# **Issue lists**

### Overview

The Issue list data type is an ordered list of issues.

This data type is returned by functions returning selections of issues (linked issues, sub-tasks, issues in a project, or subsets).

#### (i) Example

An issue list with 5 elements: [HR-1,HR-2,HR-3]

## Issue list functions

Sustering lists functions either return issue lists (e.g. [issuekey-1,issuekey-2,issuekey3,...]) or string lists or number lists for retrieving issue fields

The following functions are intended to build expressions that reference **linked issues**, **sub-tasks**, or doing any kind of **issue selection**, and for retrieving their field values.

Function	Input	Returned value
subtasks()		Returns the Issue of sub-tasks of current issue.
<b>subtasks</b> (iss ue list <b>issues</b> )	ISSUE []	Returns the ISSUE Of sub-tasks of issues in argument <b>issues</b> . Duplicated issues in argument <b>issues</b> are discarded. Example: subtasks(linkedIssues()) returns the list of subtasks of linked issues.
subtasks(str ing issue_ke ys)	STRING	Returns the <b>ISSUE</b> of sub-tasks of issues whose keys are in <b>issue_keys</b> . Argument <b>issue_keys</b> is a comma separated list of issue keys. Duplicated issue keys in argument <b>i</b> <b>ssue_keys</b> are discarded. Example: <b>subtasks</b> (%{parentIssuekey}) returns the list of sub-tasks of parent issue, i.e., sibling sub-tasks plus current sub-task.
siblingSubt asks()		Returns the <pre>issue issue issue for sibling sub-tasks of current sisue, i.e., all sub-tasks with the same parent as current issue, except current issue. In case current issue is not a sub-task, an empty issue list will be returned. Note that siblingsubtasks() is equivalent to subtasks(%{parentIssuekey}) EXCEPT issueKeysToIssueList(%{Issuekey}), where %{parentIssuekey} is Parent's issue key and %{ Issuekey} is Issue key.</pre>
siblingSubt asks(issue list issues)	ISSUE []	Returns the ISSUE I of sibling sub-tasks of issues in argument <b>issues</b> , provided they are sub-tasks. Duplicated issues in argument <b>issues</b> are discarded.
siblingSubt asks(string i ssue_keys)	STRING	Returns the ussue of sibling sub-tasks of issues whose keys are in <b>issue_keys</b> , provided they are sub-tasks. Argument <b>issue_keys</b> is a comma separated list of issue keys. Duplicated issue keys in argument <b>issue_keys</b> are discarded.
linkedIssues ()		Returns the ISSUE ] of issues linked to current issue, including <b>Epic-Task</b> links. An issue appears in the output as many times as is linked to current issue. Function <b>distinct</b> (iss ue list) can be used to remove duplicated issues. Example: distinct(linkedIssues() EXCEPT linkedIssues("has Epic, is Epic of")) returns all the issues linked to current issue, excluding <b>Epic-Task</b> issue links.

