

User guide for  
**GanttViewer**

Tomas Skalicky  
2008-07-24

## Contents

### Chapter 1: Before you begin

<u>Preface</u> .....	3
----------------------	---

### Chapter 2: Start and exit

<u>Start</u> .....	4
<u>Exit</u> .....	4

### Chapter 3: Work area

<u>Menu bar and toolbars</u> .....	5
<u>“Tasks” and “Resources” panes</u> .....	9

### Chapter 4: Creating, opening, closing and saving schedules

<u>Creating schedules</u> .....	11
<u>Opening schedules</u> .....	11
<u>Closing schedules</u> .....	13
<u>Saving schedules</u> .....	13

### Chapter 5: Modifying schedules

<u>Undo and redo changes</u> .....	15
<u>Changing schedule properties</u> .....	15
<u>Adding new tasks</u> .....	15
<u>Editing tasks</u> .....	16
<u>Removing tasks</u> .....	19
<u>Adding new resources</u> .....	19
<u>Editing resources</u> .....	19
<u>Removing resources</u> .....	20

### Chapter 6: Rescheduling

<u>Rescheduling</u> .....	21
---------------------------	----

---

## Chapter 1: Before you begin

### Preface

Program GanttViewer is designed for **displaying and modifying** project schedules in Gantt charts.

**Gantt chart** is a popular type of a bar chart that illustrates a project schedule. Gantt charts illustrate the start and finish dates of terminal elements and summary elements of a project. Terminal elements and summary elements comprise the work breakdown structure of the project. Some Gantt charts also show the dependency relationships between activities.

Program GanttViewer is independent on a platform. It means that it can be used on any operation system.

