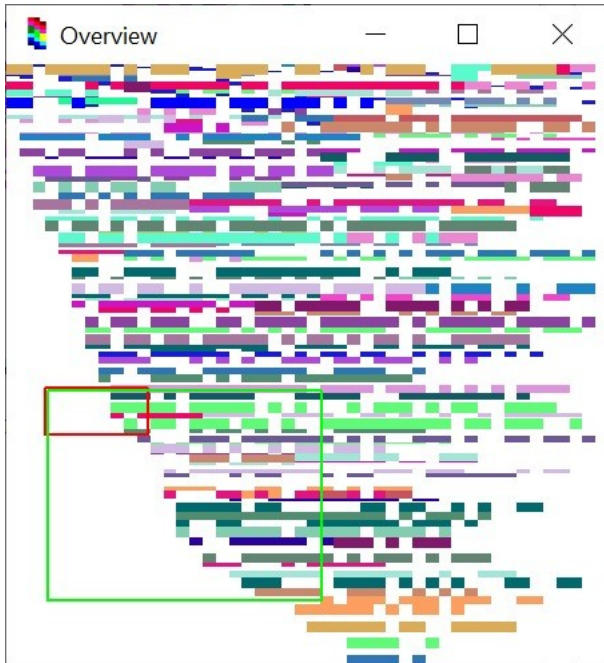
Adding a reserved cycle (free from classes)

Deleting the indicated cycle

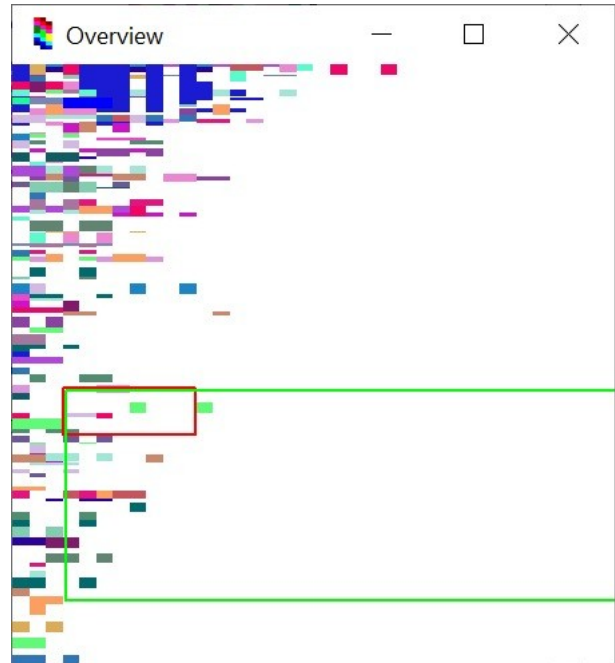|	
▭	Range
▯	Unlock fields
▯	Block fields
⚙	Click range
⬇	Add cycle
⬔	Delete cycle

Overview window

Presents a collective picture of the plan

Groups during the implementation of the plan: Rooms during plan implementation:

The presentation range in the **Arrangement** window is shown here with a red frame.
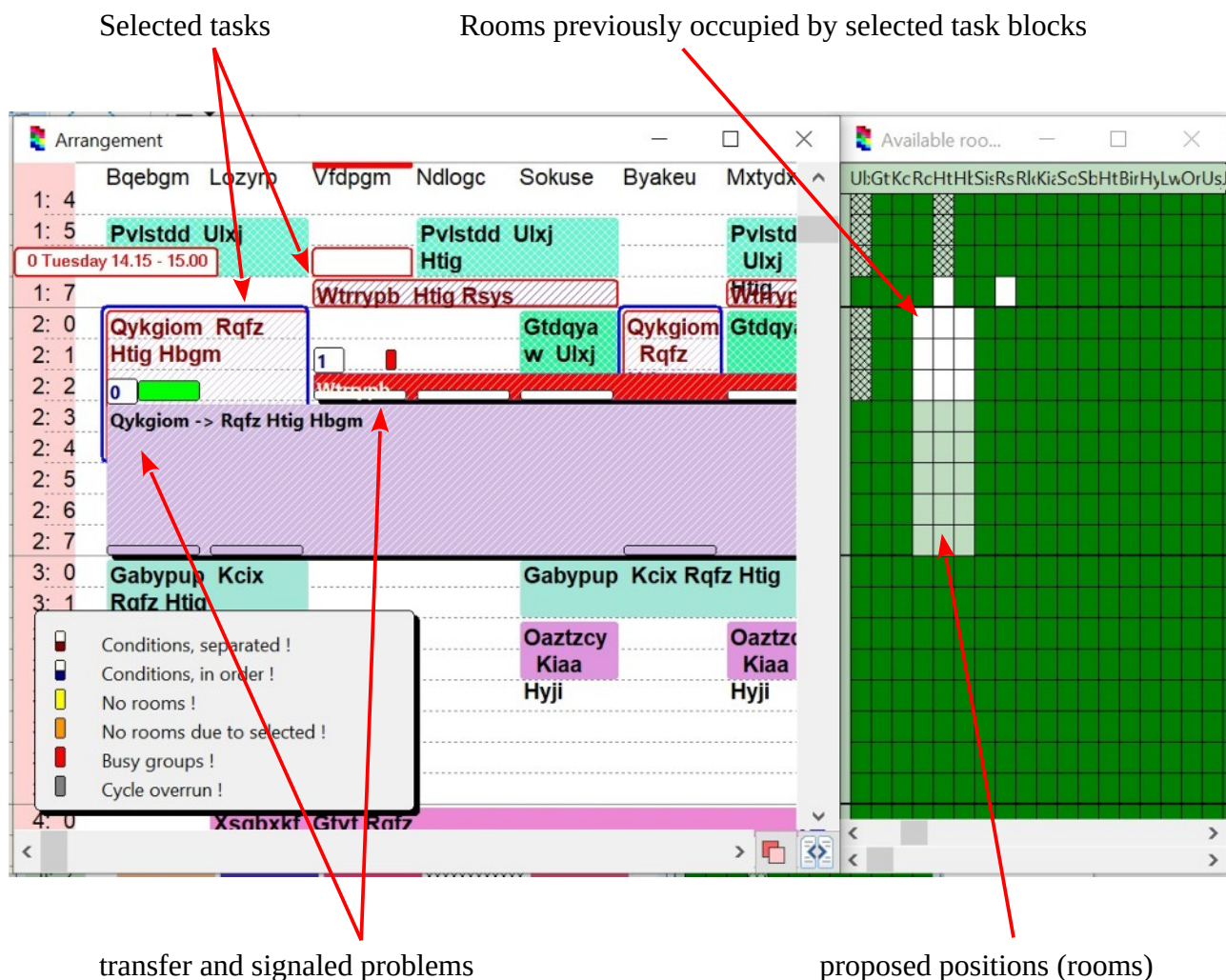The extent of the plan to be printed is shown here with a green frame.

