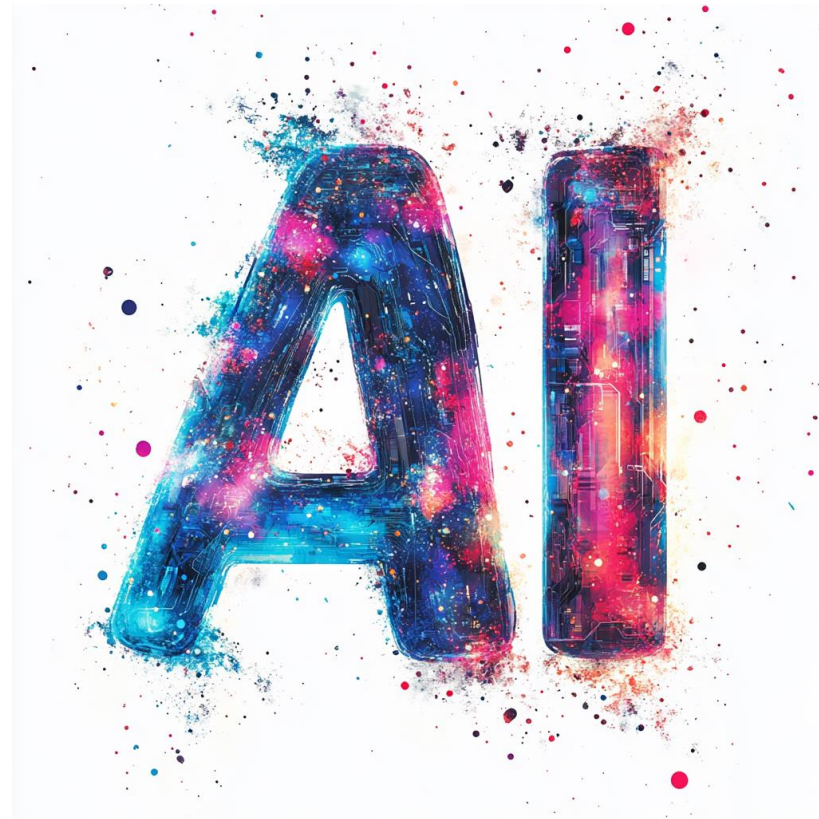


RAD Studio 12.2 in



Primož Gabrijelčič

<http://primoz.gabrijelcic.org>

<http://www.thedelphigeek.com>

Image by Midjourney

The Delphi Geek

random ramblings on Delphi, programming, Delphi programming, and all the rest

Tuesday, November 19, 2024

RAD Studio 12.2 and AI helpers

This is an invitation to the workshop in Ljubljana next week. As the session will be in Slovenian language, so is this invitation ...

Odkar smo se nazadnje srečali, je minilo kar nekaj časa. Medtem je izšla nova različica **RAD Studio 12.2**. Ta med drugim prinaša novost, ki smo jo vsi čakali - **integracijo umetne inteligence**.

Pridružite se nam na delavnici, kjer bomo predstavili novosti v **RAD Studiu 12.2**, podporne sisteme **ChatGPT**, **Gemini**, **Claude** in **Ollama** ter skušali ugotoviti, ali so že dovolj napredni, da jih lahko Delphi programerji uporabljajo pri svojem delu.

Poigrali se bomo z računalniškimi pomočniki in preizkusili vaše ideje o uporabi teh orodij.

Vidimo se v **sredo, 27. 11.**, ob **9.30** v prostorih OOO Vič, Tržaška cesta 207, Ljubljana!

Klikni za prijavo!

Posted by [gabr42](#) at 12:18 No comments:  

Labels: [AI](#), [Delphi](#), [presentations](#)

Friday, April 05, 2024

Delphi and Python, working happily together

Next Wednesday, 10th, I'll be talking about Delphi and Python in Ljubljana. As usual for Slovenian workshops, the talk will be in Slovenian language so I'll continue this invitation appropriately ...