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linkedIssues (string issue _link_types)	STRING	Returns the ISSUE ] of issues linked to current one using issue link types in argument issue_link_types. Argument i ssue_link_types is a comma separated list of issue link type names, or an empty string ("") for representing all issue link types, i.e., linkedIssues("") is equivalent to linkedIssue s(). Example: linkedIssues("blocks, clones") returns all issues linked with to current issue using issue link types blocks or clones.
linkedIssues (string issue _link_types, issue list iss ues)	STRING ISSUE []	Returns the <pre>issue issue issue issue in argument issues using issue link types in argument issue_link_types. Duplicated issues in argument issues are discarded. Example: linkedIssues("", subtasks()) returns all issues linked to current issue's sub-tasks using any issue link type.</pre>
linkedIssues (string issue _link_types, string issue_ keys)	STRING	Returns the <u>ISSUE</u> of issues linked to those ones whose keys are in argument <b>issue_keys</b> . Argument <b>issue_keys</b> is a comma separated list of issue keys. Duplicated issue keys in argument <b>issue_keys</b> are discarded. Example: linkedIssues("is blocked by", %{ parentIssuekey}) returns all issues blocking parent issue.
transitionLi nkedIssues( string issue_ link_types)	STRING	Returns the ISSUE [] of issues linked to current one with links created in current transition screen using issue link types in argument issue_link_types. Argument issue_link_typ es is a comma separated list of issue link type names, or an empty string ("") for representing all issue link types, i.e., tran sitionLinkedIssues("") is equivalent to transitionLinkedIssues(). This function is useful for validating only new issue links created by user in transition screen. Example: transitionLinkedIssues("blocks, clones") returns the list of issues linked in current transition's screen using issue link types blocks and clones.
transitively LinkedIssues (string issue _link_types)	STRING	Returns the ISSUE I of issues directly or transitively linked to current issue using issue link types in argument issue_I ink_types. Argument issue_link_types is a comma separated list of issue link type names, or an empty string ("") for representing all issue link types. Example of transitive link: if ISSUE-1 blocks ISSUE-2 blocks ISSUE 3, then ISSUE-1 is blocking transitively ISSUE-3.
transitively LinkedIssues (string issue _link_types, issue list iss ues)	STRING ISSUE []	Returns the <b>ISSUE</b> of issues directly or transitively linked to those ones in argument <b>issues</b> using issue link types in argument <b>issue_link_types</b> . Argument <b>issue_link_types</b> is a comma separated list of issue link type names, or an empty string ("") for representing all issue link types.
transitively LinkedIssues (string issue _link_types, string issue_ keys)	STRING	Returns the <b>ISSUE</b> of issues directly or transitively linked to those ones in argument <b>issue_keys</b> using issue link types in argument <b>issue_link_types</b> . Argument <b>issue_link_typ</b> <b>es</b> is a comma separated list of issue link type names, or an empty string ("") for representing all issue link types.
epic()		Returns an <b>ISSUE</b> containing current issue's epic, in case current issue is directly under an epic (e.g., a <b>Story</b> ). If current issue is a sub-task, then the epic of its parent issue is returned. If current issue is an epic itself, then current issue is returned.
epic(issue list issues)	ISSUE []	Returns the <b>ISSUE</b> of epic issues under which those issues in argument <b>issues</b> are. If some of those issues are sub-tasks, then the epic of their parent is returned. Duplicated issues in argument issues are discarded. Output can contain duplicated issues. Example: epic(linkedIssues("is blocked by")) retur ns the list of epics of those issues which are blocking current issue.

epic(string is sue_keys)	STRING	Returns the ISSUE Of epic issues under which those issues with keys in <b>issue_keys</b> are. If some of those issues are sub-tasks, the epic of their parent is returned. Argument <b>issue_keys</b> is a comma separated list of issue keys. Duplicated issue keys in argument <b>issue_keys</b> are discarded. Output can contain duplicated issues. Example: epic("CRM-15, HD-21") returns the list of epics under which issues with keys CRM-15 and HD-21 are.
issuesUnde rEpic()		Returns an <b>ISSUE</b> containing issues which are directly under current issue's epic (i.e., <b>Stories</b> are included in the output, but their <b>sub-tasks</b> are not). Current issue's epic is obtained using the logic of function epic(). Current issue is included in the output, except if current issue is an epic itself.
issuesUnde rEpic(issue list issues)	ISSUE []	Returns an <b>ISSUE</b> containing issues which are directly under the epic of issues in argument <b>issues</b> . Duplicated issues are filtered from output. Example: <b>issuesUnderEpic(linkedIssues("is</b> <b>blocked by"))</b> returns the list of issues directly under epics of issues blocking current issue.
issuesUnde rEpic(string i ssue_keys)	STRING	Returns an <b>ISSUE</b> containing issues which are directly under the epic of issues with keys in argument <b>issue_ke</b> <b>ys</b> . Argument <b>issue_keys</b> is a comma separated list of issue keys. Duplicated issues are filtered from output. Example: <b>issuesUnderEpic</b> ("CRM-15, HD-21") returns the list of issues directly under epic of issues with keys CRM-15 and HD-21.
siblingIssue sUnderEpic()		Returns an <b>ISSUE</b> containing issues which are directly under epic of current issue (i.e., <b>Stories</b> are included in the output, but their <b>sub-tasks</b> are not), excluding current issue. Current issue should be an issue directly under an epic, (i.e., it can't be a <b>sub-task</b> or an <b>epic</b> ).
siblingIssue sUnderEpic( issue list iss ues)	ISSUE []	Returns an <b>ISSUE</b> containing issues which are directly under the epic of issues in argument <b>issues</b> , excluding issues in argument <b>issues</b> from the output. Duplicated issues are filtered from output. Example: <b>siblingIssuesUnderEpic(linkedIssues("is</b> <b>blocked by"))</b> returns the list of issues directly under epics of issues blocking current issue, excluding from the output issues blocking current issue.
siblingIssue sUnderEpic( string issue_ keys)	STRING	Returns an <u>ISSUE []</u> containing issues which are directly under the epic of issues with keys in argument <b>issue_ke</b> <b>ys</b> , excluding from the output issues with keys in argument <b>issue</b> <b>keys</b> . Argument <b>issue_keys</b> is a comma separated list of issue keys. Duplicated issues are filtered from output. Example: <b>siblingIssuesUnderEpic("CRM-15, HD-21")</b> returns the list of issues directly under epic of issues with keys <b>C</b> <b>RM-15</b> and HD-21, excluding from the output issues with keys <b>C</b> <b>RM-15</b> and HD-21.
issuesFrom JQL(string jq I_query)	STRING	Returns the ISSUE I resulting of the execution of a JQL query represented by string argument jql_query. Visibility permissions applied are those of current user. We advice to use this function for performance reasons when the number of issues to be retrieved or filtered is very high (all issues in a project or various projects). Typically you will want to use this function for replacing any current expression using getIssuesFr omProjects() function.
issuesFrom JQL(string jq I_query, string user_ name)	STRING	Returns the <b>ISSUE</b> resulting of the execution of a JQL query represented by string argument <b>jql_query</b> . Visibility permissions applied are those of user in argument <b>user_name</b> . We advice to use this function for performance reasons when the number of issues to be retrieved or filtered is very high (all issues in a project or various projects). Typically you will want to use this function for replacing any current expression using <b>getIs suesFromProjects()</b> function.