Control is done by holding the left mouse button in the view box, then the image in the
Arrangement window and in the side panels (**Time** and **Available rooms** or **groups**) changes.

Controlling the movement of tasks in the Arrangement window

In the **Arrangement** window, you can move backward or forward the selected task blocks.
This is done by using the mouse wheel.
You can also use the function to automatically search for vacant (non-blocked) positions in the scheme, using the **Forward** and **Backward** buttons from the **Results** window.

Selected tasks   Rooms previously occupied by selected task blocks

transfer and signaled problems   proposed positions (rooms)

Approval of the transfer is done with the **Transfer** button in the **Results** window.

Manual assignment of rooms to a task block

The schema in the **Arrangement** window should show the distribution of tasks for groups.
For a task block in the schema, in addition to the settings in the table, you can manually assign jobs.
To do this, block the task in the schema and use the **Alt** button.

In the selection window, select the desired free rooms and confirm
(this window is similar to the assignment of conditions for managers and the selection of
tasks for individual presentation).

The indicated block of the task (locked in the schema)

selection window of available positions (rooms)
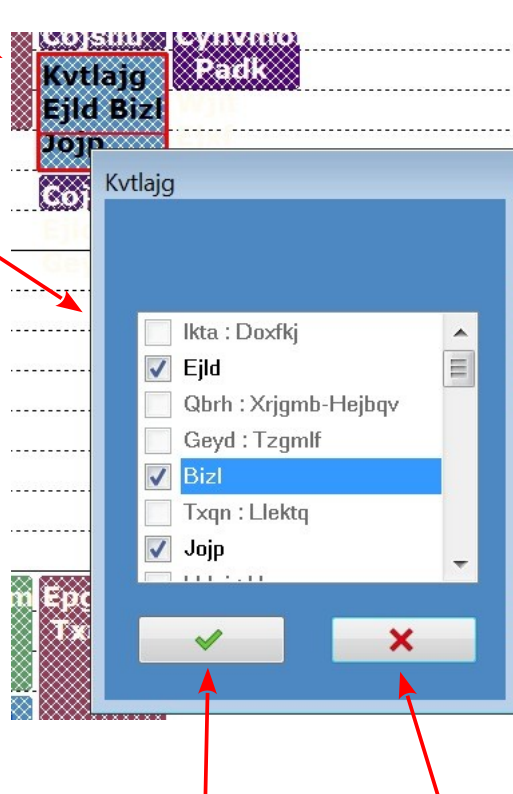
approval of changes or resignation

Checking the correctness of the scheme

Main menu - Results - Report and control

The report gives information on the compliance of the scheme with the assumptions, included in the tables. Summaries are given for groups and positions with busy (**Z**), free (**W**) and reserved (**R**) time.

total number of occupied time units   occupied   free   reserved

```
Report                                                    —    □    ✕

Yroo:     zp=    0 (ok);   Z=    0.0%;   W= 100.0%;   R=    0.0%   |  ^
Bjfa:     zp=    0 (ok);   Z=    0.0%;   W= 100.0%;   R=    0.0%   |
Room average:     Z=    9.8%;   W=  90.2%;   R=    0.0%

Timetable parameters
-----------------------------------------
 Number of groups      :     46
 Number of tasks       :    144
 Number of rooms       :     36
 Number of assumptions :      0
 Task lead time        :    285
-----------------------------------------


<       [                                              ]        >

   Table report          Results check
```

summary of the scheme

Export and print the results of lesson planning

Main menu - Results - Export and print

setting the range of groups
or rooms for presentation of graphic files
(the first one on the left and top
should generate a series
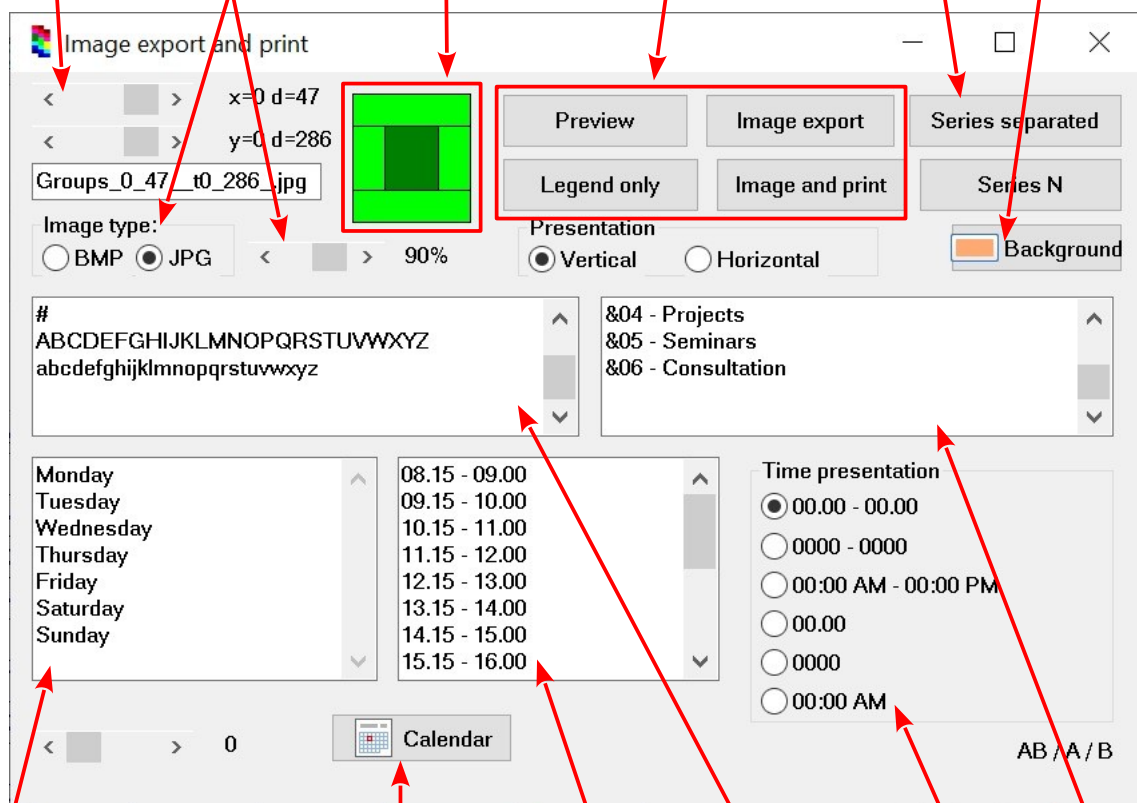set in the **Results** or **Arrangement** window)

