

Open Source Technologies in Visma HR

This page document provides an overview of the open source technologies used in the Visma HR solution by Visma Enterprise Denmark. It is intended for technical stakeholders – such as integration partners, vendors, or customers with in-house development – who need insight into the technology stack behind the system.

Frontend Technologies

Technology	Purpose	Platform	Usage
Angular	Frontend Framework	TypeScript/JavaScript	Core framework v10.2.5 Used for main application structure Files: AngularApp/package.json, AngularApp/src/app/app.module.ts, angular.json Search: GitHub Search
Angular Material	UI Components	TypeScript	Material Design components v10.2.7 Used for UI components throughout app Files: AngularApp/package.json, component imports in .ts files Search: GitHub Search
jQuery	JavaScript Library	JavaScript	DOM manipulation v3.6.0 Used extensively in WebApp Files: WebApp/Scripts/jquery-.js, WebApp master pages, packages.config entries *Search: GitHub Search
Bootstrap	CSS Framework	CSS/JavaScript	Responsive framework v3.4.1 Used for responsive design Files: WebApp/Content/bootstrap.css, WebApp/Scripts/bootstrap.js, master pages Search: GitHub Search
Chart.js	Data Visualization	JavaScript	Charting library v2.8.0 Used for data visualization Files: AngularApp/package.json, chart components in Angular app Search: GitHub Search

TinyMCE	Rich Text Editor	JavaScript	WYSIWYG editor v5.0.11 Used for rich text editing Files: WebApp/Scripts/tinymce/, AngularApp configuration, editor components Search: GitHub Search
Moment.js	Date/Time Library	JavaScript	Date manipulation v2.27.0 Used for date handling Files: AngularApp/package.json, date service components Search: GitHub Search
RxJS	Reactive Programming	TypeScript	Observable streams v6.6.7 Used with Angular for reactive programming Files: AngularApp services, HTTP clients, observable patterns Search: GitHub Search
PrimeNG	UI Components	TypeScript	Angular UI components v10.0.3 Used for advanced UI components Files: AngularApp/package.json, component imports in Angular modules Search: GitHub Search
Font Awesome	Icon Library	CSS	Icon fonts v4.7.0 Used for icons throughout application Files: WebApp/Content/font-awesome.css, icon references in templates Search: GitHub Search
LESS	CSS Preprocessor	CSS	CSS compilation Used for CSS preprocessing Files: .less files in WebApp, LESS compilation in build process Search: GitHub Search
ExcelJS	Excel Library	JavaScript	Excel file manipulation v2.0.1 Used for Excel export/import Files: AngularApp/package.json,

			Excel service implementations Search: GitHub Search
Papaparse	CSV Parser	JavaScript	CSV parsing v5.0.0 Used for CSV file processing Files: AngularApp/package.json, CSV import/export services Search: GitHub Search

Backend Technologies

Technology	Purpose	Platform	Usage
Entity Framework	ORM	C#	Data access v6.1.3 Used for ORM/data access Files: .edmx files, .tt templates, connection strings in config files Package: <code><package id="EntityFramework" version="6.1.3" targetFramework="net451" /></code> Search: GitHub Search
Serilog	Logging	C#	Structured logging v2.7.1 Used for structured logging Files: packages.config entries, logging configuration in appsettings, log service implementations Search: GitHub Search
log4net	Logging	C#	Logging framework v2.0.3 Used for application logging Files: log4net.config files, logging wrappers Package: <code><package id="log4net" version="2.0.3" targetFramework="net451" /></code> Search: GitHub Search
NLog	Logging	C#	Logging platform Used throughout application Files: logging wrapper classes, NLog

			configuration in Web..config files *Package: <code><package id="NLog" version="4.5.11" targetFramework="net451" /></code> Search: GitHub Search
Newtonsoft.Json	JSON Serialization	C#	JSON framework v12.0.2 Used for JSON serialization Files: packages.config entries, API controllers, JSON handling in services Search: GitHub Search
RestSharp	HTTP Client	C#	REST API client v105.2.3 Used for external API calls Files: packages.config entries, HTTP service implementations, API integration classes Search: GitHub Search
HtmlAgilityPack	HTML Parser	C#	HTML manipulation v1.11.51 Used for HTML parsing Files: packages.config entries, HTML processing services, web scraping utilities Search: GitHub Search
QRCode	QR Code Generator	C#	QR code generation v1.4.2 Used for QR code generation Files: packages.config entries, QR code service implementations Search: GitHub Search
Ical.Net	Calendar Library	C#	iCalendar support v2.3.6 Used for calendar functionality Files: packages.config entries, calendar service implementations, iCal export features Search: GitHub Search

Testing & Documentation

Technology	Purpose	Platform	Usage
MSTest	Testing Framework	C#	Unit testing v1.3.2 Used for unit testing Files: test project packages.config, Search: GitHub Search
NUnit	Testing Framework	C#	Unit testing v2.5.10 Used for unit testing Files: test project packages.config, attributes, NUnit test runners Search: GitHub Search
Swagger/OpenAPI	API Documentation	Multiple	API client generation Used for API documentation and client generation Files: IO.Swagger project, generated API clients, swagger.json files Search: GitHub Search

Total Open Source Technologies: 25 major packages across frontend, backend, testing, and utility functions.

License Types: Primarily MIT, Apache 2.0, and BSD licenses allowing free commercial use.

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