Deploying your C# desktop application from Monodevelop

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Acknowledgements

The basic structure of this deployment process has been largely based upon the Debian New Maintainers' Guide by Josip Rodin et al – please see References at the end.

Summary

This document outlines the steps that I found were required to package and deploy a simple desktop application written in C# using the Monodevelop IDE.

Preamble

The source was developed using Monodevelop 2.4 running on Ubuntu 10.04 with Mono 2.6.7 installed.

What does "deploying an application" mean? For me, it is providing the end user with an easily installable software package. It doesn't mean extracting .tar or .zip files, fiddling around with creating folders, moving files, compiling source and setting up desktop launchers and Application menu items. From the little knowledge I have, it seemed like a Debian package was the way to go. One of Ubuntu's noteworthy successes is in the distribution of their software packages and I thought that I might try to emulate this – I still have a lot to learn!

It's hoped that the process outlined below will help other applications developers – it took me a few weeks to begin to understand how this all works. Needless to say, I've limited experience so comments and corrections are welcome.

In addition, the final package that was created was only for limited distribution to friends, (I still have a few, OK, one or two) so I was not too concerned with digitally signing the package, distributing the source code or maintaining the application – basically I just wanted to wrap up the application into a package that was easy to install and see if others would like it.

Notes on reading this document:

- command line instructions carried out from Applications>Accessories>Terminal are highlighted in yellow.

- my application for this exercise was called myRSS, simply replace this with the name of your application.

- There are a few additional notes covering the creation of packages for use on Launchpad – Launchpad's excellent web service will build binary .deb distribution packages for you for x86 and amd64 architectures.

The Steps

1. Create the "build" environment
2. In Monodevelop
3. Copy the Source code
4. Run autotools
5. Create the "package" environment for Debian
6. Create an original Debian package
7. Configure the Debian files
8. Create the final Debian binary package
9. Install the package on another computer and test it

This document ends with a few notes of appreciation, some references and links together with a record of the various Terminal outputs for the commands used.

Actions Summary

The commands and actions carried to build a Debian package are summarised below. This might be useful as a check-list reference.

Step 1: Create the "build" environment

1. ensure that you have the required build essential tools installed, preferably using Synaptic Package Manager

Step 2: In Monodevelop

2. create .desktop file and check that the Properties>Target Directory is set to '.desktop application folder'
3. ensure Build Action is set as Resource for any supporting files
4. set Solution Configuration to Release i386
5. choose Project>Generate Makefiles and select the Autotools option

Step 3: Copy the Source code

6. create a BUILDS folder
7. copy contents of RELEASES/your application (source) folder name to BUILDS/your application folder name

Step 4: Run Autotools

8. edit the configure.ac file and insert the statement to include the Shamrock expansions macros:

   > m4_include([expansions.m4])
   > …. insert the highlighted line above just before these lines...
   > SHAMROCK_EXPAND_LIBDIR

9. run autoreconf, from within the BUILDS source folder:
   > :~/AppsCSharp/BUILDS/myRSS$ autoreconf -i -f

10. edit the configure file and change the ac_default_prefix from '/usr/local' to just '/usr', as required by Debian systems:
    > #
    > # Initializations.
    > #
    > ac_default_prefix=/usr
    > ac_clean_files=

11. run the 'configure' and 'make' scripts, from within the BUILDS source folder:
    > :~/AppsCSharp/BUILDS/myRSS$ ./configure && make

Step 5: Create the "package" environment for Debian

12. create a PACKAGES folder
13. copy the BUILD/myRSS folder to a new folder in PACKAGES/myrss-0.1 (using the naming convention for the new folder name)
14. set the Debian environment variables for your email, name and GPG KeyId by editing

your .bashrc script in your home/username folder. This only needs to be done once, then reset/restart your terminal session.