preview and export the graphic file and print

series generation
of image files

presentation elements
(title, timeline panels,
legend)

settings
of background
(optional)

type and quality
graphic file

calendar of days allocation

title description

legends

names of cycles (e.g. days)

names of time units (e.g. hours)

notation format
time units

Calendar

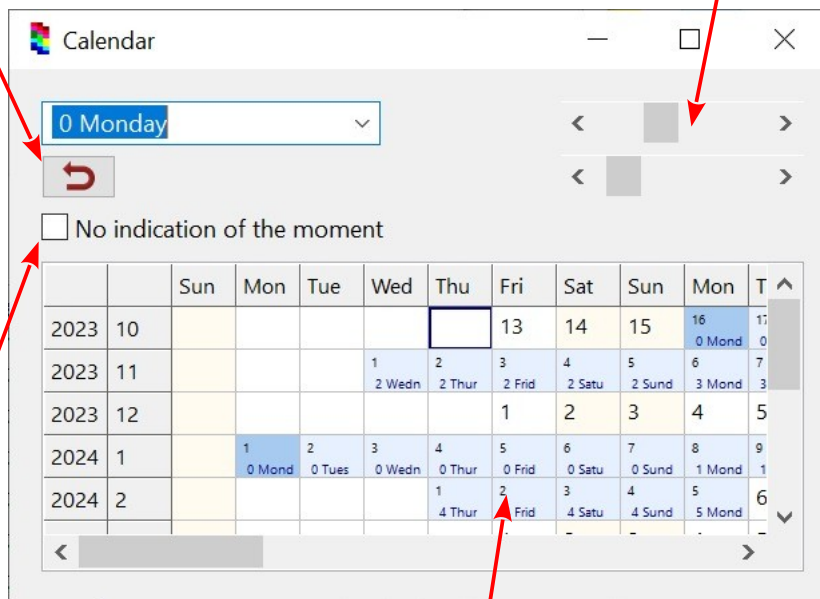The calendar is used to associate individual cycles of the scheme with the days of the year.

displayed number of the full list of cycles (e.g. week) and the name of the indicated cycle (e.g. day)

refresh the list of cycles
and deleting the contents of the calendar

calendar table setting
(control dimensions and typeface)

selection of day assignment to the indicated cycle (**left** mouse button)
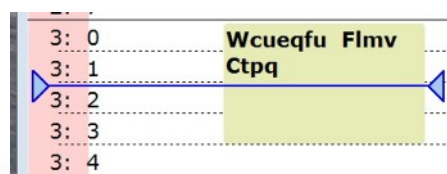allocate all cycles from the indicated one immediately (**right** mouse button)

enable the indication of the current moment in the **Arrangement** window with the plan background
Example of an excerpt from the **Arrangement** window with the moment of the plan:

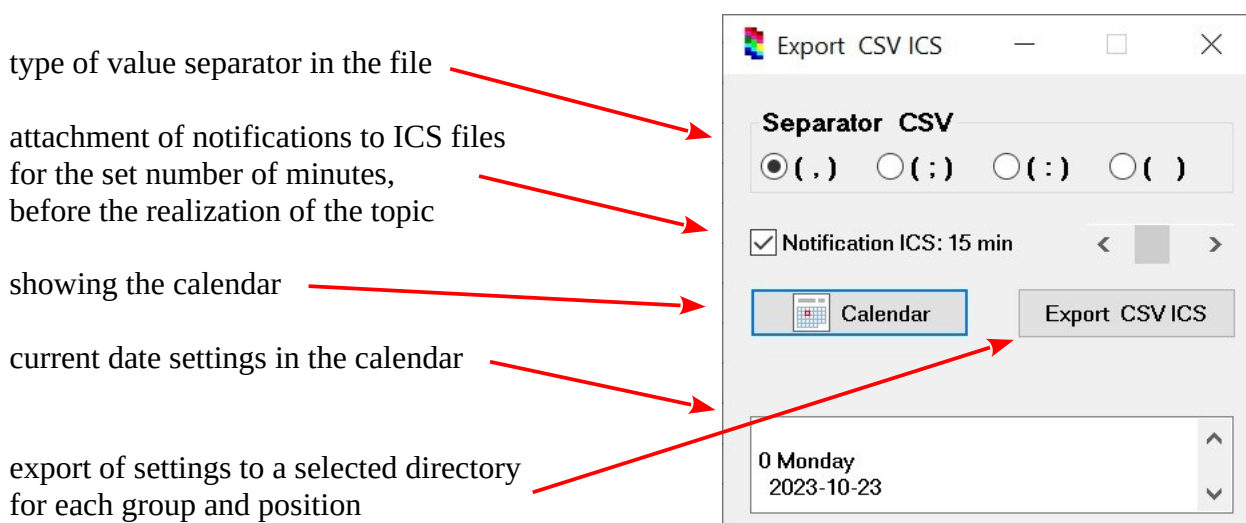inside a unit time position:
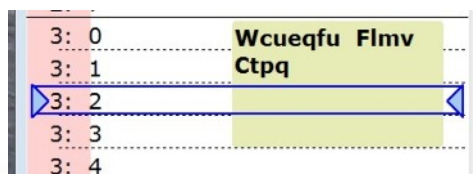
between two positions:

Export CSV ICS

Main menu - Results - CSV ICS export.

