

# Just Type Search Feature

## Overview

The “Just Type” search feature is a universal search system inspired by macOS Spotlight and Windows Search. It allows users to quickly search for apps, contacts, documents, and commands from anywhere in the application by simply typing.

## Features

### Core Functionality

- **Universal Trigger:** Start typing anywhere to open search
- **Keyboard Shortcut:** `Cmd/Ctrl + K` to open search manually
- **Smart Detection:** Automatically detects when user is typing in input fields and ignores those events
- **Category Filtering:** Filter results by category (All, Navigation, Financial, Documents, etc.)
- **Keyboard Navigation:** Full keyboard support with arrow keys, Enter, Tab, and Escape
- **Real-time Search:** Instant search results as you type

### Design

- **Anchored to Top:** Search bar appears at the top of the viewport for easy access
- **Glassmorphic Effects:** Uses backdrop blur and semi-transparent backgrounds
- **webOS Design System:** Fully integrated with webOS design tokens for consistency
- **Light/Dark Mode:** Automatic support for both color schemes
- **Smooth Animations:** Fade-in and slide-down animations for a polished experience
- **Responsive:** Works on all screen sizes from mobile to desktop

### Keyboard Shortcuts

Shortcut	Action
<code>Cmd/Ctrl + K</code>	Open search
Any letter/number	Open search with that character
<code>↑ / ↓</code>	Navigate through results
<code>Enter</code>	Select highlighted result
<code>Tab</code>	Cycle through categories
<code>Esc</code>	Close search

# Architecture

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## Components

1. **JustTypeSearch** ( `/components/webos/just-type-search.tsx` )
  - Main search UI component
  - Handles search input, results display, and keyboard navigation
  - Uses zustand store for state management
2. **GlobalSearchTrigger** ( `/components/webos/global-search-trigger.tsx` )
  - Listens for global keyboard events
  - Opens search when appropriate keys are pressed
  - Ignores typing in input fields
3. **useUniversalSearch** ( `/hooks/webos/use-universal-search.ts` )
  - Zustand store for search state
  - Manages searchable items registry
  - Handles search logic with fuzzy matching

## Styling

- **Main Styles:** `/styles/just-type-search.css`
- **Design Tokens:** Uses variables from `/styles/webos-design-system.css`
- All styles are theme-aware and support light/dark modes automatically

## Usage

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### Basic Usage

The search is automatically available in the application. Users can:

1. Press `Cmd/Ctrl + K` to open search
2. Start typing anywhere (outside of input fields) to open search
3. Type to filter results
4. Use arrow keys to navigate
5. Press Enter to select a result
6. Press Escape to close

### For Developers

#### Registering New Searchable Items

You can register new items to be searchable from anywhere in your application:

```
import { useUniversalSearch } from '@/hooks/webos/use-universal-search';
import { FileText } from 'lucide-react';

function MyComponent() {
  const { registerSearchable, unregisterSearchable } = useUniversalSearch();

  useEffect(() => {
    registerSearchable({
      id: 'my-feature',
      title: 'My Feature',
      description: 'Description of my feature',
      category: 'Apps',
      icon: FileText,
      path: '/dashboard/my-feature',
      keywords: ['feature', 'custom', 'search'],
    });

    return () => {
      unregisterSearchable('my-feature');
    };
  }, []);

  return <div>My Component</div>;
}
```

## SearchResult Interface

```
interface SearchResult {
  id: string;           // Unique identifier
  title: string;        // Display title
  description?: string; // Optional description
  category: string;     // Category for filtering
  icon?: LucideIcon;    // Optional icon component
  path?: string;        // Navigation path
  action?: () => void;   // Custom action on select
  keywords: string[];   // Search keywords
}
```

## Integration

The feature is integrated into the root layout ( `/app/layout.tsx` ):

```
import { JustTypeSearch } from '@components/webos/just-type-search';
import { GlobalSearchTrigger } from '@components/webos/global-search-trigger';

export default function RootLayout({ children }) {
  return (
    <html>
      <body>
        <Providers>
          <GlobalSearchTrigger />
          <JustTypeSearch />
          {children}
        </Providers>
      </body>
    </html>
  );
}
```

## Default Searchable Items

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The system comes with pre-configured searchable items:

- **Navigation:** Dashboard, My Community, My Household
- **Financial:** Payments, Billing
- **Documents:** Community documents, Files
- **Communication:** Messages, Notifications, AI Assistant
- **Apps:** Calendar, Notes, Email
- **Settings:** Profile, System Settings
- **Admin:** Admin Panel, User Management, Payment Management (role-based)

## Accessibility

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- **Keyboard Navigation:** Full keyboard support
- **ARIA Labels:** All interactive elements have proper labels
- **Focus Management:** Automatic focus on search input when opened
- **Screen Reader Support:** Semantic HTML and ARIA attributes
- **Reduced Motion:** Respects `prefers-reduced-motion` preference
- **Color Contrast:** Meets WCAG AA standards in both light and dark modes




## Performance

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- **Lazy Loading:** Component only renders when search is open
- **Debounced Search:** Search is optimized to prevent excessive re-renders
- **Virtual Scrolling:** Results list handles large datasets efficiently
- **Memoization:** Search results are memoized to prevent unnecessary computations

## Browser Compatibility

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-  Chrome/Edge (latest)
-  Firefox (latest)
-  Safari (latest)

-  Mobile browsers (iOS Safari, Chrome Mobile)

## Future Enhancements

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- [ ] AI-powered search suggestions
- [ ] Search history and recent searches
- [ ] File content search
- [ ] Integration with external services (Google Drive, Dropbox)
- [ ] Voice search
- [ ] Search analytics

## Troubleshooting

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### Search not opening when typing

- Check if you're typing in an input field or textarea
- Verify that JavaScript is enabled
- Check browser console for errors

### Search results not appearing

- Ensure items are registered with the search system
- Check that keywords match your search query
- Verify that the category filter is set to "ALL" or the correct category

### Styling issues

- Ensure `/styles/just-type-search.css` is imported
- Check that webOS design tokens are loaded
- Verify CSS variables are defined in `:root`

## Support

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For issues or feature requests, please contact the development team or create an issue in the repository.

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**Version:** 1.0.0

**Last Updated:** December 7, 2025

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