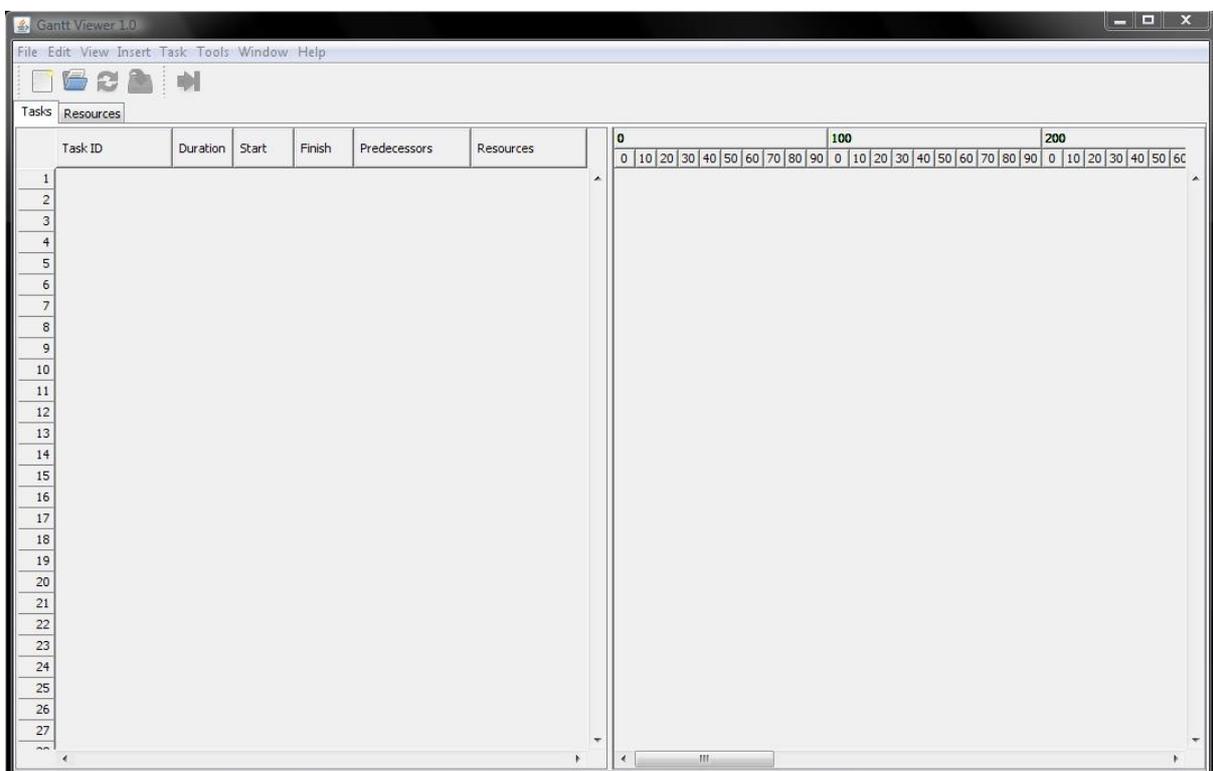
## Chapter 2: Start and exit

### Start

Before you start program GanttViewer, JAVA SDK or JRE is needed to be install. You can download it on <http://developers.sun.com/downloads/>.

You have to execute “**GanttViewer.jar**” file to start program GanttViewer.

After starting the program, the main window shows. You can display and modify a project schedule in it.



### Exit

When you want to exit from the program, all open schedules are checked whether they are saved.

## Chapter 3: Work area

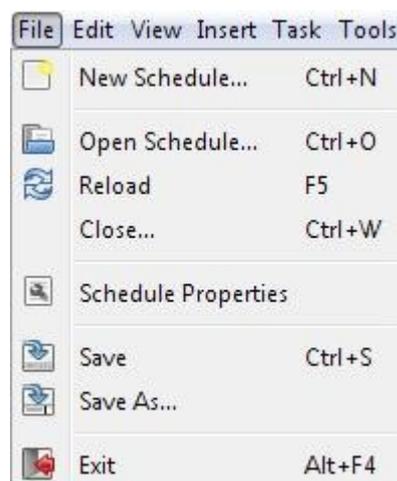
### Menu bar and toolbars

If you want to create a new schedule, switch to “Resources” pane or remove a selected task, you can do that using a menu bar or toolbars. There are details about them below.



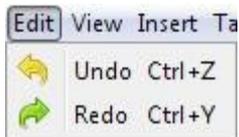
#### File

- > *New Schedule...*      If you want to create a new schedule. (See also [Creating schedules](#))
- > *Open Schedule...*      If you want to load a schedule from a file. (See also [Opening schedules](#))
- > *Reload*                      If you want to load the shown schedule again. You are asked whether you want to save unsaved changes. (See also [Opening schedules](#))
- > *Close...*                      If you want to close the shown schedule. You are asked whether you want to save unsaved changes. (See also [Closing schedules](#))
- > *Schedule Properties*      If you want to change properties of the shown schedule. (See also [Changing schedule properties](#))
- > *Save*                              If you want to save the shown schedule. (See also [Saving schedules](#))
- > *Save As...*                      If you want to choose a filename and save the shown schedule to a file with it. (See also [Saving schedules](#))
- > *Exit*                                If you want to exit from the program. (See also [Exit](#))



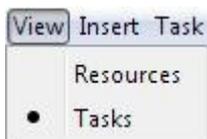
## Edit

- > *Undo* If you want to undo changes. (See also [Undo and redo changes](#))
- > *Redo* If you want to redo changes. (See also [Undo and redo changes](#))



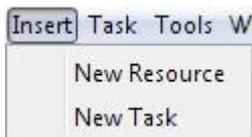
## View

- > *Resources* If you want to switch to “Resources” pane. (See also [“Resources” pane](#))
- > *Tasks* If you want to switch to “Tasks” pane. (See also [“Tasks” pane](#))



