tasky_list_tasks

Description

Lists all Tasky tasks with optional filtering capabilities.

Purpose

Query and display existing tasks with support for status filtering, tag filtering, search, and pagination. This is a read-only operation that provides comprehensive task visibility.

Parameters

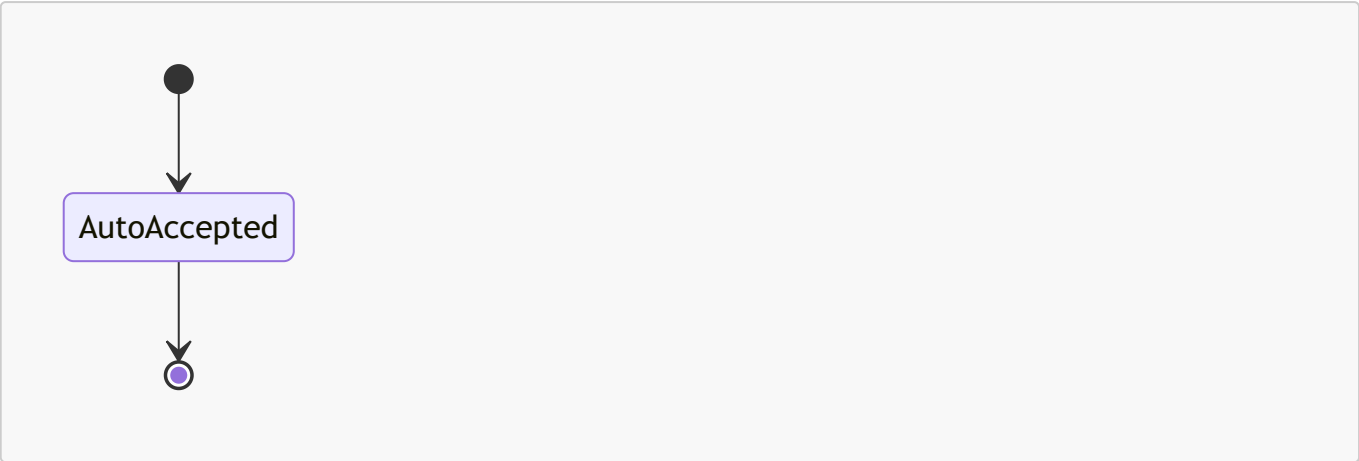| Parameter	Type	Required	Description
status	"pending" | "in_progress" | "completed" | "cancelled"	✗	Filter by task status
tag	string	✗	Filter by specific tag
limit	number	✗	Maximum number of tasks to return
search	string	✗	Search in title and description (case-insensitive)
dueDateFrom	string	✗	Filter tasks due after this date (ISO format)
dueDateTo	string	✗	Filter tasks due before this date (ISO format)
offset	number	✗	Pagination offset (default: 0)

UI Flow

1. **User Input:** "Show me all pending tasks" or "List my tasks tagged with 'bug'"
2. **Auto-Execution:** No confirmation needed (read-only operation)
3. **AI Processing:** Parses filter requirements from natural language
4. **Tool Call:** mcpCall invoked with filter parameters
5. **Result Display:** Tasks shown as structured list in chat
6. **Adaptive Cards:** Each task rendered with details and metadata
7. **Pagination:** Large result sets automatically paginated

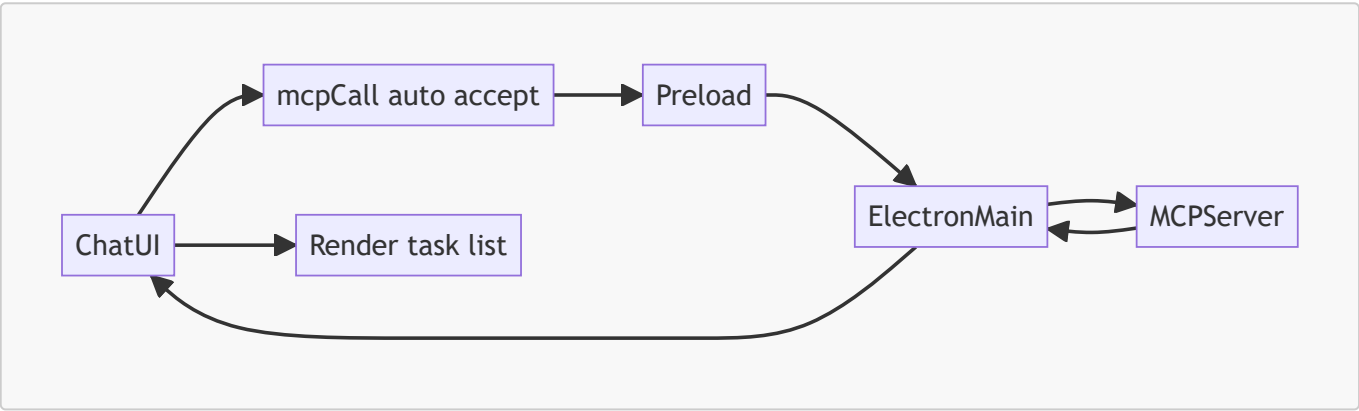## Database Operations

Confirmation Outcomes

This is a read only operation and is auto accepted.