filterBylssu eType(issue	ISSUE []	Filters ISUE II in argument issues, leaving only
list issues, string issue_ types)	STRING	those issue types appearing in argument issue_types. Argument issue_types is a comma separated list of issue type names. Example: filterByIssueType(subtasks(), "Bug, Improvement, New Feature") returns the list of sub-tasks with issue types Bug, Improvement or New Feature.
filterByStat	ISSUE []	Filters Issue [] in argument issues, leaving only
us(issue list i ssues, string status es)	STRING	those ones in statuses appearing in argument statuses. Argument statuses is a comma separated list of status names. Example: filterByStatus(linkedIssues("is blocked by"), "Open, Reopened, In Progress") returns the list of blocking issues in statuses Open, Reopened or In Progress.
filterByStat	ISSUE []	Filters Issue in argument issues, leaving only
usCategory( issue list iss ues, string st atus_catego ries)	STRING	those ones in statuses with categories in status_categories. Argument status_categories is a comma separated list of status category names. Example: filterByStatusCategory(linkedIssues("is blocked by"), "New, In Progress") returns the list of blocking issues in statuses with categories New or In Progress.
filterByRes	ISSUE []	Filters ISSUE ] in argument issues, leaving only
olution(issu e list issues, string resolu tions)	STRING	those ones with resolutions appearing in argument <b>resolutions</b> . Argument <b>resolutions</b> is a comma separated list of resolution names. If this argument receives an empty string (""), the function will return issues with unset field Resolution. Example: filterByResolution(subtasks(), "Won't Fix, Cancelled") returns the list of sub-tasks with resolutions Won't Fix or Cancelled.
filterByProj ect(issue list	ISSUE []	Filters issue in argument issues, leaving only
issues, string projec ts)	STRING	those ones in projects present at argument <b>projects</b> . Argument <b>projects</b> is a comma separated list of project keys. Example: filterByProject(linkedIssues(), "CRM, HR") returns the list of linked issues belonging to projects with keys CRM or HR.
filterByProj	ISSUE []	Filters Issue in argument issues, leaving only
ectCategory (issue list iss ues, string p roject_cate gories)	STRING	those ones in projects with category in <b>project_categories</b> . Argument <b>project_categories</b> is a comma separated list of project category names. Example: filterByProjectCategory(linkedIssues(), "Development, Production") returns the list of linked issues belonging to projects in categories keys Development or Production.
filterByField	ISSUE []	Filters Issue in argument issues, leaving only
Value(issue list issues,	NUMBER	those issues where logical predicate formed by arguments <b>field</b> <b>operator n</b> is evaluated as true. Available comparison operators
numeric field <b>field</b> , comparison operator <b>ope</b> <b>rator</b> , number <b>n</b> )		<pre>are =, !=, &lt;, &lt;=, &gt; and &gt;= . Argument field has format { somefield}. Example: filterByFieldValue(subtasks(), {00079}, &gt;, 1) returns sub-tasks with more than one Affects Version/s.</pre>
filterByField Value(issue list issues, string field fi eld, comparison operator ope rator, string s )	ISSUE []	Filters Issue in argument issues, leaving only
	STRING	those issues where logical predicate formed by arguments field operator s is evaluated as true. Available comparison operators are =, !=, <, <=, >, >=, ~, !~, in and not in. Case ignoring operators are also available: =~, !=~, ~~, !~~, in~ and not in~. Argument field has format %{somefield} for string fields, or %{somefield.} for cascading select fields. Example: filterByFieldValue(linkedIssues(), %{ components}, ~, "Web") returns linked issues with component "Web".