## Insert

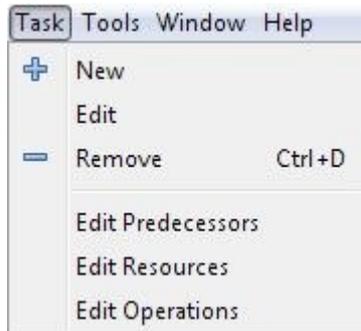
- > *New Resource* If you want to add a new resource. (See also [Adding new resources](#))
- > *New Task* If you want to add a new task. (See also [Adding new tasks](#))



## Task

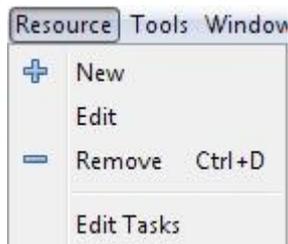
- > *New* If you want to create a new task. (See also [Adding new tasks](#))
- > *Edit* If you want to edit a focused task. (See also [Editing tasks](#))
- > *Remove* If you want to remove a focused task. (See also [Removing tasks](#))
- > *Edit Predecessors* If you want to edit predecessors of a focused task. (See also [Editing task's predecessors](#))
- > *Edit Resources* If you want to edit resources of a focused task. (See also [Editing task's resources](#))

- > *Edit Operations*      If you want to edit operations of a focused task. (See also [Editing task's operations](#))



## Resource

- > *New*      If you want to create a new resource. (See also [Adding new resources](#))
- > *Edit*      If you want to edit a focused resource. (See also [Editing resources](#))
- > *Remove*      If you want to remove a focused resource. (See also [Removing resources](#))
- > *Edit Tasks*      If you want to edit tasks of a focused resource. (See also [Editing resource's tasks](#))



## Tools

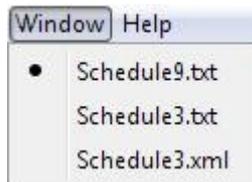
- > *Reschedule*      If you want to reschedule the shown schedule to have a correct schedule. (See also [Rescheduling](#))



## Window

- > *[an opened file with schedule]*

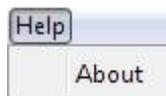
If you want to switch to another loaded schedule.



## Help

> *About*

If you want to know some information about the program.



## “Tasks” and “Resources” panes

In these panes, schedules are shown. Both panes are divided into two parts: the left one is a **table** and the right one is a **chart**.

Tables of both panes can be **sorted by all columns** (Task ID, Resource ID - sorted by string values; Duration, Start, Finish, Allocated Time - sorted by numeric values; Predecessors, Resources, Task - sorted by number of values).

Both charts have **time on x-axis**. Imaginary units are used. The least correct value of time is 0 and the least difference between two values is 1. When you want to **zoom** in (out) a chart, you only need to press the left button of your mouse when your mouse is above the header of a chart and drag your mouse to the right (left). Values in cells of the header will change when cells' widths are big or small enough. Number of cells is fixed.

0										100										200				
0	10	20	30	40	50	60	70	80	90	0	10	20	30	40	50	60	70	80	90	0	10	20	30	40

*Default view*

0											1000
0	100	200	300	400	500	600	700	800	900	0	

*Zoomed out view*

### “Tasks” pane

In the table, there are shown all tasks and details about them. All columns are editable.

TaskID	Duration	Start ▲	Finish	Predecessors	Resources
--------	----------	---------	--------	--------------	-----------

In the chart, there are **images of tasks** and **images of dependencies** between tasks. Images of tasks are next to rows of the table with details about the tasks.

RodLathe-01	7	14	21	Unknown-1	VTPlus-15, H1
Unknown-1	10	1	11		VTPlus-15
Task2	61	54	115	RodLathe-01, Task-03	H1
Task-03	25	27	52	RodLathe-01	VTPlus-15
Unknown-2	30	53	83	Task-03	VTPlus-15, H1

If you want to **move** an image of a task, press the left button of your mouse when your mouse is above the image and drag your mouse where you want to place the image.

If you want to **resize** an image of a task, press the left button of your mouse when your mouse is above the left or the right side of the image and drag your mouse.

