CODE MAGUS

---

directory: Directory Record Stream Access Method Version 1

CML00014-01

Business Partner IBM

August 16, 2016

Contents

1   Introduction

The `directory` access method is a module which implements the `recio` [1] provider interface allowing the `recio` user interface to support directory access on `Unix-based` systems and Catalog access on `MVS`.

2 Open String Specification

As with all `recio` library open specification strings, three components comprise the open string: access method, object, and option name-value pairs.

2.1 Open Specification Access Method Name

The access method name should be specified as `dir`.

2.2 Open Specification Object Name

The object name has a different meaning on different systems; the systems and the meaning of the object are:

1. `Unix-based` systems: The object identifies a directory. The entries of the directory are returned one record at a time.

2. `Windows-based` systems: The object identifies a directory. The entries of the directory are returned one record at a time.

3. `MVS` systems: The object acts as a filter as defined by the Catalog Search Interface in the manual `z/OS DFSMS: Managing Catalogs`. This is similar to the search parameters allowed for the dataset name under option 3.4 of `ISPF`. The entries of the catalog as constrained by the filter are returned one record at a time.

2.3 Open Specification Option Name-Value Pairs

Consult the access method definition file for the option name-value pairs supported by the `directory` access method. The access method definition file also supplies details of the default values (if any) of the options.

2.4 Open String Specification Examples

The commands below may be split over several lines; this is only for readability within this document. Normally all open string specifications are one continuous string.

The following open string specification could be used to return all the entries in the directory `/home/codemagus/` on a `Unix-based` system.

```
"dir(/home/codemagus/)"
```

The following open string specification could be used to return all the entries that start with an 'a' in the directory `C:\CodeMagus\a*` on a `Windows-based` system.

```
"dir(C:\CodeMagus\a*)"
```

The following open string specification could be used to return all datasets on MVS starting with CML.

```
"dir(CML.**)"
```

The following open string specification could be used to list all datasets on MVS starting with CML but with only two nodes.

```
"dir(CML.*)"
```

3 `directory` access method definition file

The access method definition file should be consulted for the description of the options and their default values. This includes the constraining values of the options. The access method definition file should also be consulted for the processing modes supported by the access method.

Refer to the `recio` library documentation for interpreting the contents of the access method definition file.

```
access dir(filemask="NA");

  -- File: DIR.amd
  --
  -- This file contains an access method definition which is used to read
  -- directory entries.
  -- It caters for MVS, Unix and Windows directory structures.
  --
  -- Author: Patrick Hayward [www.codemagus.com].
  --
  -- Copyright (c) 2008 Code Magus Limited. All rights reserved.

  -- $Author: hayward $
  -- $Date: 2012/10/02 11:00:33 $
  -- $Id: DIR.amd,v 1.4 2012/10/02 11:00:33 hayward Exp $
  -- $Name:  $
  -- $Revision: 1.4 $
  -- $State: Exp $
  --
  -- $Log: DIR.amd,v $
  -- Revision 1.4  2012/10/02 11:00:33  hayward
  -- Add option filemask to allow user
  -- to limit the files that are returned
  -- from reading a directory.
  --
  -- Revision 1.3  2009/01/30 10:15:02  hayward
  -- Change Author information.
  --
  -- Revision 1.2  2008/09/25 16:57:32  hayward
  -- Remove debug option and extraneous libs in link.
  --
  -- Revision 1.1.1.1  2008/07/22 15:48:52  hayward
  -- Add sources to CVS for Directory Access Method
  --
  --

  modes seq_input, skip_input;

  implements open;
  implements close;
  implements read;
```

```
    implements point;
    implements tell;

    describe filemask as
        "Specifies a regular expression such that only the subset of file names "
        "of those in the specified directory matching this expression "
        "are returned.";

    constrain filemask as "^\(NA\)\|\(.*\)$";

    path = ${CODEMAGUS_AMDLIBS} "%s";
    module = "diram" ${CODEMAGUS_AMDSUFDL};
    entry = diram_init;

end.
```

4   Environment

The location and format of the access method definition file is required to be specified by the environment variable CODEMAGUS_AMDPATH. This environment variable supplies a pattern to the full path of where access method definition (or amd) files are located. The format of the environment variable is that of a path with a %s appearing in the position in which the access method member name should appear. For example, on MVS systems this might have the form:

```
CODEMAGUS_AMDPATH='DNCT00.SRDA1.AMDFILES(%s)'
```

On a Unix-based system, the value might be set in a shell profile file such as:

```
export CODEMAGUS_AMDPATH=$HOME/bin/%s.amd
```

On Windows systems, the value might be supplied from the environment variables and look something like:

```
C:\CodeMagus\bin\%s.amd
```

References

[1] recio: Record Stream I/O Library Version 1. CML Document CML00001-01, Code Magus Limited, July 2008. PDF.