State

Auto accept

Rejected

- Not applicable for read only tool

Accepted

- Same as auto accept for read only tool

Side effects

- Minimal UI side effects; no notifications
- Adaptive card snapshot embedded in chat

See also: State Management Diagrams

Adaptive Card Response

Snapshot shape

```
{
  "__taskyCard": {
    "kind": "result",
    "tool": "tasky_list_tasks",
    "status": "success",
    "data": [
```

```
      { "schema": { "id": "a1", "title": "Fix login bug", "tags": ["bug"],
  "dueDate": "2025-09-08T17:00:00.000Z" }, "status": "PENDING" },
      { "schema": { "id": "a2", "title": "Write tests", "tags": ["testing"] },
  "status": "IN_PROGRESS" }
    ]
  }
}
```

Error variant

```
{
  "__taskyCard": {
    "kind": "result",
    "tool": "tasky_list_tasks",
    "status": "error",
    "error": { "message": "Database error" }
  }
}
```

Renderer notes

- Success: Renders a list of task cards with status and tags.
- Error: Inline error card with retry option.

```sql
-- Main query to fetch all tasks
SELECT * FROM tasks;

-- Fetch all task tags for association
SELECT task_id, tag FROM task_tags;

-- Applied filters in application code:
-- - Status filtering
-- - Tag filtering
-- - Search in title/description
-- - Due date range filtering
-- - Sorting by due date, then creation date
-- - Pagination with offset/limit
```

Sorting Logic

1. **Primary:** Tasks with due dates first (ascending by due date)
2. **Secondary:** Tasks without due dates
3. **Tertiary:** By creation date (newest first)

MCP Request Example

```
curl -X POST http://localhost:7844/mcp \
  -H "Content-Type: application/json" \
  -d '{
    "jsonrpc": "2.0",
    "id": 2,
    "method": "tools/call",
    "params": {
      "name": "tasky_list_tasks",
      "arguments": {
        "status": "pending",
        "tag": "bug",
        "limit": 5,
        "search": "login"
      }
    }
  }'
```

Response Format

```
{
  "jsonrpc": "2.0",
  "id": 2,
  "result": {
    "content": [
      {
        "type": "text",
        "text": "Returned 2 of 15 tasks"
      },
      {
        "type": "text",
        "text": "[{\"schema\":
{\"id\":\"fix_login_bug_20250907_143022_abc123\",\"title\":\"Fix login
bug\",\"description\":\"Users cannot log in with Google
OAuth\",\"createdAt\":\"2025-09-07T14:30:22.000Z\",\"updatedAt\":\"2025-09-
07T14:30:22.000Z\",\"dueDate\":\"2025-09-08T17:00:00.000Z\",\"tags\":
[\"bug\",\"authentication\"],\"assignedAgent\":\"claude\"},\"status\":\"PENDING\",
\"reminderEnabled\":false},{\"schema\":
{\"id\":\"update_auth_flow_20250907_150000_def456\",\"title\":\"Update auth
flow\",\"description\":\"Modernize authentication system\",\"createdAt\":\"2025-
09-07T15:00:00.000Z\",\"updatedAt\":\"2025-09-07T15:00:00.000Z\",\"tags\":
[\"enhancement\",\"authentication\"],\"assignedAgent\":\"claude\"},\"status\":\"PE
NDING\",\"reminderEnabled\":false}]"
      }
    ]
  }
}
```

UI Components

- **MessageContainer:** Displays task list in chat timeline
- **AdaptiveCardRenderer:** Formats each task as a card with:
  - Task ID and title
  - Status badge
  - Due date (if set)
  - Tags as chips
  - Description preview
  - Assigned agent
  - Creation/update timestamps
- **ToolCallDisplay:** Shows tool execution status (minimal for read-only)

Filter Examples

Status Filtering

- "Show completed tasks"
- "List tasks in progress"
- "What pending tasks do I have?"

Tag Filtering

- "Show me bug tasks"
- "List all urgent items"
- "Tasks tagged with authentication"

Search Filtering

- "Find tasks about login"
- "Search for database tasks"
- "Tasks containing 'API'"

Date Filtering

- "Tasks due this week"
- "Overdue tasks"
- "Tasks due before Friday"

Pagination Behavior

- **Default:** Returns all matching tasks
- **With Limit:** Returns first N tasks after sorting
- **With Offset:** Skips first N tasks for pagination
- **Metadata:** Response includes "Returned X of Y tasks"

Performance Considerations

- **Tags:** Loaded in single query, joined in application
- **Sorting:** Applied after all filters for consistency
- **Memory:** Large datasets handled through pagination

- **Indexing:** Database indexes on status, created_at, due_date

Error Handling

Error	Cause	Response
Database error	SQLite query failure	Error message with details
Invalid status	Unknown status value	Empty result set
Invalid date	Malformed date filter	Date parsing error

Implementation Details

- **Auto-Confirmation:** Read-only operation, no user confirmation required
- **Result Caching:** No caching - always fresh data
- **Transaction:** Single read transaction for consistency
- **Case Sensitivity:** Search is case-insensitive

Common Use Cases

1. **Dashboard View:** `{}` (no filters) - shows all tasks
2. **Active Work:** `{"status": "in_progress"}` - current work
3. **Planning:** `{"status": "pending", "limit": 10}` - next tasks
4. **Bug Tracking:** `{"tag": "bug"}` - all bug-related tasks
5. **Urgent Items:** `{"search": "urgent"}` - priority tasks

Related Components

- `tasky-mcp-agent/src/mcp-server.ts:79-107` - Tool definition and handler
- `tasky-mcp-agent/src/utils/task-bridge.ts:283-335` - Database query logic
- `src/components/chat/AdaptiveCardRenderer.tsx` - Task card display
- `src/components/chat/MessageContainer.tsx` - List integration in chat