

Vse o tokovih podatkov



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The Delphi Geek

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

Thursday, October 14, 2021

Slovenian Delphi 11 Webinar

Just a short notice for Slovenian readers - In case you missed it, next week you'll be able to join a Slovenian webinar about Delphi 11.

[Register here](#)

Posted by [gabr42](#) at [15:58](#) No comments:  

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

Wednesday, February 10, 2021

Readers-writer lock - Part 4: Improving TLightweightMREW

While the *TLightweightMREW* is quite handy, it is not perfect. There's a weird assymetry in it. On all operating systems that Delphi can compile for, *read* locks are reentrant (recursive) while *write* locks are not. In other words, if a thread already owns a read lock, it can call *BeginRead* again and it will succeed. Write locks are different. If a thread already owns a write lock and calls *BeginWrite* again, it will either deadlock (on Windows) or raise an exception (on other supported platforms).

This is, however, relatively simple to fix. I have implemented a simple wrapper for the *TLightweightMREW* lock in *TLightweightMREWEx*. This new record uses internal *TLightweightMREW* to provide locking and adds some simple logic to implement write lock reentrancy. The implementation and accompanying test program *rwReentrantWriter* can be found at <https://github.com/gabr42/examples/tree/master/Reader-writer%20lock>.

[Read more »](#)

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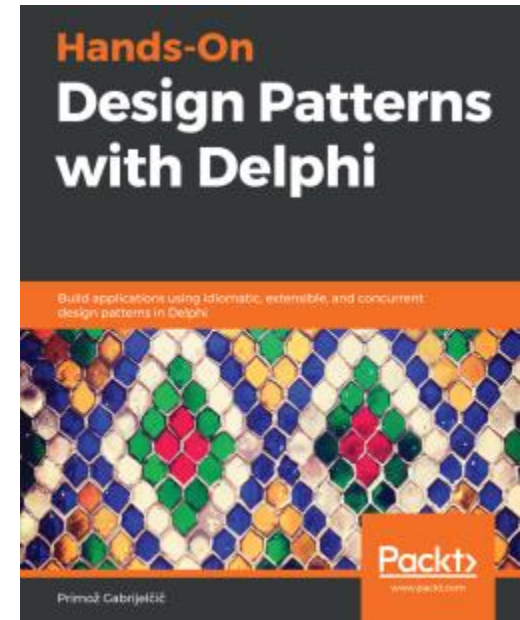
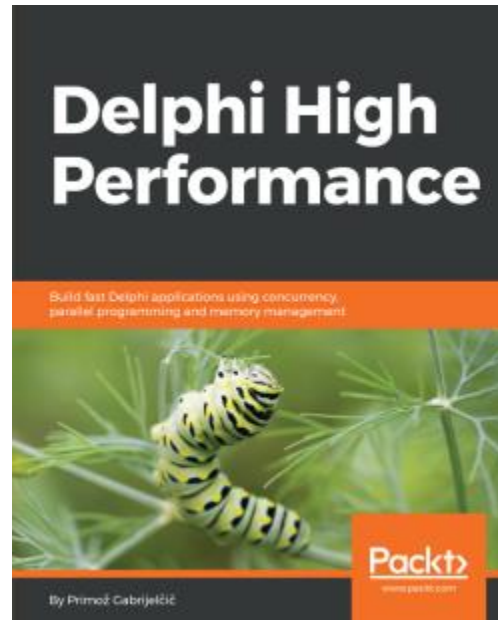
Hands-On
Design Patterns
with Delphi

