```
 1: //////////////////////////////////////////////////
 2: RSS Feeds of BBC News
 3: _____
 4: maXbox Starter 81 -RSS feeds in Code - Max Kleiner
 5:
 6: "Time goes, you say? Ah, no! alas, time stays, we go."
 7:     - Henry Austin Dobson
 8:
 9:
10: At its core, RSS refers to simple text files (XML/RDF) with more or less
    important, updated information – news pieces, articles, weather info,
    opinion mining that sort of thing.
11: In the following I want to show this topic thing with the BBC-News
    feeder. News feeds allow you to see when websites have added new
    content. You can get the latest headlines and video in one place, as
    soon as its published, without having to visit the websites you have
    taken the feed from.
12:
13: BBC News as our example provides feeds for both the desktop website as
    well as for our mobile site and the most popular feeds are listed here:
    https://www.bbc.co.uk/news/10628494.
14:
15: First we define the URL to get the content from:
16:
17: Const
18:    RSS_NewsFeed = 'http://feeds.bbci.co.uk/news/world/rss.xml';
19:
20: RSS is an XML based document format for syndicating news and other
    timely news-like information. It provides headlines, URLs to the source
    document and brief description information in an easy to understand and
    use format. RSS based "News Readers" and "News Aggregators" allow the
    display of RSS headlines on workstation desktops. Users of RSS content
    use apps called feed 'readers' or 'aggregators' (newer versions of Web
    browsers offer built in support for RSS feeds): a user subscribes to a
    feed by entering the link of the RSS feed into their RSS feed reader; of
    course software libraries exist to read the RSS format and present RSS
    headlines on webpages and other online applications like in our script
    example with SimpleRSS. So you can feed a memo or text component in your
    form.
21:
22: In the XML baseline you see this:
23:
24: <?xml version="1.0" ?>
25: - <rdf:RDF xmlns:rdf="http://www.w3.org/1999/02/22-rdf-syntax-ns#"
    xmlns="http://purl.org/rss/1.0/">
26: - <!-- XML Generated by SimpleRSS http://simplerss.sourceforge.net at
    Sat, 15 Jan 2021 11:43:18 -->
27: - <channel xmlns="" rdf:about="">
28:   <title>Title Required</title>
29:   <link>Link Required</link>
30:   <description>Description Required</description>
31: - <items>
32:   <rdf:Seq />
33:   </items>
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34:    </channel>
35:    </rdf:RDF>
36:
37: This structure is a convention and suitable for a record:
38:
39: type
40:    TRSSItem2 = record
41:       FPubDate: TDate;
42:       FLink: string;
43:       FTitle: string;
44:       FDescription: string;
45:    end;
46:
47: The FPubDate made me a bit upset because I had to convert it in
    TRFC822DateTime Format. This specified date-time value, while
    technically valid, is likely to cause interoperability issues.
48: The value specified must meet the Date and Time specifications as
    defined by RFC822, with the exception that the year should be expressed
    as four digits.
49: The syntax is like (all single spaced and no comments):
50:
51: <pubDate>Wed, 02 Oct 2020 08:00:00 EST</pubDate>
52: <pubDate>Wed, 02 Oct 2020 13:00:00 GMT</pubDate>
53:
54: There, of course, is knowledge on the web, but in my case I use a
    component with specific objects to adapt. But the good news is the core
    code is straight and simple:
55:
56: //RSS Script Feed Snippet:
57:    with TSimpleRSS.create(self) do begin
58:       XMLType:= xtRDFrss;
59:       IndyHTTP:= TIdHTTP.create(self);
60:       LoadFromHTTP(RSS_NewsFeed);
61:       //LoadFromHTTP(Climatefeed);
62:       writeln('RSSVersion: '+Version)
63:       writeln('SimpleRSSVersion: '+SimpleRSSVersion)
64:       for it:= 0 to items.count-1 do
65:          writeln(itoa(it)+': '+Items[it].title+':
    '+items[it].pubdate.getdatetime);
66:    end;
67:
68: Items are sticked together in the class TRSSItems and inherits from
    TOwnedCollection. These CollectionItem objects in turn contain their own
    published child property which descends from TCollection and contain
    their own TCollectionItem descendant - so a nested
    TCollection/TCollectionItem scenario.
69: The http provider is by default Indy and we can load the feeds as a
    stream with the LoadFromHTTP() Method. The RSS Version is based with 2.
    These modern supplied RSS documents use the RSS 2.0 format. Each RSS
    item links to the html/web documents are described. Additional technical
    information is available from the following non-US Government website
    like BBC News. The XMLType is based on the RDF proposal. RDF is a kind
    of sematic web. The Semantic Web enables devices to seek out knowledge
    distributed throughout the Web, mesh or mix it, and then take action
    based on it. Simply said: The Resource Description Framework (RDF) is
    the W3C standard for encoding knowledge.