Python je izjemno priljubljen programski jezik, ki slovi po svoji raznoliki in preprosti uporabi.

embarcadero
MVP

Pages

[Presentations](#)



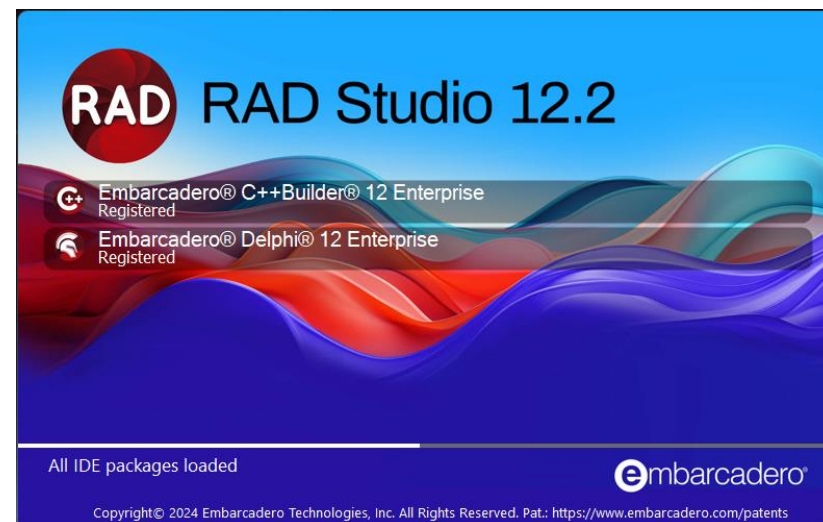
Hands-On
Design Patterns
with Delphi

Build applications using idiomatic, extensible, and concurrent design patterns in Delphi

RAD Studio 12.2

Novosti v 12.2

- Moderniziran C++ prevajalnik
- 64-bitni Delphi prevajalniki
- Smart CodeInsight
- Fokusirani način & oznake v drsnikih
- WebStencils
- Izboljšani Visual Assist za C++Builder
- Izboljšave za mobilni razvoj



bcc64x

- Dinamični runtime paketi
 - Uporaba
 - Izdelava
- CMake (+ninja)
 - GetIt
- Vzporedno prevajanje na več CPU
 - Privzeto prižgano
 - Samo „modern“

64-bitni Delphi prevajalnik

- Samo iz ukazne vrstice ali iz MSBuild
 - Samo Enterprise in Architect

∨ Use MSBuild externally to compile	<input type="checkbox"/> false
> Value from "Debug configuratic	<input type="checkbox"/> (not set)
> Value from "All configurations -	<input type="checkbox"/> (not set)
> Value from "All configurations -	<input type="checkbox"/> (not set)
> Preferred tool architecture	x64 ∨

64-bitni Language Server (DelphiLSP)

- Samo Enterprise in Architect

The screenshot shows the 'Language' settings dialog in the IDE. The 'Language' dropdown is set to 'Delphi'. The 'Code Insight' tab is selected. Under 'Automatic features', the 'Use 64 bit version of the server' checkbox is highlighted in yellow.

Smart CodeInsight
Project Upgrading
LiveBindings
Saving and Recovering
GetIt Package Manager

> User Interface
v Editor
 Display
 > Color
 Tabs
 Scroll Bar
 Status Bar
 Gutter
 Focus Mode
 Line Endings
 Search
 Language
 Key Mappings
 > Language
 > Third Party
 > Version Control
 > Modeling
 > Deployment
 > Debugger

Language

Language
Delphi

Syntax Highlighter Error Insight **Code Insight** Insight Options Completion k < >