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



Parallel Programming

Knjige



<https://delphi-books.com>

Tokovi podatkov

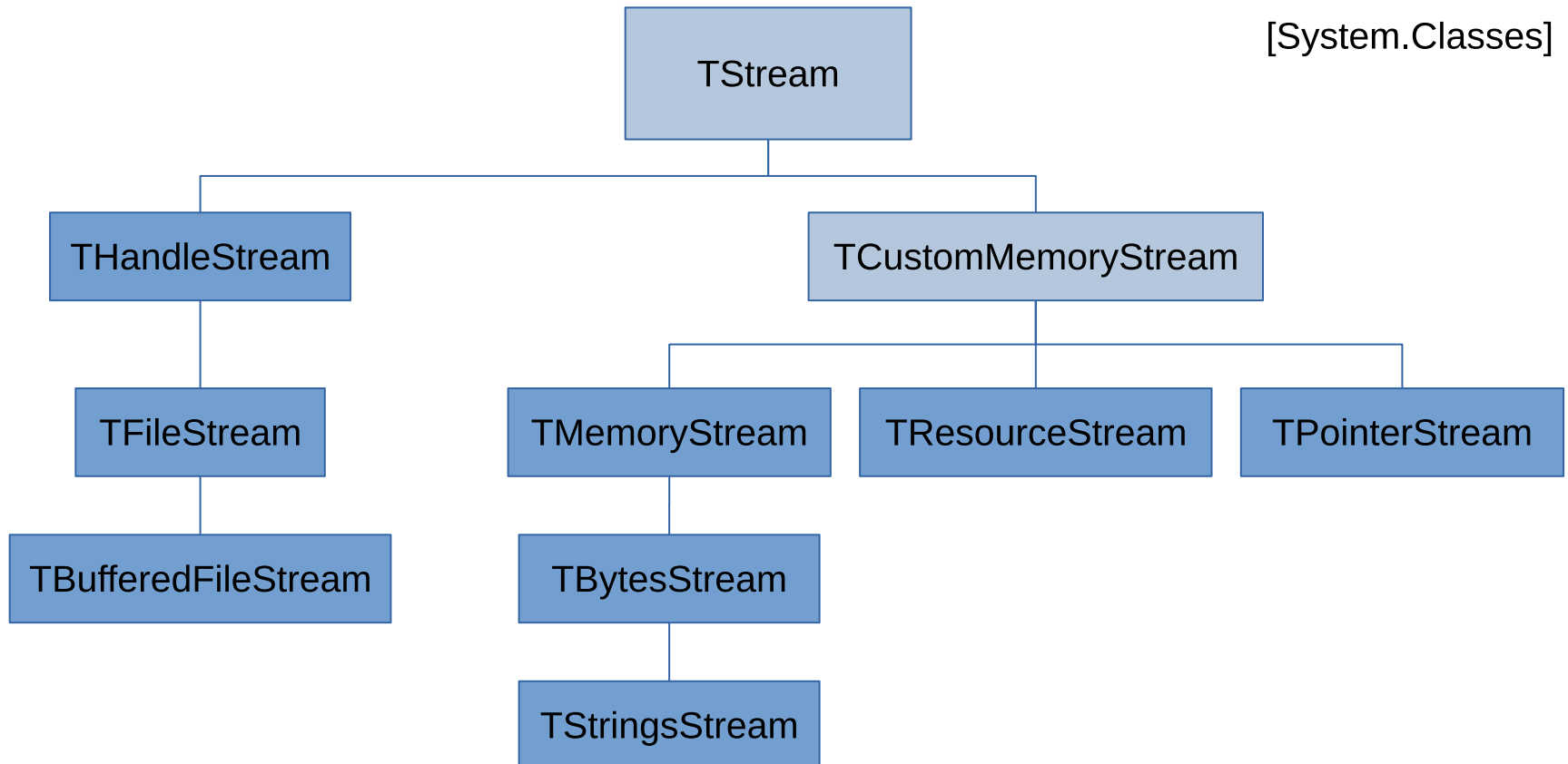
Tokovi podatkov

- **Abstrakcija** dostopa do podatkov
- Program uporablja **vmesnik** za dostop do podatkov
- Programa ne zanima, kako so podatki **shranjeni**