Step 6: Initialise the Debian package

15. build an original Debian make, from within the PACKAGES source folder:
    :~/AppsCSharp/PACKAGES/myrss-0.1$ dh_make --createorig
    enter s when prompted for the package type

Step 7: Configure the Debian files

16. edit these files
    control, copyright, changelog, rules
17. edit these files and rename by removing the trailing '.ex'
    menu.ex - rename it to **menu**
    myrss.doc.base.EX - rename it to **myrss.doc.base**
18. remove the trailing '.ex' to rename the following files:
    postinst.ex, postrm.ex, preint.ex, prerm.ex
    watch.ex, manpage.1.ex
19. delete the following files:
    cron.d.ex
    emacsen-install.ex
    emacsen-remove.ex
    emacsen-startup.ex
    init.d.ex
    init.d.ls.ex
    myrss.default.ex
    manpage.sgml.ex
    manpage.xml.ex
    READE.Debian
    README.source

Step 8: Create the final Debian binary package

20. create the Debian binary package with this command, from within the PACKAGES source folder:
    :~/AppsCSharp/PACKAGES/myrss-0.1$ dpkg-buildpackage

    (when prompted, enter your PGP Pass Phrase to sign the package)

Step 9: Install the package on another computer and test it

copy the .deb file to another computer

from the folder containing this file, right-click on it and install using the GDebi Package Installer

Ubuntu's Synaptic Package Manager can be used to remove it.

Step 1: Create the "build" environment

Building executable code on Unix and its derivative flavours is far from simple. Don't assume that you have all the various software packages needed to do this already installed on your computer. In the end, I probably over-installed everything that looked like:

- autotools, autoreconf, autotools-dev
- build-essential
- build, make
- dpkg, deb, debhelper
- devscripts, fakeroot
- dh_make
- libtool, libtoolize
- cil-common-dev

This is not a definitive list – if something doesn't work, it usually tells you which package is missing. Just install it and try again! There are generally three ways of installing packages:

- from the terminal command line ...$ sudo apt-get install package-name
- from Ubuntu's System>Administration>Synaptic Package Manager
- from Ubuntu's Applications>Ubuntu Software Center

I'd recommend checking first in Ubuntu's Synaptic Package Manager.

Another useful addition to Nautilus is the ability to drop down into Terminal (for the command line interface) from whichever folder you're browsing in – this is done by installing 'nautilus-open-terminal' through Synaptic Package Manager. Open in Terminal is then accessible through either of Nautilus's File or Edit menus (would much prefer a button on its toolbar!).

Step 2: in Monodevelop

On a C# programming note, my initial attempts to use the 'working' / install folder '/usr/lib/myrss' as a working directory failed because this folder is created and owned by root, as a result of the installation process – I understand that it's better to use the following code:

```
string base_folder = Environment.GetFolderPath (Environment.SpecialFolder.ApplicationData);
```
and
```
my_FileName = System.IO.Path.Combine (base_folder, my_DataFolder + "/" + "myworkfile.txt");
```

which should write/read from the user's personal '~/.config' folder.

Monodevelop will create the makefiles that are needed in order to assemble, compile, build and install your application.

In Monodevelop:

- to create a desktop executable link for your application:
  Right click-on the project name in the Solution Pad and select Add> New File then Deployment>Desktop Application Launcher and enter an appropriate name (the same as your executable)

Click-on the .desktop filename in the Solution Pad and then click-on the Properties pane (on the right-hand side, probably 'hidden'). Ensure that the Target Folder property is set to .desktop application folder. Please be aware that Monodevelop does not seem to save this setting on exiting, so if you rebuild the makefiles within Monodevelop, make sure you re-check this before each Generate Makefiles. However, I've found that this .desktop file does not create an actual Desktop launcher, but seems essential for the proper creation of an entry in the TaskBar Applications menu and the actual menu item is determined by the Debian menu file, see the section on editing the Debian files, below.

- Check that any supporting files, such as logos, icons, configuration, help-text etc, that are in your project's solution folder have their Build Action set to Resource – this can be set by right-clicking on the file name in the Solutions Pad. By default, Monodevelop deploys these to the program Files folder.
- Ensure that your Solution configuration is set to Release i386.
- In the menu Project>Build choose Clean myRSS then Rebuild myRSS.
- Then, either right-click on the Solution name in the Solution Pad or choose the menu item Project>Generate Makefiles...
- in the Generate Makefiles Dialog, select the 'Use Autotools' make files options (not the Simple option).