CSV ICS export leads to the simultaneous generation of CSV (Comma Separated Values) type and ICS type open calendar standard files for the set and individual groups and positions separately, based on a pre-filled calendar. It is necessary, for this purpose, to indicate the location and provide the name of the assumed destination directory. You can choose different types of separator (not just comma).

CSV and ICS files can potentially be used as the distribution of the calendar of classes in Android® and iOS® for individual participants in the implementation of the plan.

type of value separator in the file

attachment of notifications to ICS files
for the set number of minutes,
before the realization of the topic

showing the calendar

current date settings in the calendar

export of settings to a selected directory
for each group and position

In order to ensure the correct operation of timekeeping and calendar, the data of the list of items of moments (hours) of plan execution in the **Export and Print** window must be given according to the scheme:

HH.MM - HH.MM

Where HH and MM represent the hour and minute of the start and the hour and minute of the end of the plan unit. For example: **08.15 - 09.00**

The generated CSV files consist of the following elements:

>   Subject, Start Date, Start Time, End Date, End Time,
>   All Day Event, Description, Location, Private
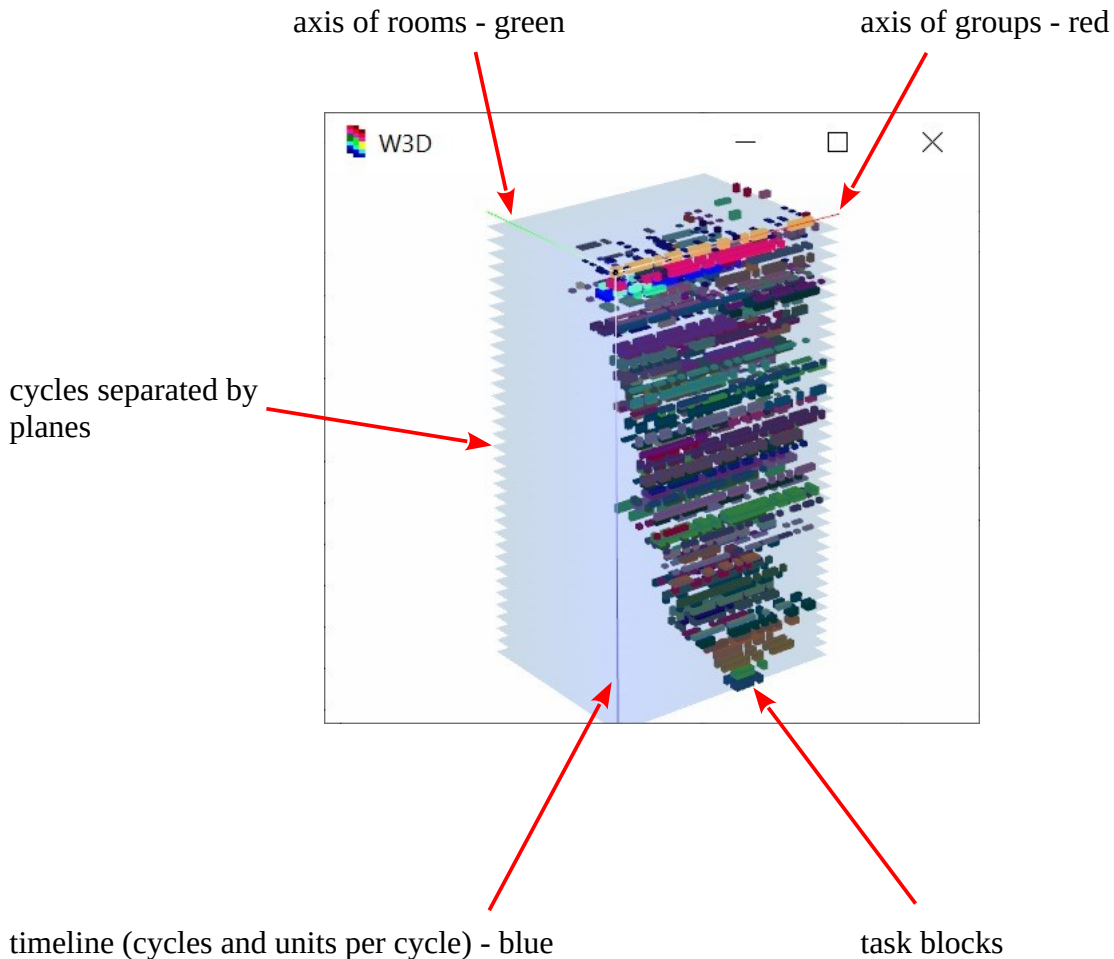
separated by a selected separator.

A three-dimensional view of the class layout diagram

Main menu - Results - 3D layout.

The diagram can be viewed as a three-dimensional presentation.
Controlling the viewpoint is done by moving the mouse and locking it with the left mouse button.
Zooming in and out is done with the mouse wheel.

axis of rooms - green

axis of groups - red

cycles separated by planes

timeline (cycles and units per cycle) - blue

task blocks

Import group and room reservations from another project

It is possible to load the reservation status of groups and positions from another project, in order to avoid conflicts during plan execution.