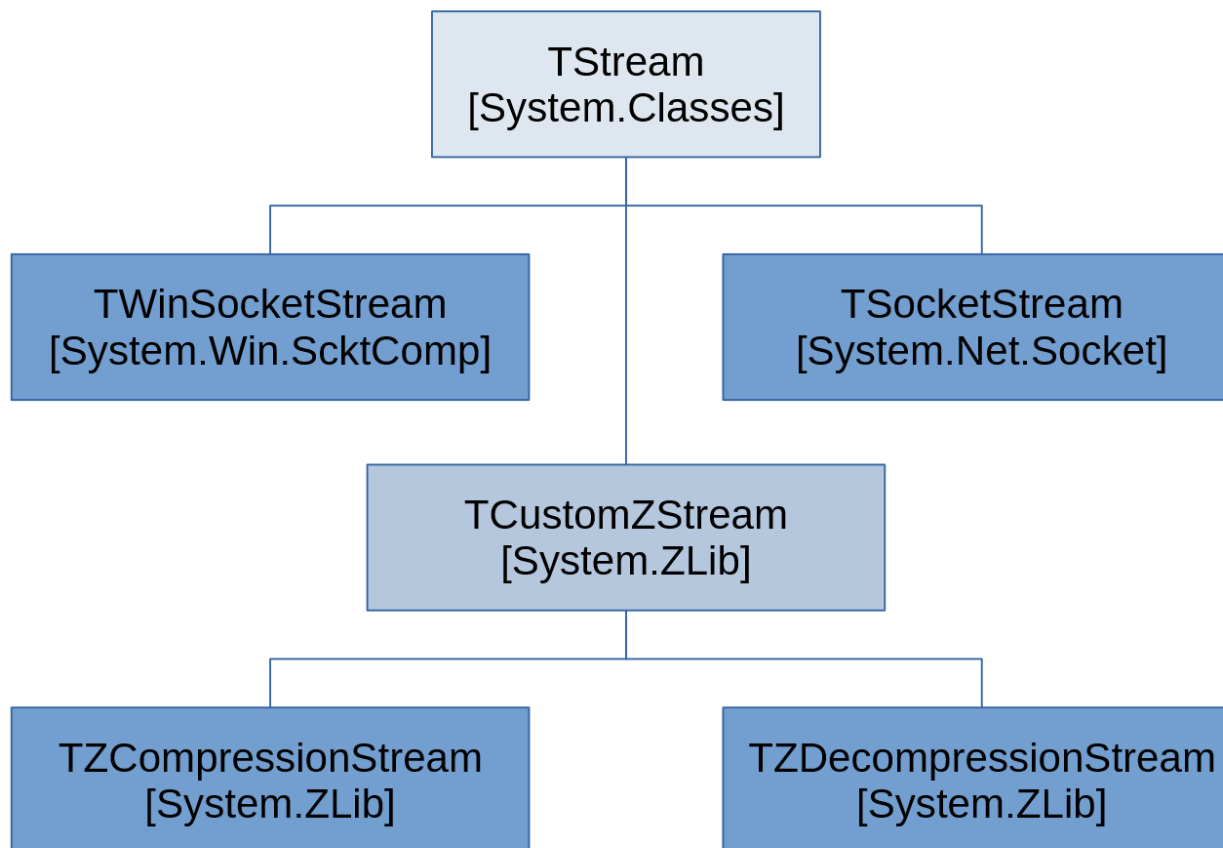
Vmesnik

- [sekvenčno] **branje**
- [sekvenčno] **pisanje**
- **skok**
 - odmik od **začetka** toka, **konca** toka ali **trenutnega** položaja