filterByCard inality(issue	ISSUE []	Returns ISUE in I whose cardinality (i.e., the number of times it appears in list I) satisfies the comparison
list I, comparison operator <b>ope</b> <b>rator</b> , number <b>n</b> )		<pre>cardinality operator n. Available comparison operators: =, ! =, &lt;, &lt;=, &gt; and &gt;= . Example: filterByCardinality(linkedIssues(), &gt;, 1) returns a list with all issues linked to current issue with 2 or</pre>
		more issue links.
append(issu e list I, issue list m)	ISSUE []	Returns with all issues in arguments I and m . Duplicated issues may appear in output. Use function union(I, m) instead, if you want to avoid repetitions. Example: append(linkedIssues("is blocked by"), subtasks()) returns the list blocking issues plus sub-tasks. If a sub-task is also linked with issue link type "is blocked by", it will appear twice in the output list.
union(issue list I, issue list m)	ISSUE []	Returns <b>ISSUE</b> with all issues in argument I or in argument <b>m</b> without duplicated issues. Example: union(linkedIssues(), subtasks()) returns the list of linked issues and sub-tasks of current issue, without issue repetitions.
except(issue list I, issue list m)	ISSUE []	Returns <b>ISSUE</b> with all issues in argument I which are not in argument <b>m</b> . Duplicated issues in I may appear in output. Use function <b>distinct()</b> to remove them if you need to. Example: <b>except(linkedIssues(), subtasks())</b> returns the list of linked issues removing those which are also sub-tasks of current issue.
intersect(iss ue list I, issue list m)	ISSUE []	Returns <b>ISSUE</b> with all issues in argument I and <b>m</b> simultaneously. Example: intersect(linkedIssues(), subtasks()) returns the list of linked issues which are also sub-tasks of current issue.
distinct(issu e list I)	ISSUE []	Returns <u>ISSUE</u> with all issues in list I without any duplication. Example: distinct(linkedIssues()) returns the list of linked issues, with only one occurrence per issue, although an issue may be linked with more than one issue link type.
fieldValue(st ring field field , issue list is sues)	STRING ISSUE []	Returns the <b>STRING</b> of string values stored in argument field in those issues in argument issues. Argument field has format %{somefield}, or %{somefield.i} for cascading select fields. The number of values in output is the number of issues in argument issues with field set, except for multi-valued fields, for which a value is returned for each selected value in the field. Multi-valued fields are fields of types Multi Select, Checkboxes, Components, Versions, Multi User Picker, Multi Group Picker, Issue Pickers, Attachments and Labels. Example: fieldValue(%{reporter}, subtasks()) returns the list of reporter users of sub-tasks.
fieldValue(n umeric field f ield, issue list issues)	NUMBER ISSUE []	Returns the <b>NUMBER []</b> of numeric values stored in argument <b>field</b> in those issues in argument <b>issues</b> . Argument <b>fie</b> <b>Id</b> has format <b>{somefield}</b> . The number of values in output is the number of issues in argument <b>issues</b> with <b>field</b> set. Example: fieldvalue({duedate}, subtasks()) returns the list of <b>Due Dates</b> of sub-tasks.
textOnIssue List(issue list issues, string text_e xpression)	ISSUE [] STRING	Returns a <b>STRING</b> resulting of evaluating <b>text_expre</b> <b>ssion</b> against each of the issues in argument <b>issues</b> . Argument <b>text_expression</b> is an expression that returns a <b>string</b> , where references to field values of issues in argument issues are done with prefix ^ before field code, eg., ^%{summary} is field code for Summary in each of the issues in argument <b>issues</b> . Example: textOnIssueList(subtasks(), ^%{ assignee} = ^%{reporter} ? ^%{Issuekey} : null) returns the issue keys of sub-tasks with same user as reporter and as assignee.