Code insight manager
Delphi (Language Server Protocol) New Edit

Automatic features

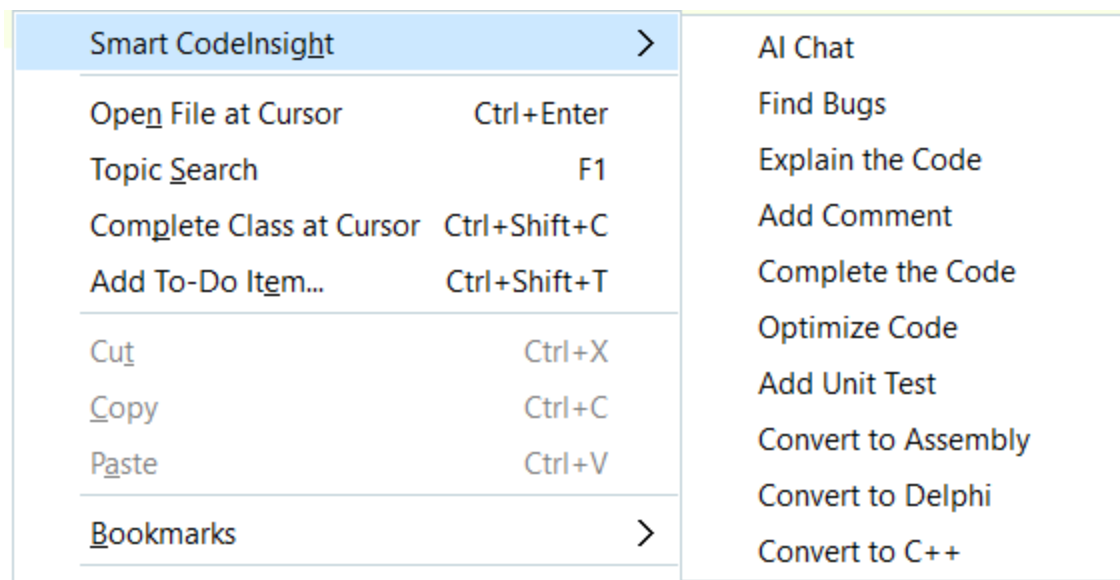
<input checked="" type="checkbox"/> Code completion	<input checked="" type="checkbox"/> Tooltip symbol insight
<input checked="" type="checkbox"/> Auto inyoke Only on dot	<input checked="" type="checkbox"/> Block completion Without new line
<input checked="" type="checkbox"/> Auto parenthesis	<input checked="" type="checkbox"/> Code template completion
<input type="checkbox"/> History	<input checked="" type="checkbox"/> Auto complete
<input checked="" type="checkbox"/> Show reserved words	<input type="checkbox"/> Hints
<input checked="" type="checkbox"/> Finish incomplete properties	<input type="checkbox"/> Generate LSP Config
<input checked="" type="checkbox"/> Code parameters	<input type="checkbox"/> Use 64 bit version of the server
<input checked="" type="checkbox"/> Tooltip expression evaluation	

Smart CodeInsight

- Vmesnik do AI LLM
- Trenutno podpira:
 - OpenAI
 - Gemini (Google)
 - Claude (Anthropic)
 - Ollama

Smart CodeInsight

- Tools, Options, IDE, Smart CodeInsight
- Privzeto ugasnjeno
- Pošlje se samo koda, ki si jo označil
- Ne spreminja kode, samo dodaja komentarje



Fokus

- Ctrl+Alt+Z

- > IDE
- > User Interface
- ∨ Editor
 - Display
 - > Color
 - Tabs
 - Scroll Bar
 - Status Bar
 - Gutter
 - Focus Mode**
 - Line Endings
 - Search
 - Language
 - Key Mappings
- > Language
- > Third Party
- > Version Control
- > Modeling
- > Deployment
- ∨ ...

Focus Mode

- Enable focus mode
- Clone all tabs in Focus mode.
- Focus mode editors display: _____
- Bookmarks
- Right margin
- Navigation toolbar
- Code folding
- Debug Info (Breakpoints, Compiled lines)
- Changed areas
- No dots on line numbers

Oznake v drsnikih

- Spremenjena koda
- Napake
- Opozorila
- Zadetki pri iskanju

```
in(const data: st
```

```
, nil, breakdowr
```

```
d: string): E
```

Enable Scroll bar annotations

Enabled	Name	Start (0-15)	Width (1 - 15)	Preview
<input checked="" type="checkbox"/>	Error Insight	1	15	
<input checked="" type="checkbox"/>	Changed areas	14	2	
<input checked="" type="checkbox"/>	Search results	0	4	
<input checked="" type="checkbox"/>	Bookmarks	7	4	