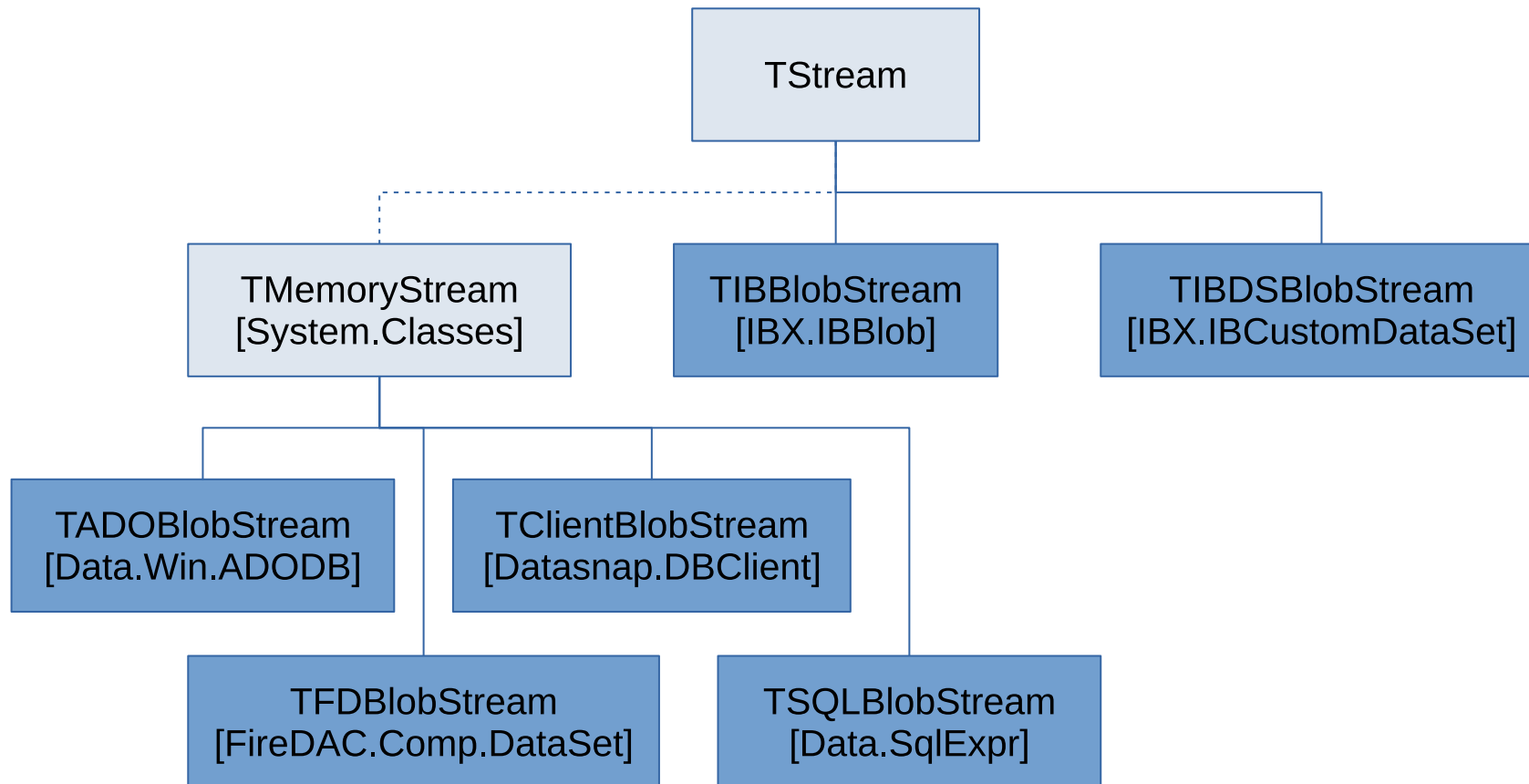
Splošnonamenski tokovi



Specializirani tokovi



Tokovi podatkovnih baz



Tokovi v operacijskih sistemih

- Android
 - [Androidapi.JNI.JavaTypes] **InputStream**, **OutputStream**, **FileInputStream**, **FileOutputStream** ...
- Mac/iOS
 - [Macapi.Foundation, iOS.Foundation] **NSStream**, **NSInputStream**, **NSOutputStream**
- Windows
 - [System.Types] **IStream**
 - [Vcl.AxCtrls] **TOleStream** [IStream ⇒ TStream]
 - [System.Classes] **TStreamAdapter** [TStream ⇒ IStream]

RTL/VCL/FMX

- **TStrings**: LoadFromStream, LoadFromFile, SaveToStream, SaveToFile
 - TStringList, TCustomShortCutList [System.Actions], THashedStringList [System.IniFiles]
- **TReader, TWriter**
 - (De)serializacija component

<https://docwiki.embarcadero.com/RADStudio/Sydney/en/Streams, Reader and Writers>

Razširitve

TNullStream

type

```
TNullStream = class(TStream)
```

```
public
```

```
function Seek(const Offset: Int64;  
              Origin: TSeekOrigin): Int64; overload; override;
```

```
end;
```

```
function TNullStream.Seek(const Offset: Int64;
```

```
                          Origin: TSeekOrigin): Int64;
```