Monodevelop's creating makefiles output will look like this:

Generating Autotools files for Solution myRSS

Creating Makefile.am for Solution myRSS

Creating Makefile.am for Project myRSS
Creating autogen.sh
Creating configure.ac
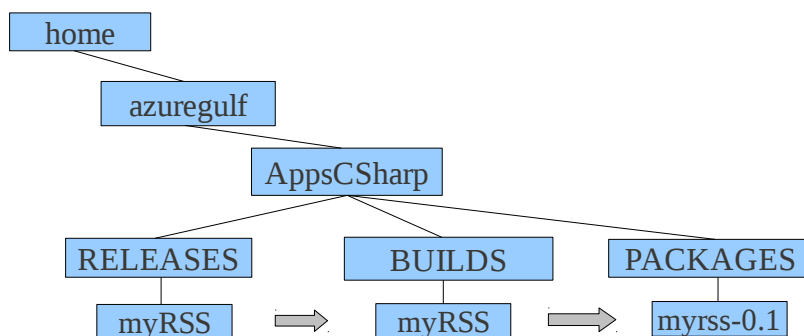Creating Makefile.include
Adding variables to top-level Makefile

Autotools files were successfully generated.

Unfortunately, that's all that Monodevelop does – you need to the rest by hand...

Step 3: Copy the Source code

Create another folder to prevent you from accidentally messing up your 'original' source code.

I've ended up with a folder structure looking like:

My code is written in the RELEASES folder with Monodevelop; I then copy the source code folder (myRSS) to the BUILDS folder and assemble the various build, make and binary files there; these are then copied to a specifically renamed folder in PACKAGES folder for the final process of producing a Debian package.

(Yes, I know RELEASES should be called SOURCES or similar but I've found that it's a real headache renaming folders and then expecting Monodevelop to figure out the new name – I usually end up editing a few of Monodevelop's configuration files for that project. And, Debian expects executables to be named in lower-case, so it's probably best to start that way and avoid including capitals, as I did.)

Now copy your Monodevelop source code folder (including any sub-folders) to a folder with the same name in the BUILDS folder.

Step 4: Run Autotools

Edit the configure.ac file and insert the highlighted text, as below, assuming that you also see the subsequent 3 lines that make calls to the 'Shamrock' expansion macros:

```
dnl DJW Cahusac de Caux added Shamrock expansions

m4_include([expansions.m4])

SHAMROCK_EXPAND_LIBDIR
SHAMROCK_EXPAND_BINDIR
SHAMROCK_EXPAND_DATADIR

AC_PROG_INSTALL
```

For some reason, these macros are not being automatically included when the configure script is built by autoreconf. (In case you're wondering, 'dnl' is short for 'discard until new line' which can be used in M4's macro language as a comment line.)

I do wonder if the expansions.m4 file should actually be installed by Monodevelop into the /usr/share/aclocal-1.11 folder. Likewise, the macro file libtool.m4 was also missing from this folder but was in /usr/share/aclocal. The Monodevelop generated makefile.am has this line:

```
EXTRA_DIST=expansions.m4
```

but, as I understand it, this just distributes the expansions.m4 file without actually including it in the configure script.

Initialise the 'build' by running autoreconf, from within the BUILDS source folder:

```
azuregulf@azuregulf-desktop:~/AppsCSharp/BUILDS/myRSS$ autoreconf -i -f
```

To check what the flags -i and -f mean, use 'man autoreconf' at the command line. If all's well with autoreconf, there is almost no output to the Terminal. Unlike the first time that I ran autoreconf, it crashed with a 'cannot find libtoolize' error which was cured by installing libtool using Synaptic Package Manager.

The default prefix for the target installation folders is assigned in the file configure at around line 539 where it should look like:

```
#
# Initializations.
#
ac_default_prefix=/usr /local
ac_clean_files=
ac_config_libobj_dir=.
LIBOBJS=
cross_compiling=no
subdirs=
MFLAGS=
MAKEFLAGS=
```

Edit this configure file and change the default prefix from /usr/local to /usr so that this is now correct for Debian systems (which prohibit application installations into /usr/local).

Then run the scripts 'configure' and 'make', from within the BUILDS source folder, as follows:

```
azuregulf@azuregulf-desktop:~/AppsCSharp/BUILDS/myRSS$ ./configure && make
```

Note: the command './configure && make' could be split into two separate commands: './configure' and then 'make' – the two &&'s just mean carry on to the next command if the previous one completes successfully.

It should be possible to run configure with a command line option that sets the prefix, using:

```
./configure --prefix ~/usr
```

but, this needs to be carried through in order for command dpkg-buildpackage (in step 8, when actually building the .deb package) to work correctly when it also invokes configure – until corrected, editing the file seems to be the most robust solution.