- Options, Editor, Scroll Bar

C++Builder Visual Assist

- Introduce Variable
- Create From Usage
- Extract Method

WebStencils Template Library

- Template engine, osnovan na „DelphiRazor“
- WebBroker, RAD Server
- Lahko pa tudi v vsaki aplikaciji
- Povezovanje vrednosti v programu s template datoteko
- Enumeracija
- TWebStencilsProcessor, TWebStencilsEngine
- <https://github.com/Embarcadero/WebStencilsDemos>

WebStencils primer

```
@foreach dataset {  
    @if loop.visible {  
        <p>@loop.city</p>  
        <small>@loop.state</small>  
    }  
}
```

Mobilni razvoj

- Apple
 - Posodobljen linker
 - Povezovanje statičnih iOS knjižnic
- Android
 - Možnost kompresije datotek Dex in ,native' knjižnic
 - targetSdkVersion nastavljen v IDE
 - Vključevanje knjižnic .aar
 - Deluje z Facebook SDK in Firebase Analytics

Popravki in izboljšave

- Razhroščevalnik
 - Inline variable
 - Remote debugging
- Delphi LSP
 - Namigi na večini simbolov
 - Lokalne konstante in spremenljivke

Delphi RTL, VCL

- RTL
 - Novo: TParallelArray (System.Threading)
 - For, Sort
 - Novo: TOrderedDictionary
- VCL
 - Izboljšave pri skaliranju ,frames‘
 - Izboljšan FormsTabBar, styling, HighDPI ...

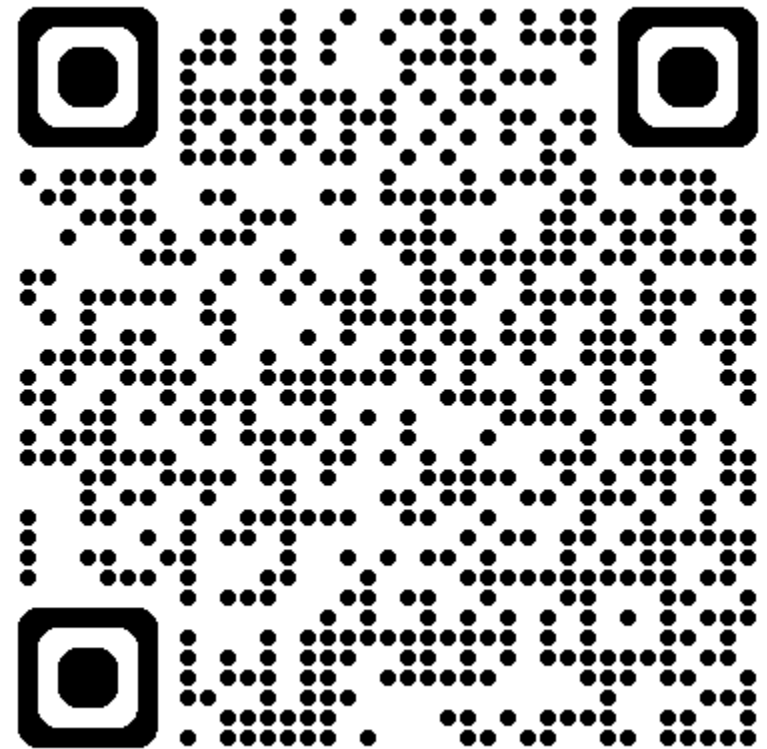
Popravki

- 350 napak, ki so jih prijavili uporabniki

Delphi in AI

Konfiguracija

- https://docwiki.embarcadero.com/RADStudio/Athens/en/Smart_CodeInsight_Options



Moje nastavitve

- Default AI for Editor: ChatGPT
- Default AI for Chat Window: ChatGPT

OpenAI

- <https://platform.openai.com>
- <https://openai.com/api/pricing/>

ChatGpt Ollama Gemini Claude

Enabled

BaseURL
https://api.openai.com/v1

Api key
.....