Main menu - File - Occupied groups or positions

The moment of importing reservations from another project (marking the beginning)

common groups or rooms with another project

Enabling the display of the occupancy status of of groups and rooms from another project (necessary to make a reservation)

refresh time of the current project

location of another project

selection: group or room

loading occupancy groups or positions to the current project

reservation and release of all occupied groups or positions from another project in the current project (if they do not overlap with the current task blocks)
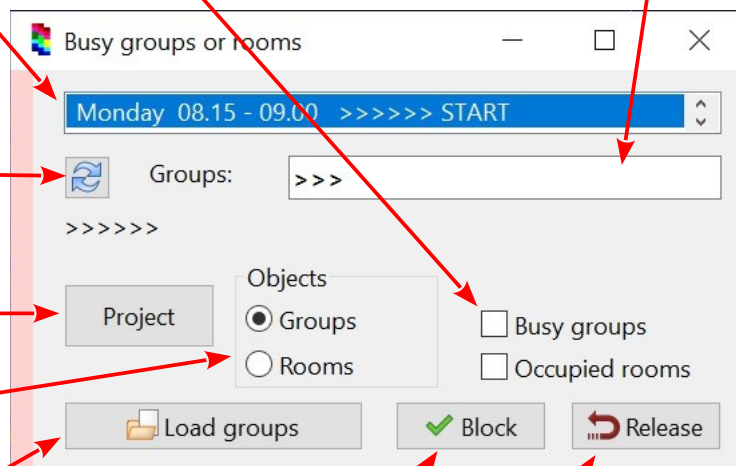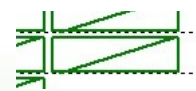
Presentation of occupancy of groups and rooms from another scheme (project):

groups:
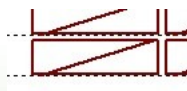
rooms:

Once they are made visible, you can turn bookings on and off for everyone at the same time.

Background and diagram frames (optional)

The timetable diagram can be presented with a changed background and superimposed illustrations (showing symbols of the organization, for example). The settings of the background parameters can be accessed from various places in the main menu and the **Background** button:

      Settings - Visual parameters - Background
      Results - Export and Print - Background

Settings for the type and thickness of horizontal and vertical, main and subordinate lines

setting the general background of the various parts of the diagram presentation, as in the Export and Print window (center panel, hours, days - cycles, title, legend).
Click the right mouse button and the color from the
Settings - Visual parameters will be assigned to the indicated presentation element

enable background mosaic option

inclusion of selected images

increase the size of the mosaic of background fragments

Selecting illustrations and their location relative to the diagram (must first be done **Preview** in the **Results - Export and Print** window).
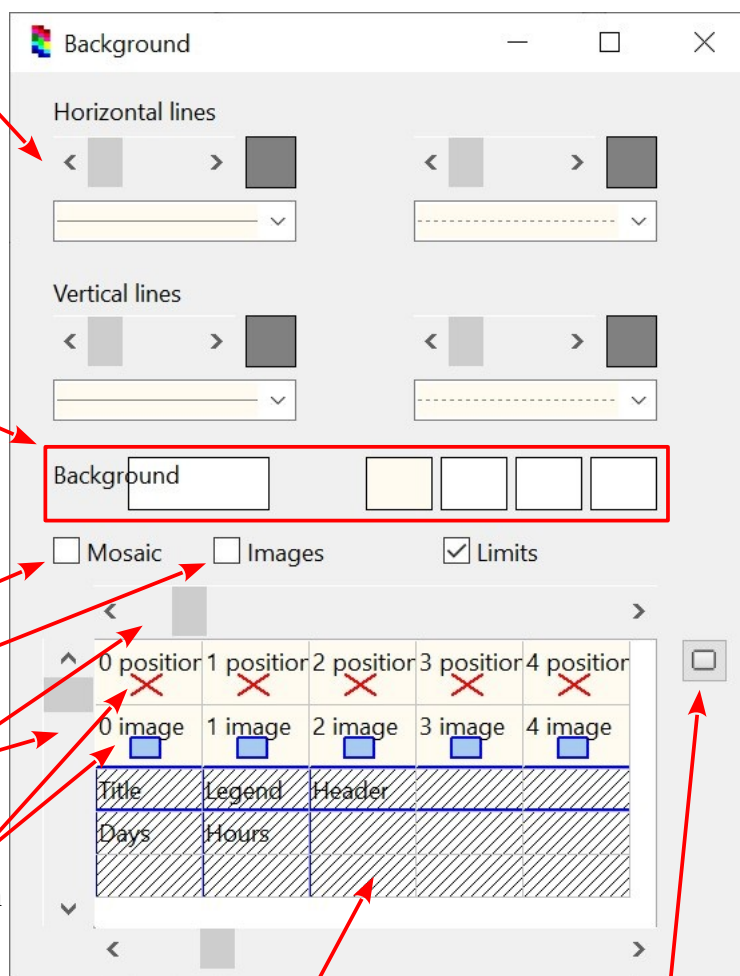Left and right mouse buttons.

setting the color of individual parts of the background mosaic of the diagram
To the color from Settings - Visual parameters.
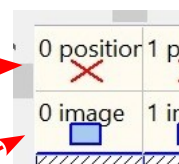The mosaic is repeated over the entire plan area.

zeroing the selected fragment of the mosaic

Defining the position of the illustration - mouse buttons:

      Left - position the illustration in the window
   (window will appear: **Position of illustration**)
      Right - level of the illustration in the plan presentation,
          (obscuring relative to other objects)

      Left - pointing to the location of the illustration file on the computer

Setting the illustration in the window is done after previewing in the **Results** - **Export and Print** window. To set the illustration drawing, the upper left and lower right corners of the image are indicated in the **Illustration Position** window.