mathOnIssu eList(issue list issues, number mat h_time_exp ression)	ISSUE [] NUMBER	Returns a NUMBER [] resulting of evaluating math_time _expression against each of the issues in argument issues. Argument math_time_expression is a math/time expression, where references to field values of issues in argument issues are done with prefix ^ before field code, e.g., ^{duedate} is field code for <b>Due date</b> in each of the issues in argument issues Example: mathOnIssueList(linkedIssues("is blocked by"), (^{duedate} != null ? ^{ duedate} - ^{created} : 0) / {HOUR}) returns a list of numbers with the number of days from issue creation to due date for all issues linked using "is <b>blocked by</b> " issue link type.
numberOfR emotelssue Links(string issue_link_t ypes)	STRING	Returns the <b>NUMBER</b> of issue links to other Jira instances using any of the issue link types in argument <b>issue_lin</b> <b>k_types</b> . Argument <b>issue_link_types</b> is a comma separated list of issue link type names, or empty string ("") for representing all issue link types.
count(issue list I)	ISSUE []	Returns the <b>NUMBER</b> of issues in I. Example: count(filterByResolution(linkedIssues ("is blocked by"), "")) returns the number of non- resolved blocking issues.
getIssuesFr omProjects( string projec ts)	STRING	Returns an <b>ISSUE</b> with all issues of projects in argument <b>projects</b> . Argument <b>projects</b> is a string containing a comma separated list of project keys or project names. Example: getIssuesFromProjects("CRM, HT") returns all issues in project CRM and HT. This function can make your expression run slowly due to the high number of issues retrieved and needing to be filtered. Using <b>issuesFromJQL()</b> for retrieving and filtering issues will make your expression run much faster.
first(issue list I)	ISSUE []	Returns an ISUE I with the first element in issue list I, or an empty list if I is an empty list.
last(issue list I)	ISSUE []	Returns an ISUE I with the last element in issue list I , or an empty list if I is an empty list.
nthElement( issue list I, number n)	ISSUE [] NUMBER	Returns an $\{ISSUE []}$ with the element at position <b>n</b> in issue list <b>I</b> , where <b>n</b> >= 1 and <b>n</b> <= <b>count(I)</b> . Returns an <b>empty list</b> if <b>n</b> is greater than the number of elements in <b>I</b> .
sublist(issue list I, number inde xFrom, number inde xTo)	NUMBER	Returns an ISSUE [] with elements in I from indexFro m index to indexTo index. Having indexFrom >= 1 and indexFr om <= count(I) and indexTo >= 1 and indexTo <= count(I) and indexFrom <= indexTo.
indexOf(stri ng issue_key , issue list I)	STRING	Returns the index <b>NUMBER</b> in issue list I of issue with key <b>issue_key</b> . <b>Zero</b> is returned when issue is not found in I.
indexOf(issu e list element , issue list I)	ISSUE []	Returns the index <b>NUMBER</b> in issue list I of first issue in <b>element. Zero</b> is returned when first issue in <b>element</b> is not found in I.
sort(issue list I, field field , order)	ISSUE []	Returns an <u>ISSUE []</u> with elements in I ordered according to values of <b>field</b> . Argument <b>field</b> has format { <b>somefield</b> } for numeric and date-time fields, %{ <b>somefield</b> } for string fields, or %{ <b>somefield.i</b> } for cascading select fields. Available orders are <b>ASC</b> (for ascending order) and <b>DESC</b> (for descending order). Example: sort(linkedIssues("is blocked by"), { duedate}, ASC) returns the list of issues blocking current issue, sorted in ascending order by <b>Due date</b> .

Examples

Input	Output
subtasks()	Returns the list of sub-tasks of the current issue.
<pre>linkedIssues("is blocked by, is caused by")</pre>	Returns the list of issues linked to current one through issue link types " <b>is blocked by</b> " and " <b>is caused by</b> ".
<pre>filterByIssueType (linkedIssues(), "Bug, Incident")</pre>	Returns the list of linked issues with issue type " <b>Bug</b> " or " Incident".
<pre>filterByPredicate (siblingSubtasks(), %{ resolution} != null)</pre>	Returns the list of sibling sub-tasks (i.e., sub-tasks of same parent as current sub-task) which are not resolved.