Model
o1-mini

Max Token
4096

temperature
0,1

Ollama

- <https://ollama.com>
- deluje tudi brez GPU, ampak **zelo** počasi

ChatGpt **Ollama** Gemini Claude

Enabled
BaseURL

Model

```
C:\>ollama
Usage:
  ollama [flags]
  ollama [command]

Available Commands:
  serve      Start ollama
  create     Create a model from a Modelfile
  show       Show information for a model
  run        Run a model
  stop       Stop a running model
  pull       Pull a model from a registry
  push       Push a model to a registry
  list       List models
  ps         List running models
  cp         Copy a model
  rm         Remove a model
  help       Help about any command

Flags:
  -h, --help      help for ollama
  -v, --version    Show version information

Use "ollama [command] --help" for more information about a command.
```

Gemini

- <https://aistudio.google.com/>
- <https://ai.google.dev/pricing>

ChatGpt Ollama **Gemini** Claude

Enabled

BaseURL

Api key

Model

MaxToken

Temperature

TopK

TopP

Claude

- <https://console.anthropic.com/>
- <https://www.anthropic.com/pricing#anthropic-api>

ChatGpt Ollama Gemini **Claude**

Enabled

BaseURL

Api key

Model

MaxToken

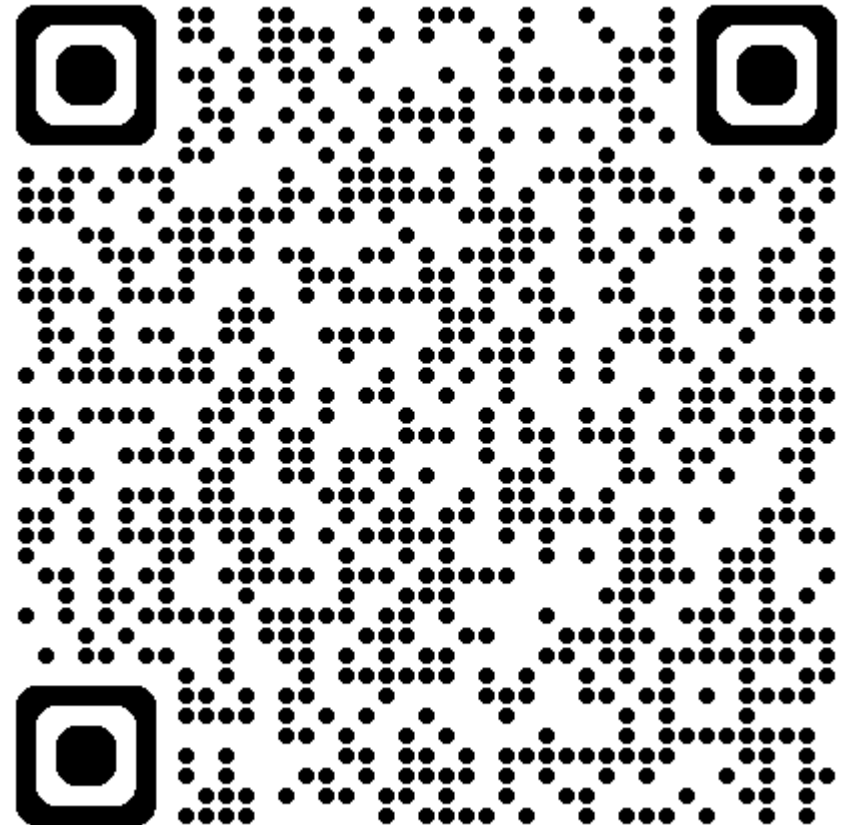
Anthropic Version

Privatnost




- Trenutno nobena od treh rešitev „v oblaku“ ne uporablja (skozi API) poslanih podatkov za učenje modelov **za plačljive račune**
 - Gemini v zastonski različici **uporablja** podatke za učenje
- Ollama je „lokalna“ rešitev in podatkov ne pošilja nikamor