The effect of using the background and typeface parameter settings from the
Main menu - Settings - Visual parameters
is to improve the readability of the presentation of the plan diagram and to be able to mark the presentation with illustrations. Example:
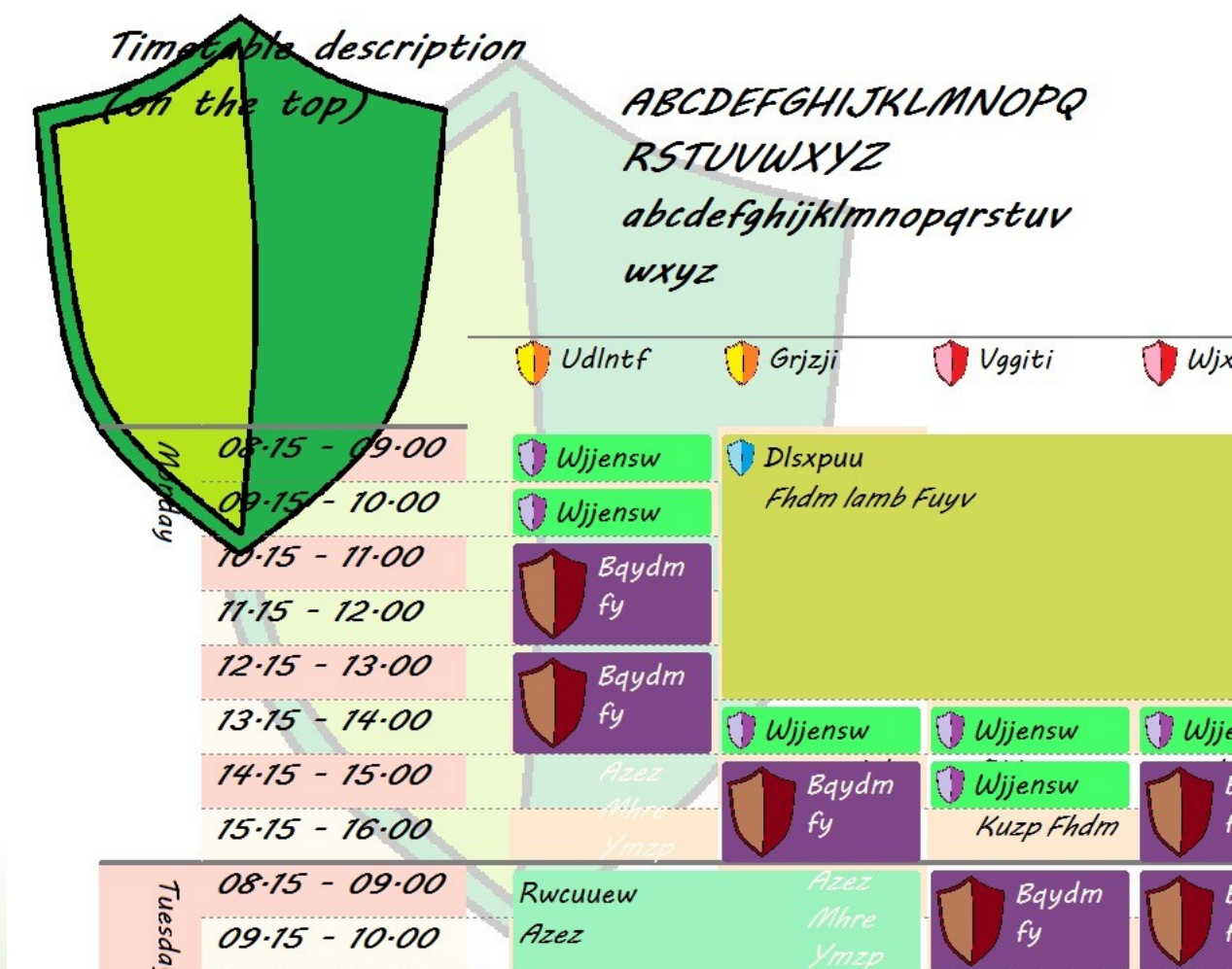
The course of arranging the timetable

1. Determine the number of tasks, groups and rooms

    The sliders are located in the tabs of the main form and are activated by an option from the main menu:

    Settings - Visual Parameters - Change the number.

    Set the number of groups, classes (tabs "**Tasks**", "**Groups**" and "**Rooms**" in the main form)

   Note: reducing the number of individual features causes deletion - it is best to disable the option after setting

    You can also start a new plan with the *File - New* option, specifying at once the established number of tasks, groups and rooms, which can be modified later.

2. Specify the names of groups, tasks and rooms (Settings - Names).

    The '/' sign before the name of the task (activity) means division with another task (diagonal)

    mark '|' in front of the name of the task (activity) means division with another task (vertical)

    the character '/' in front of the name of a task (activity) means division into two triangles

      (/)   (|)   (\ )
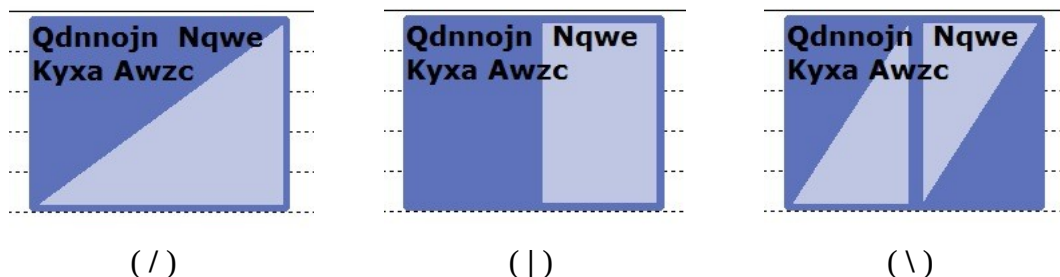
    The character '/' before the name of the group or position means setting the preceding vertical dash, of the color specified in the "Parameters" window

    Direct them to the main table (the "to table" buttons in the Tasks, Groups and Rooms tabs of the **Names** window)

3. Determine the number of hours per day

    - number of hours for a cycle (Main Form - Cycle)

    and the estimated number of cycles (Main form - N. Cycles)

4. Enter the name of the cycles (days) and the names of the time units of the plan (hours)

    (*Results - Export and print*)