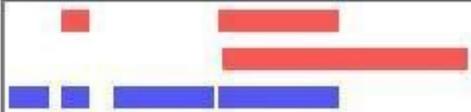
See also [Editing tasks](#)

## “Resources” pane

In the table, there are shown all resources and details about them. “Allocated Time” represents how long a resource is allocated for doing its tasks. All columns except “Allocated Time” are editable.

Resource ID	Allocated Time ▲	Tasks
-------------	------------------	-------

In the chart, there are **images of tasks**. No images of dependencies are there. Images of tasks are next to rows of the table with details about resources which are allocated for doing the tasks. It means that if a task is planned to be done by two resources, there is an image of the task next to the first resource and an image next to the second one.

H1	69	RodLathe-01, Unknown-2, Task2	
VTPlus-15	72	Unknown-1, RodLathe-01, Task-03, Unknown-2	

You can move and resize images of tasks as in “Tasks” pane.

If you want to **move** a task from **one resource to another**, press the left button of your mouse when your mouse is above the image of the task and drag it above the second resource.

See also [Editing resources](#)

## Chapter 4: Creating, opening, closing and saving schedules

### Creating schedules

If you want to create a new schedule, click on *File > New Schedule...* or *New Schedule...* in “File toolbar” or type *Ctrl+N*.

The new schedule has an ID in the form “Unknown-[number]” where “[number]” is the first free number of schedules with not specified ID.

### Opening schedules

If you want to load a schedule from a file, click on *File > Open Schedule...* or *Open Schedule...* in “File toolbar” or type *Ctrl+O*. If you want to load the shown schedule again, click on *File > Reload* or *Reload current schedule* in “File toolbar” or type *F5*.

The input file has to be a **text file** and have a fixed format (TXT format or XML format).

#### TXT format

Lines which begins with '#' character are **comments**. On the first line which is not comment, there is an **ID** of a schedule. Other lines which are not comments represents **tasks**. Each line is divided into cells by tabulators and in these cells, there are **TaskID**, **OrderID**, **ProductID**, **PartsIDs**, **Start**, **Finish**, **PredecessorsIDs**, **ResourcesIDs** in this order.

TaskID	.....	an ID of a task
OrderID	.....	an ID of an order
ProductID	.....	an ID of a product
PartsIDs	.....	IDs of operations which needs to be done during carrying out of the task
Start	.....	time when it is planned the beginning of carrying out of the task
Finish	.....	time when the task is planned to be finished
PredecessorsIDs	..	IDs of tasks which need to be finished before carrying out of the task begins
ResourcesIDs	....	IDs of resources which is allocated for carrying out of the task

In PartsIDs, PredecessorsIDs and ResourcesIDs, there are values divided by ',' character.

ScheduleID	TaskID	OrderID	ProductID	PartID,...,PartID	Start	Finish	PredecessorID,...,PredecessorID	
ResourceID,...,ResourceID	...	TaskID	OrderID	ProductID	PartID,...,PartID	Start	Finish	PredecessorID,...,PredecessorID
ResourceID,...,ResourceID								