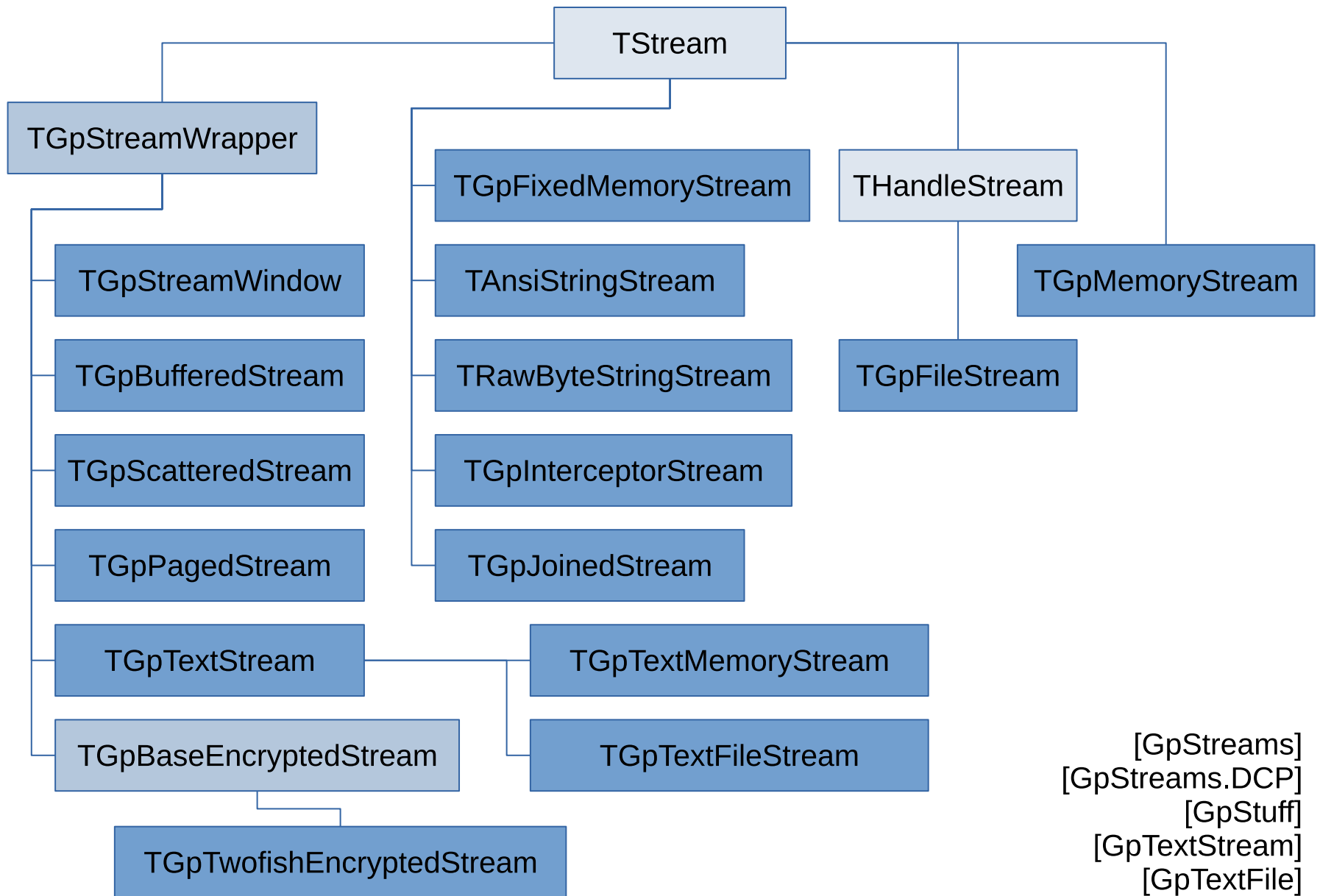
```
begin
```

```
    Result := 0;
```

```
end;
```