Step 5: Create the "package" environment for Debian

Create the packaging folder – I called mine PACKAGES – and copy the source folder in BUILD to a new folder in the PACKAGES folder, using this naming convention for the new folder name:

      application package name - release number

      note:
-      the hyphen (no spaces either side)
-      the release number can follow a convention, if you wish
-      the application package name must be lower-case and without any spaces

      so, my 'myRSS' folder name becomes 'myrss-0.1' in the PACKAGES folder

A short digression: Whilst I previously mentioned that I wasn't concerned with digitally signing my

package, I found that this was a requirement when uploading source to Ubuntu's Launchpad web service. And, it's very simple to get a PGP key – on Ubuntu 10.04 select the menu item Applications>Accessories>Passwords and Encryption Keys and follow the instructions to generate a PGP key.

Set the Debian environment variables for your name and email address – these can be added as command line parameters, but I found it simpler to edit my .bashrc script file so that they're set once for all subsequent Debian operations.

Your .bashrc file should be in your home user folder:

        /home/<yourusername>/.bashrc
        (in my case: /home/azuregulf/.bashrc)

Add these lines at the end of the file (obviously, changing the email, name and KeyId to suit):

        DEBEMAIL=derek@azuregulf.com
        DEBFULLNAME="DJW Cahusac de Caux"
        export DEBEMAIL DEBFULLNAME
        export GPGKEY=YourGPGKeyId

After saving the file, you'll need to reset your terminal session by either restarting the PC or running the reset command.

Step 6: Initialise the Debian package

From within the PACKAGES source folder, run the dh_make command to "debianise" the source folder using the --createorig option and enter s when asked for what type of package (s means a single binary).

        azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.1$ dh_make --createorig

        Type of package: single binary, indep binary, multiple binary, library, kernel module, kernel patch or cdbs?
        [s/i/m/l/k/n/b] s

        Maintainer name : DJW Cahusac de Caux
        Email-Address   : derek@azuregulf.com
        Date   : Thu, 28 Oct 2010 20:09:46 +0100
        Package Name   : myrss
        Version   : 0.1
        License   : blank
        Using dpatch   : no
        Using quilt   : no
        Type of Package : Single
        Hit <enter> to confirm:
        Done. Please edit the files in the debian/ subfolder now. myrss
        uses a configure script, so you probably don't have to edit the Makefiles.

This creates an original copy of the source in a folder called myrss-0.1.orig in the parent PACKAGES folder.

A new sub-folder called 'debian' is added into the source folder containing a number of files essential for Debian packaging.

All of the files ending in .ex are examples. You'll need to edit, rename or delete most of these files, as explained in step 7, below.

Step 7: Configure the Debian files

There a number of files here that are mandatory and will need to be changed in order to comply with the standards for Debian packaging. We'll go through the files in their order of importance. I used gedit to edit the files. Any blank lines and leading spaces (which are more likely to be tab characters) should be left untouched.

File: control

The original file looked like:

```
Source: myrss
Section: unknown
Priority: extra
Maintainer: DJW Cahusac de Caux <derek@azuregulf.com>
Build-Depends: debhelper (>= 7), autotools-dev
Standards-Version: 3.8.3
Homepage: <insert the upstream URL, if relevant>

Package: myrss
Architecture: any
Depends: ${shlibs:Depends}, ${misc:Depends}
Description: <insert up to 60 chars description>
 <insert long description, indented with spaces>
```

This was changed to:

```
Source: myrss
Section: news
Priority: optional
Maintainer: Derek JW Cahusac de Caux (PGP key) <derek@azuregulf.com>
Build-Depends: debhelper (>= 7), autotools-dev, cli-common-dev, libgtk2.0-cil-dev, libglade2.0-cil-dev,
libwebkit-cil-dev
Standards-Version: 3.8.4
Homepage: <insert the upstream URL, if relevant>

Package: myrss
Architecture: any
Depends: ${cli:Depends}, ${shlibs:Depends}, ${misc:Depends}
Description: RSS news feed reader
 a C# Gtk GUI application developed with the MonoDevelop IDE
 that reads RSS news feeds and some blogs to provide a text-based
 view of current news together with the benefits GUI manipulation
 and access to the current web page for any news story.
```

Brief notes on these changes are described below:

- line 2 Section changed to 'news' - see http://packages.debian.org/unstable/ for a list of categories and choose one that applies to your software – I chose the Debian sub-section 'news' as this worked when I was uploading to Launchpad – on reflection, this should probably be 'net'.
- line 3 Priority changed to optional
- line 4 Maintainer – make sure that your name, comment and email address are exactly the same as that used for the creation of your PGP key, if you're signing the package.
- line 5 Build-Depends – this was the most difficult line to figure out and needs to be correct if you want your builds to work anywhere else, for example on Launchpad. Apart from the default debhelper and autotools-dev dependencies, the rest were figured out by trial and error using pbuilder and helpful comments from other packagers. I do feel that Monodevelop should at least suggest the minimum packages required for building the application – after all, it already has this information encoded in its assembly references for the project.
- Line 11 Depends – added the instruction ${cli:Depends} – this seems to resolve all of the CLI bindings required for both the application and the run-time Mono engine. Again, Monodevelop could/should easily suggest this dependency.
- Remember to indent each line of the long description with a leading space.

File: copyright file

The original file looked like:

This work was packaged for Debian by:

DJW Cahusac de Caux <derek@azuregulf.com> on Thu, 28 Oct 2010 20:09:46 +0100

It was downloaded from <url://example.com>

Upstream Author(s):

<put author's name and email here>
<likewise for another author>

Copyright:

<Copyright (C) YYYY Name OfAuthor>
<likewise for another author>

License:

<Put the license of the package here indented by 4 spaces>

The Debian packaging is:

Copyright (C) 2010 DJW Cahusac de Caux <derek@azuregulf.com>

Please chose a license for your packaging work. If the program you package
uses a mainstream license, using the same license is the safest choice.

```
# Please avoid to pick license terms that are more restrictive than the
# packaged work, as it may make Debian's contributions unacceptable upstream.
# If you just want it to be GPL version 3, leave the following lines in.

and is licensed under the GPL version 3,
see `/usr/share/common-licenses/GPL-3'.

# Please also look if there are files or directories which have a
# different copyright/license attached and list them here.
```

And was changed to:

> This work was packaged for Debian by:
>
>   DJW Cahusac de Caux <derek@azuregulf.com> on Thu, 28 Oct 2010 20:09:46 +0100
>
> It was downloaded from <desktop@azuregulf.com>
>
> Upstream Author(s):
>
>   DJW Cahusac de Caux <derek@azuregulf.com>
>
> Copyright:
>
>   Copyright (C) AzureGulf T&C wll 2010
>
> License:
>
>   GPL-3+
>
> The Debian packaging is:
>
>   Copyright (C) 2010 DJW Cahusac de Caux <derek@azuregulf.com>
>
> and is licensed under the GPL version 3,
> see `/usr/share/common-licences/GPL-3'.

Brief notes:

- my changes are probably don't completely conform to the Debian standards – the software wasn't downloaded. So, just a quick chop and change.

File: changelog

The original file:

> myrss (0.1-1) unstable; urgency=low
>
>   * Initial release (Closes: #nnnn) <nnnn is the bug number of your ITP>
>
> -- DJW Cahusac de Caux <derek@azuregulf.com> Thu, 28 Oct 2010 20:09:46 +0100

and after:

myrss (0.1-1) unstable; urgency=low

  * Initial release (Closes: #0.0)

 -- DJW Cahusac de Caux <derek@azuregulf.com> Thu, 28 Oct 2010 20:09:46 +0100

or, if you're using Launchpad, then changes to this file must look like this:

myrss (0.3-5-0ubuntu1) lucid; urgency=low

  * Initial release (Closes: #0.3-4)

 -- Derek JW Cahusac de Caux (PGP key) <derek@azuregulf.com> Sun, 21 Nov 2010 11:23:53 +0000

Brief notes:

- Launchpad changes are highlighted – you'll need to append the '-0ubuntu1' distribution tag to your version number and also name the Ubuntu distribution that the package is targeted for (in this case 'lucid'). Also, make sure that your name, comment (in brackets) and email (in the angle-brackets, which are required) match those used for your PGP key. If you need to check what was used for the key, then run this command from Terminal:

```
azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.3$ gpg --list-secret-keys

/home/azuregulf/.gnupg/secring.gpg
---------------------------------
sec   2048R/17XXXXXF 2010-11-21
uid            Derek JW Cahusac de Caux (PGP key) <derek@azuregulf.com>
ssb   2048R/DXXXXXX4 2010-11-21
```