## XML format

There is a definition of XML format in XML Scheme below.

```
<?xml version="1.0"?>
<xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema">
  <xs:element name="Schedule">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="ScheduleID" type="xs:string" />
        <xs:element name="Tasks">
          <xs:complexType>
            <xs:sequence>
              <xs:element ref="Task" minOccurs="0" maxOccurs="unbounded" />
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>

  <xs:element name="Task">
    <xs:complexType>
      <xs:sequence>
        <xs:element ref="TaskID" />
        <xs:element name="OrderID" type="xs:string" />
        <xs:element name="ProductID" type="xs:string" />
        <xs:element name="Parts">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="PartID" type="xs:string" />
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="Start">
          <xs:complexType>
            <xs:sequence>
              <xs:element ref="Value" />
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="Finish">
          <xs:complexType>
            <xs:sequence>
              <xs:element ref="Value" />
            </xs:sequence>
          </xs:complexType>
        </xs:element>
        <xs:element name="Predecessors">
          <xs:complexType>
            <xs:sequence>
              <xs:element ref="TaskID" />
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:sequence>
    </xs:complexType>
  </xs:element>

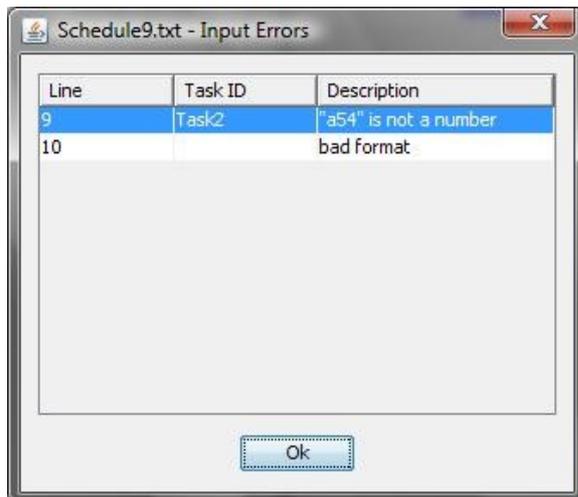
```

```
</xs:element>
  <xs:element name="Resources">
    <xs:complexType>
      <xs:sequence>
        <xs:element name="ResourceID" type="xs:string" />
      </xs:sequence>
    </xs:complexType>
  </xs:element>
</xs:sequence>
</xs:complexType>
</xs:element>

  <xs:element name="TaskID" type="xs:string" />

  <xs:element name="Value" type="xs:integer" />
</xs:schema>
```

If the input file is not in a correct format, “Input errors” dialog will show details about **errors**. Schedule which is in that file will be loaded without data with errors.



## Closing schedules

If you want to close the shown schedule, click on *File > Close...* or type *Ctrl+W*.

You are asked whether you want to save unsaved changes.

## Saving schedules

If you want to save the shown schedule, click on *File > Save* or *Save* in “File toolbar” or type *Ctrl+S*. If

---

you want to choose a filename and save the shown schedule to a file with it, click on *File > Save As...*  
You can save a schedule in TXT format or XML format.

## Chapter 5: Modifying schedules

### Undo and redo changes

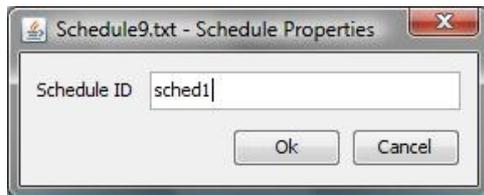
If you add or remove a task or a resource, you can undo it by clicking on *Edit > Undo* or typing *Ctrl+Z*.

If you have used undo function last time, you can redo the last change by clicking on *Edit > Redo* or typing *Ctrl+Y*.

### Changing schedule properties

If you want to change properties of the shown schedule, click on *File > Schedule Properties*. After that, "Schedule Properties" dialog will display.

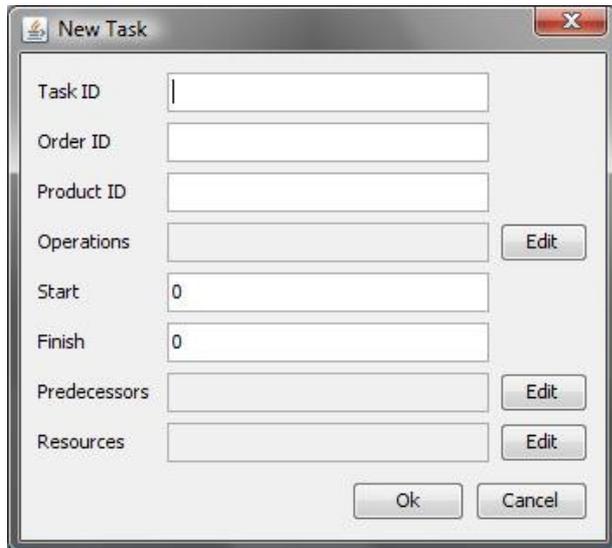
In it, you can change an **ID** of the schedule.