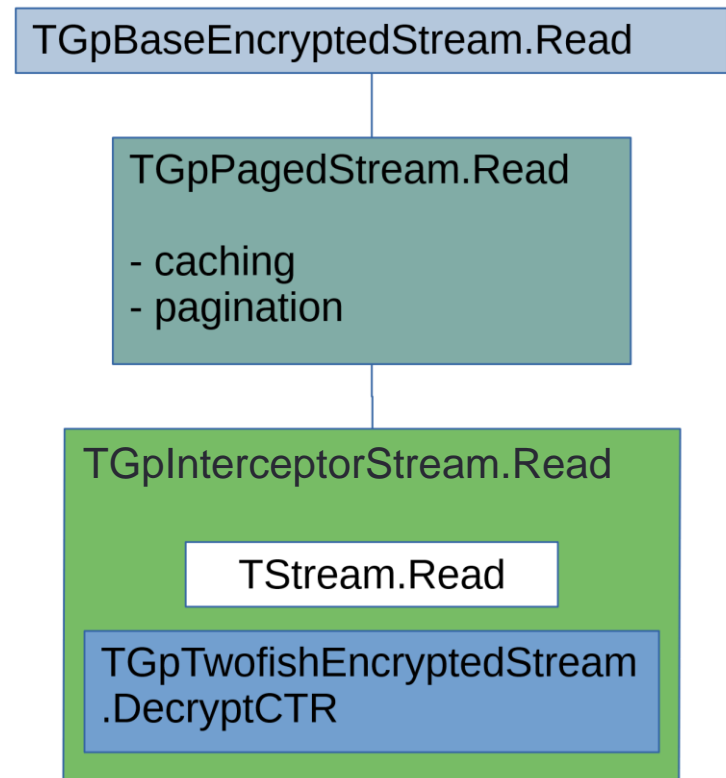
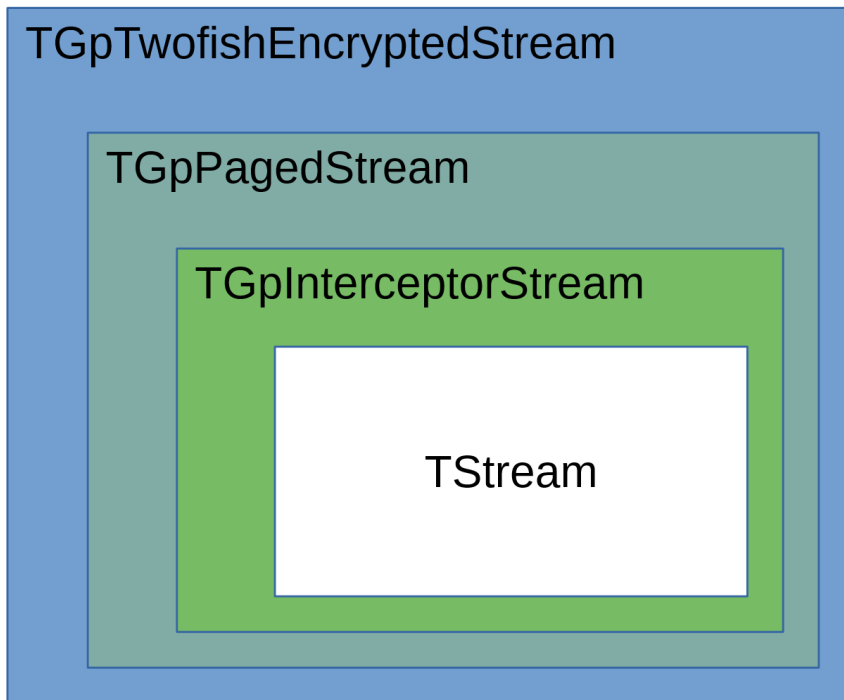
GpStreams

- <https://github.com/gabr42/GpDelphiUnits>
- **GpStreams.pas**
- **GpStreams.DCP.pas**
- **GpStuff.pas**
- **GpTextStream.pas**
- **GpTextFile.pas**



[GpStreams]
 [GpStreams.DCP]
 [GpStuff]
 [GpTextStream]
 [GpTextFile]

Sprotno (de)šifriranje



IGpBuffer

- Blok podatkov kot
 - **Tok** podatkov [TGpMemoryStream]
 - **Polje** byte/word/dword/qword vrednosti
 - **Niz** Ansi/Wide
- Samodejno sproščanje pomnilnika

GpTextStream

- Branje/pisanje po vrsticah
- Pretvorba kodnih tabel
- ANSI / UTF-8 / UTF-16 / UTF-32 (delno)

- **Readln / Writeln**
- **Codepage** [pre-Tencoding]

Viri

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- <https://thedelphigeek.com>
- <https://delphi-books.com>
- https://docwiki.embarcadero.com/RADStudio/Sydney/en/Streams,_Reader_and_Writers
- <https://github.com/gabr42/GpDelphiUnits>