5. Main form - **"Tasks" tab:**

    Specify the time required to complete the tasks ("**duration**")

    Specify for the lectures the range of groups involved ("**gr.first**" - "**gr.last**")

    Groups falling within this range will be assigned to a task if the number of task completion for them is greater than 0 (the "Groups" tab of the main form)

    If exercises are planned for individual groups then the range ("**gr.first**" - "**gr.last**") can be omitted or zeroes can be entered

    Specify the minimum number of classrooms for tasks ("**rooms.min**")

    Specify the maximum number of such tasks running simultaneously ("**subjects.max.**")

    Specify the moment when the task starts (optional, if not at the beginning) ("**start**")

    Specify the size of the break after the task (optional, if not zero) ("**break**")

Specify the color for the selected tasks (*Settings* - *Visual parameters*)

The right mouse button gives information about the occupancy of groups and rooms for a given task

6. Master Form - "Groups" tab:
Specify how many times a task must be performed by a group

The right mouse button activates the menu giving the range of selected groups, deleting and adding tasks and groups

7. Main Form - "Rooms" tab:
Indicate the classrooms that can or must be used for a specific task

Right mouse button activates the menu deleting and adding rooms (classrooms)

8. Assumptions (optional) (Settings - Assumptions):
Provide lists of different tasks that cannot be performed simultaneously
(there must be one blank at the end of the list of conditions),
This applies, for example, to tasks performed by a single teacher

9. Results - Arrangement - Scheme.
Perform the distribution of the plan
Displaying the plan in the "**Arrangement**" window is done using the buttons from the "**Results**" window.
These are:
"**In order**" - Arrange the plan as the tasks have been placed in the table "Tasks"
"**Random**" - plan according to randomly set tasks (different combinations)
"**Sorted**" - the plan set for the tasks, sorted according to the occupancy of the groups (first lectures or their completion time) from the largest to the smallest
"**Results**" window controls the display of the scheme in the "Arrangement" window. It sets:
"**Groups**" - distribution for groups
"**Rooms**" - distribution of occupancy of rooms
"**Selected tasks**" - tasks selected to be displayed for, for example, a single workplace selected from the entire schedule

Buttons in the "**Arrangement**" window (after selecting the display in the "**Results**" window):

"**Groups**" option in the "**Results**" window:
   left - change the status of the task (exercise or lecture)
         - unmarked (smooth)
         - marked for movement (hatched)
         - blocked - reserved (check)
   right - to move the view and enable the menu to select the passage,
         to lock or unlock a schematic fragment
   Ctrl or **Wheel** (mouse wheel) - moving the selected tasks in time
     (confirmed by the "**Transfer**" button in the **Results** window)
Information about problems given while moving the task:
   marked in red - setting on a locked task

marked in yellow - the indicated rooms are already blocked or occupied by blocked tasks
marked in white - the location of the task does not meet the list of given conditions
    or the task is simultaneously implemented in too many groups
marked in gray - location of the task simultaneously in two cycles
    (all contingencies cannot be accepted)

Alt - change the assignment of rooms to the blocked task, shown by the cursor
    (positions excluded from the list, are blocked or occupied by blocked tasks)

"**Rooms**" option in the "**Results**" window:

    left - reservation - blocking of rooms (positions)
    right - moving the view
    red are marked rooms with overbooking (several tasks to one room)
    or inconsistency of the declared task time with the performed reservation

Information about errors in the scheme is shown as black rectangles and red underlines (they refer to differences between the table and the scheme)

10. Results - **Report and control**
Checking the correctness of the solution (whether the rooms are not repeated at a given time). The last error is shown on the preview as a red horizontal line.

11. Parameters (Settings - Visual parameters)
Preparation for presentation
Set typeface and size
Set the dimensions of the unit on the plan
Set colors for task groups (marked in the main form, right table)

12. Results - Export and print
Prepare the image of the diagram for printing
Set the position of the upper left corner of the range
Specify the range in the number of groups - to the right and time - to the bottom

Have a pleasant work :-D

Information about the program

The project was done with the following tools:
>   Lazarus IDE 2.0 - 3.2: https://www.lazarus-ide.org/
>   https://indy.fulgan.com/SSL/
>   http://www.ararat.cz/synapse/doku.php/start
>   http://www.famfamfam.com/lab/icons/silk/
>   http://tango.freedesktop.org/Tango_Icon_Library

Program tests and current compilations are performed in the environments:
>   Windows® 7 64bit Home Premium Sp1, AMD® FX-8320E, 16 GB RAM,
>   Windows® 10 64bit Pro 22H2, AMD® Ryzen 5 Pro 4650G, 32 GB RAM,
>   Graphics: AMD® Ryzen 5 Pro 4650G,
>   Nvidia® GTX 1060 6GB, RTX 4070 12GB,
>   monitor 4K 60Hz.

64 bit program parameters:
>   Groups: 500; Tasks: 900; Rooms: 200; Conditions: 100
>   Selected presentation tasks: 100; Time: 3000 units.
>   Internet connection required for date checking.

Demo 64 bit program parameters:
>   Groups: 3; Tasks: 3; Rooms: 3; Conditions: 3
>   Selected presentation tasks: 3; Time: 100 units
>   No ability to edit task names and parameters.
>   No read and write capabilities.

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Installation

Installing the normal version of the program is done on the user's permanent disk. No modifications are made to the system. The program works as a portable version. Realized, for this purpose, are the following points:

- Create a directory, for placing the program, on the fixed disk.
- Place there all the files from the unpacked file "Program_plan.zip"
- Run the executable file "Serial_info.exe", specifying the main path of the drive, intended to install the program, for example, "C:\".
- Send the obtained control file "info.exc" to us and declare the period of use of the program (one year or more), according to the payment made.
- We will send the computer reference file "serial.exc".
- Put the "serial.exc" file in the directory with the program, which was established at the beginning.
- Now the main program should work, you can create a shortcut to it.

Note ! An Internet connection is required for the program to work.

Examples of lesson plan presentations for groups and positions

It is possible to select any range of groups or rooms, as well as selected tasks, for presentation.