Izdelajte lastni plugin

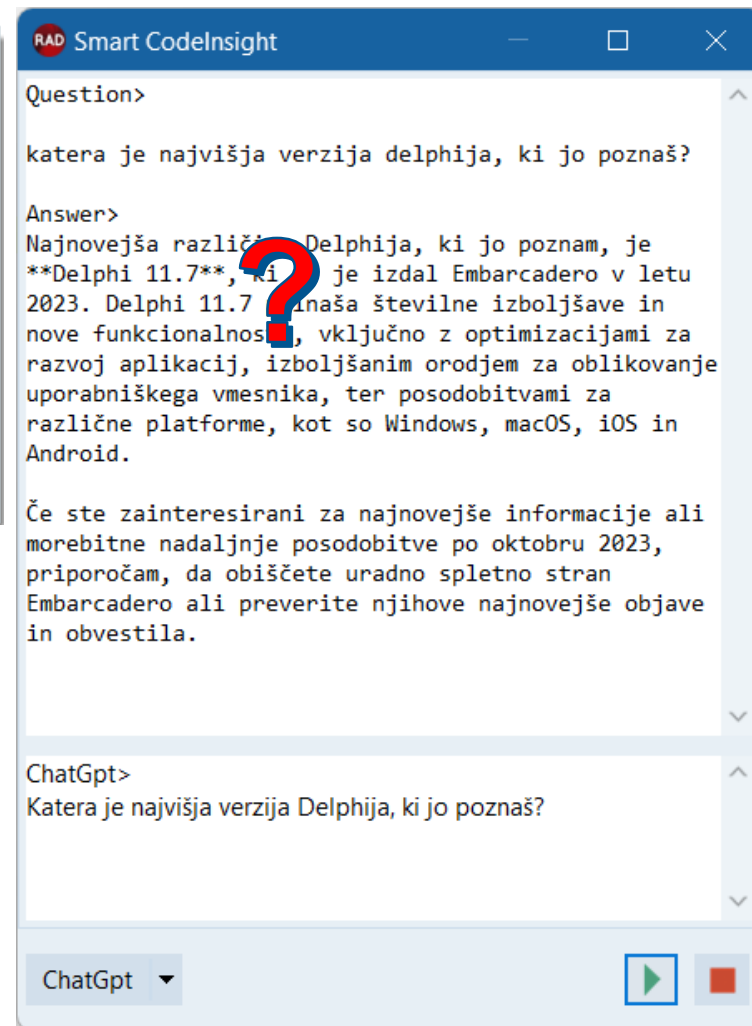
- https://docwiki.embarcadero.com/RADStudio/Athens/en/Create_and_implement_your_AI_plugin



Smart CodeInsight

Smart CodeInsight		>
Open File at Cursor	Ctrl+Enter	
Topic Search	F1	
Complete Class at Cursor	Ctrl+Shift+C	
Add To-Do Item...	Ctrl+Shift+T	
 Cut	Ctrl+X	
 Copy	Ctrl+C	
 Paste	Ctrl+V	
Bookmarks		>

AI Chat
Find Bugs
Explain the Code
Add Comment
Complete the Code
Optimize Code
Add Unit Test
Convert to Assembly
Convert to Delphi
Convert to C++



Smart CodeInsight

Question>

katera je najvišja verzija delphija, ki jo poznaš?

Answer>

Najnovejša različica Delphija, ki jo poznam, je ****Delphi 11.7****, ki je izdal Embarcadero v letu 2023. Delphi 11.7 prinaša številne izboljšave in nove funkcionalnosti, vključno z optimizacijami za razvoj aplikacij, izboljšanim orodjem za oblikovanje uporabniškega vmesnika, ter posodobitvami za različne platforme, kot so Windows, macOS, iOS in Android.

Če ste zainteresirani za najnovejše informacije ali morebitne nadaljnje posodobitve po oktobru 2023, priporočam, da obiščete uradno spletno stran Embarcadero ali preverite njihove najnovejše objave in obvestila.

ChatGpt>

Katera je najvišja verzija Delphija, ki jo poznaš?

ChatGpt

Praktično delo

Ena za ogrevanje ...

“I want to create a Delphi application that would monitor clipboard content (on Windows) and append clipboard content to a log file each time the clipboard has changed (and has a text inside).”