```

70: After running the script you get this similar output:
71:
72: 29: Life **in** a Day: Kevin Macdonald says film 'reinforces everyones similarities': Mon, 01 Feb 2021 00:00:57 GMT
73: link: https://www.bbc.co.uk/news/entertainment-arts-55861945
74: descript: Kevin Macdonalds documentary features personal videos from across the world - all shot **on** the same day.
75: rssitem.title BBC News - World
76: rssitem.link https://www.bbc.co.uk/news/
77:
78: **To** build your own provider **for** example **with** TLS1.3 **or to** link **with** your own XML-Parser/DOM vendor you can use the LoadFromStream() Method. Now the code block **for** a weather service **with** HTTPS **and** LoadFromStream():
79:
80: **Const** Weatherfeed5Bern=
81:    'https://weather-broker-cdn.api.bbci.co.uk/en/forecast/rss/3day/2661552';
82:
83: **function** GetBlogStream8(**const** S_API, pData: **string**;
84:                                     astrm: TStringStream):
    TStringStream;
85: **begin**
86:   HttpGET(S_API, astrm) *//maps HTTPS from WinInet_HttpGet*
87:   result:= astrm;
88: **end**;
89:
90: strm:= TStringStream.create('');
91: strm:= GetBlogStream8(WeatherFeed5Bern,'', strm);
92:
93:   **with** TSimpleRSS.create(self) **do begin**
94:     XMLType:= xtRDFrss;   *// bbcnews: xtRDFrss;*
95:     *//(xtRDFrss, xtRSSrss, xtAtomrss, xtiTunesrss)');*
96:     *//GenerateXML;*
97:     LoadFromStream((strm));
98:     SaveToFile('C:\maXbox\Lazarus\rssbbctest.xml');
99:     writeln('RSSFeedVersion: '+Version)
100:     writeln('SimpleRSSVersion: '+SimpleRSSVersion)
101:     **for it**:= 0 **to** items.count-1 **do**
102:       writeln(itoa(**it**)+': '+Items[**it**].title+': '+items[**it**].pubdate.getdatetime);
103:     strm.Free;
104:   **end**;
105:
106: **And** the output **as** iterated items from RSS-Reader will be (3-day forecast):
107:
108:   RSSFeedVersion: 2.0
109:   SimpleRSSVersion: ver 0.4 (BlueHippo) Release 1
110:   0: Today: Light Snow, Min Temperature:-5°C (23°F) Max Temperature: 0°C (32°F): Sat, 15 Jan 2021 10:37:30 Z
111:   1: Saturday:Light Cloud,Min Temperature:-3°C (27°F) Max Temperature:-1°C (30°F):Sat,15 Jan 2021 10:37:30 Z
112:   2: Sunday:Sleet Showers,Min Temperature:-1°C (31°F) Max Temperature:3°C (38°F):Sat,15 Jan 2021 10:37:30 Z

113:
114: By the way, weather data have their own format, which is called NWS, and
     is not to be confused with RSS and cannot be read by RSS readers and
     aggregators. These files present more detailed information than the RSS
     feeds in strings friendly for parsing. Both the RSS and XML feeds offer
     URLs to icon images.
115:
116:
117: Conclusion:
118: Really Simple Syndication (RSS) is a family of web formats used to
     publish frequently updated digital content. Most commonly used to update
     news articles, weather reports or traffic services and other content
     that changes quickly, RSS feeds may also include audio files (PodCasts)
     or even video files (VodCasts). SimpleRSS components provides methods
     for accessing, importing, exporting and working with RSS, RDF, Atom &
     iTunes Feeds. This library is free software; you can redistribute it
     and/or modify it under the terms of the GNU Lesser General Public
     License.
119:
120: Next time I show an an online translation service with sentiment
     analysis:
121: Trump's false election fraud claims face a dead end
122: Trumps falsche Wahlbetrugsansprüche stehen vor einer Sackgasse
123: Trump's valse verkiezingsfraudeclaims lopen dood
124: Les fausses allégations de fraude électorale de Trump font face à une
     impasse
125:
126:
127: Ref Script & Component:
128:     http://www.softwareschule.ch/examples/bbcnews.txt
129:     http://simplerss.sourceforge.net
130:     script: 1017_XmlDocRssParser.pas
131: Doc:
132:     https://maxbox4.wordpress.com
133:     http://feedvalidator.org/docs/rss2.html
134:     http://web.resource.org/rss/1.0/modules/content/