Horizontal plan

Single group:

Two groups:

Single room:

Two rooms:

Vertical plan

Collective presentation of the groups:

Aggregate presentation of rooms:

Timetable description
(on the top)

ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz

		Tzpd	Ubui	Oxle	Cduv	Vqzw	Vyrp	Nlzo	Otez	Kemr	
Monday	08.15 - 09.00	Ozvxkvx Vkihhz	Aqpmaiv Uzsypy	Aqpmaiv Uzsypy	Aqpmaiv Uzsypy	Aqpmaiv Dfqjrh	Aqpmaiv Dfqjrh	Aqpmaiv Dfqjrh	Mysecrs Yfwwbf	Mysecrs Yfwwbf	08.15 - 09.00
	09.15 - 10.00										09.15 - 10.00
	10.15 - 11.00										10.15 - 11.00
	11.15 - 12.00										11.15 - 12.00
	12.15 - 13.00										12.15 - 13.00
	13.15 - 14.00	Yxfhlya	Yxfhlya	Yxfhlya	Yxfhlya	Bqkszob					13.15 - 14.00
	14.15 - 15.00	Pclujfw	Pclujfw	Pclujfw	Abejzyy	Abejzyy	Abejzyy	Abejzyy	Abejzyy	Abejzyy	14.15 - 15.00
	15.15 - 16.00	Yxfhlya	Yxfhlya	Yxfhlya	Pclujfw	Pclujfw	Pclujfw	Bqkszob	Bqkszob	Abejzyy	15.15 - 16.00
Tuesday	08.15 - 09.00	Aqpmaiv Xwgzbv	Aqpmaiv Xwgzbv	Aqpmaiv Xwgzbv	Mysecrs Iporfa	Mysecrs Iporfa	Mysecrs Iporfa	Aqpmaiv Tuafvc	Aqpmaiv Tuafvc	Aqpmaiv Tuafvc	08.15 - 09.00
	09.15 - 10.00										09.15 - 10.00
	10.15 - 11.00										10.15 - 11.00
	11.15 - 12.00										11.15 - 12.00
	12.15 - 13.00										12.15 - 13.00
	13.15 - 14.00	Bqkszob									13.15 - 14.00
	14.15 - 15.00	Pclujfw	Pclujfw	Abejzyy	Abejzyy	Abejzyy	Yxfhlya	Yxfhlya	Yxfhlya	Bqkszob	14.15 - 15.00
	15.15 - 16.00	Abejzyy	Pclujfw	Pclujfw	Pclujfw	Abejzyy	Abejzyy	Abejzyy	Yxfhlya	Yxfhlya	15.15 - 16.00
Wednesday	08.15 - 09.00	Aqpmaiv Mtuahp	Aqpmaiv Mtuahp	Aqpmaiv Mtuahp	Mysecrs Vtxlkt	Mysecrs Vtxlkt	Mysecrs Vtxlkt	Mysecrs Xwgzbv	Mysecrs Xwgzbv	Mysecrs Xwgzbv	08.15 - 09.00
	09.15 - 10.00										09.15 - 10.00
	10.15 - 11.00										10.15 - 11.00
	11.15 - 12.00										11.15 - 12.00
	12.15 - 13.00										12.15 - 13.00
	13.15 - 14.00										13.15 - 14.00
	14.15 - 15.00	Abejzyy	Pclujfw	Pclujfw	Pclujfw	Uubbchq Yigycc	Abejzyy	Abejzyy	Abejzyy	Bqkszob	14.15 - 15.00
	15.15 - 16.00	Pclujfw	Abejzyy	Abejzyy	Abejzyy		Abejzyy	Abejzyy	Abejzyy	Jzybmy	15.15 - 16.00
Thursday	08.15 - 09.00	Ozvxkvx Mtuahp	Ozvxkvx Mtuahp	Ozvxkvx Mtuahp	Tchdflk Ascgod	Tchdflk Ascgod	Xdrocfd Ecrhtz	Mysecrs Uzsypy	Mysecrs Uzsypy	Mysecrs Uzsypy	08.15 - 09.00
	09.15 - 10.00										09.15 - 10.00
	10.15 - 11.00										10.15 - 11.00
	11.15 - 12.00										11.15 - 12.00
	12.15 - 13.00				Pcpblhx Iporfa	Pcpblhx Iporfa					12.15 - 13.00
	13.15 - 14.00	Uubbchq Mhkklx	Bqkszob	Yxfhlya			Yxfhlya	Yxfhlya	Abejzyy	Abejzyy	13.15 - 14.00
	14.15 - 15.00		Abejzyy Iporfa	Abejzyy Iporfa	Bqkszob Tuafvc	Yxfhlya Ghccvj	Yxfhlya Ghccvj	Yxfhlya Ghccvj	Yxfhlya Dfqjrh	Yxfhlya Dfqjrh	14.15 - 15.00
	15.15 - 16.00										15.15 - 16.00
Friday	08.15 - 09.00	Fjusnhs Srjjini	Ozvxkvx Buibtu	Ozvxkvx Buibtu	Ozvxkvx Buibtu	Hgwkvct Mtuahp Vtxlkt Mhkklx Xwgzbv Tuafvc Vfplej Uzsypy Ghccvj Dfqjrl Yfwwbf Eqfsnm Aublzx Acmldz Yigycc	Dhwbcka Njmysi	Dhwbcka Njmysi	Dhwbcka Iporfa	Dhwbcka Iporfa	08.15 - 09.00
	09.15 - 10.00										09.15 - 10.00
	10.15 - 11.00										10.15 - 11.00
	11.15 - 12.00										11.15 - 12.00
	12.15 - 13.00										12.15 - 13.00
	13.15 - 14.00										13.15 - 14.00
	14.15 - 15.00	Bqkszob Ikhjst									14.15 - 15.00
	15.15 - 16.00										15.15 - 16.00

Legend (at the bottom)

- Lectures
- Exercises
- Labour
- Projects
- Seminars
- Consultation

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