### Adding new tasks

If you want to add a new task, click on *Insert > New Task*, *Task > New* or *New Task* in a popup menu which is above the table of "Tasks" pane or in "Tasks" and "Predecessors" dialog, you can use "New Task" button. After any of these possibilities, dialog "New Task" will display.

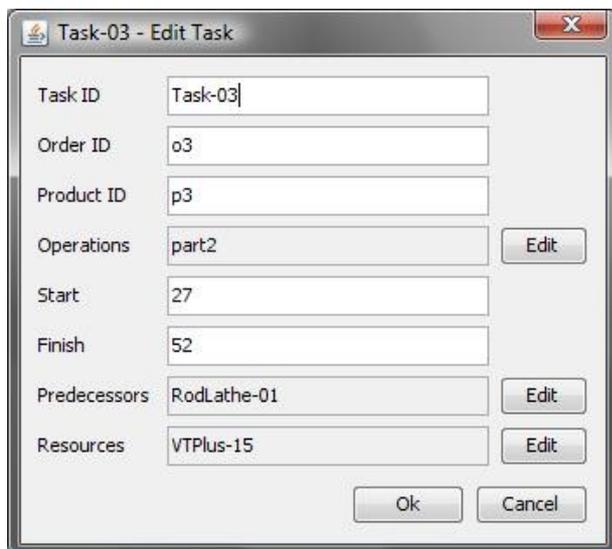
In it, you can set details of the new task. (See also [Editing tasks](#))



## Editing tasks

If you want to edit a focused task, click on *Task > Edit* or *Edit Task* in a popup menu which is above the table of “Tasks” pane. After any of these possibilities, dialog “Edit Task” will display.

In it, you can change details of the focused task.



- Task ID ..... an ID of the focused task
- Order ID ..... an ID of an order
- Product ID ..... an ID of a product

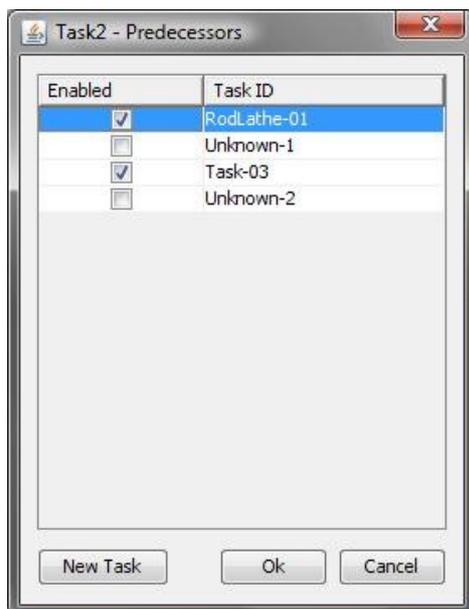
Operations . . . . .	IDs of operations which needs to be done during carrying out of the task (See also <a href="#">Editing task's operations</a> )
Start . . . . .	time when it is planned the beginning of carrying out of the task
Finish . . . . .	time when the task is planned to be finished
Predecessors . . . . .	IDs of tasks which need to be finished before carrying out of the task begins (See also <a href="#">Editing task's predecessors</a> )
Resources . . . . .	IDs of resources which is allocated for carrying out of the task (See also <a href="#">Editing task's resources</a> )

If you only want to change values of time, you can move or resize an image of the task in any chart. (See also ["Tasks" pane](#), ["Resources" pane](#))

### Editing task's predecessors

If you want to change predecessors of a focused task, click on *Task > Edit Predecessors*. After that, "Predecessors" dialog will display.

In it, you can select tasks, which will be predecessors of the focused task.



### Editing task's resources

If you want to change resources of a focused task, click on *Task > Edit Resources*. After that, "Resources" dialog will display.

In it, you can select resources, which will be allocated for carrying out the focused task.



### Editing task's operations

If you want to change operations of a focused task, click on *Task > Edit Operations*. After that, "Operations" dialog will display.

In it, you can modify operations, which will be done during carrying out the focused task.



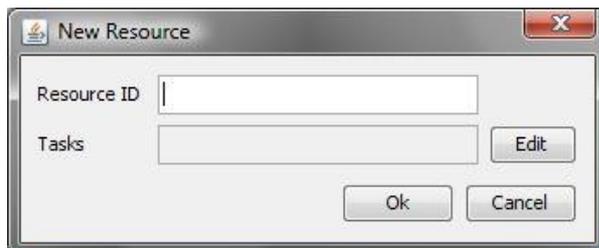
## Removing tasks

If you want to remove a focused task, click on *Task > Remove* or *Remove Task* in a popup menu which is above the table of “Tasks” pane or type *Ctrl+D*.

## Adding new resources

If you want to add a new resource, click on *Insert > New Resource*, *Resource > New* or *New Resource* in a popup menu which is above the table of “Resources” pane or in “Resources” dialog, you can use “New Resource” button. After any of these possibilities, dialog “New Resource” will display.

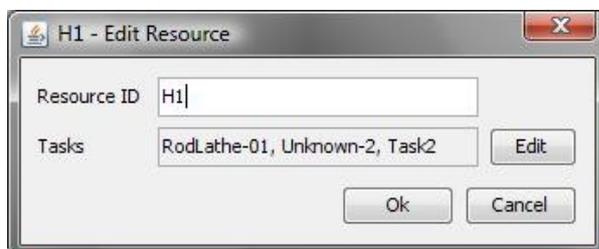
In it, you can set details of the new resource. (See also [Editing resources](#))



## Editing resources

If you want to edit a focused resource, click on *Resource > Edit* or *Edit Resource* in a popup menu which is above the table of “Resources” pane. After any of these possibilities, dialog “Edit Resource” will display.

In it, you can change details of the focused resource.



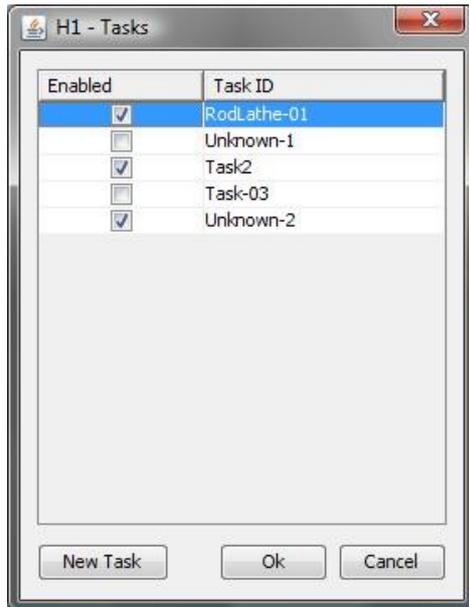
Resource ID . . . . . an ID of the focused resource

Tasks . . . . . IDs of tasks which are carried out by the resource (See also [Editing resource's tasks](#))

## Editing resource's tasks

If you want to change tasks of a focused resource, click on *Resource > Edit Tasks*. After that, "Tasks" dialog will display.

In it, you can select tasks, which will be carried out by the focused resource.



## Removing resources

If you want to remove a focused resource, click on *Resource > Remove* or *Remove Resource* in a popup menu which is above the table of "Resources" pane or type *Ctrl+D*.

---

## Chapter 5: Rescheduling

### Rescheduling

If you want to have a **correct schedule**, you can use rescheduling function.

Schedule is correct whether:

- no task begins earlier than all its' predecessors finish,
- each resource carry out up to one task at a time.

Conflicts are solved locally. It means that tasks are shifted as few as possible.