File: rules

The original file:

```
#!/usr/bin/make -f
# -*- makefile -*-
# Sample debian/rules that uses debhelper.
# This file was originally written by Joey Hess and Craig Small.
# As a special exception, when this file is copied by dh-make into a
# dh-make output file, you may use that output file without restriction.
# This special exception was added by Craig Small in version 0.37 of dh-make.

# Uncomment this to turn on verbose mode.
#export DH_VERBOSE=1

%:
	dh  $@
```

and after careful changes:

```
#!/usr/bin/make -f
# -*- makefile -*-
# Sample debian/rules that uses debhelper.
# This file was originally written by Joey Hess and Craig Small.
```

```
# As a special exception, when this file is copied by dh-make into a
# dh-make output file, you may use that output file without restriction.
# This special exception was added by Craig Small in version 0.37 of dh-make.

# Uncomment this to turn on verbose mode.
#export DH_VERBOSE=1
#export DH_OPTIONS +=-v
        include /usr/share/cli-common/cli.make

%:
        dh  $@
```

Brief notes:

- if you want the verbose mode, replace the # with a TAB character in both the
  DH_VERBOSE and DH_OPTIONS lines. Needless to say, you will probably switch off any
  further verbosity, once you're familiar with the process.
- add the include line to ensure that the cli.make file is included when the package is built
  (ensure there is a leading tab at the start of the line). If this file 'cli.make' is not already in the
  folder /usr/share/cli-common, then add it with these lines:
  ```
  #export MONO_SHARED_DIR=$(CURDIR)
  export MONO_DISABLE_SHM = 1
  export DH_OPTIONS += --with=cli
  ```
- when running dpkg-buildpackage, this extra DH_OPTIONS for the CLI bindings causes a
  verbose reaction from numerous packages as they try to figure out the additional '--with'
  option – just ignore these warnings, as this is essential for the proper generation of the
  packages dependencies.

File: menu.ex

The file before:

```
?package(myrss):needs="X11|text|vc|wm" section="Applications/see-menu-manual"\
 title="myrss" command="/usr/bin/myrss"
```

and after:

```
?package(myrss):needs="X11" section="Applications/Internet"\
 title="myRSS" command="/usr/bin/myrss"
```

Brief notes:

- changed the menu entry to be in the Internet section
- saved the file and then renamed by removing the trailing '.ex from the filename
- this file is essential for the creation of the Applications menu entry during installation

File: myrss.doc.base.EX

Documentation of some sort is mandatory for a Debian package, so at least this file is essential – you can also include a number of other files such as the README, if you wish. I just kept this as my only documentation file and it initially looked like this:

```
Document: myrss
Title: Debian myrss Manual
Author: <insert document author here>
Abstract: This manual describes what myrss is
 and how it can be used to
 manage online manuals on Debian systems.
Section: unknown

Format: debiandoc-sgml
Files: /usr/share/doc/myrss/myrss.sgml.gz

Format: postscript
Files: /usr/share/doc/myrss/myrss.ps.gz

Format: text
Files: /usr/share/doc/myrss/myrss.text.gz

Format: HTML
Index: /usr/share/doc/myrss/html/index.html
Files: /usr/share/doc/myrss/html/*.html
```

And after a few simple changes:

```
Document: myrss
Title: Debian myrss Manual
Author: DJW Cahusac de caux
Abstract: This manual describes what myrss is
 a HTML help file is automatically created
 the first time you click on Help.
Section: User Guide

Format: HTML
Index: /usr/share/doc/myrss/html/index.html
Files: /usr/share/doc/myrss/html/*.html
```

Brief notes:

- this file needs to be renamed by removing the trailing '.EX' from the filename
- make sure that the folder paths for the Index and Files entries are correct, as whatever documentation you have will be installed there.

File: manpage.1.ex

before

```
.\"                        Hey, EMACS: -*- nroff -*-
.\" First parameter, NAME, should be all caps
.\" Second parameter, SECTION, should be 1-8, maybe w/ subsection
.\" other parameters are allowed: see man(7), man(1)
```

.TH MYRSS SECTION "October 28, 2010"
.\" Please adjust this date whenever revising the manpage.

...<snip>...

.SH AUTHOR
myrss was written by <upstream author>.
.PP
This manual page was written by DJW Cahusac de Caux <derek@azuregulf.com>,
for the Debian project (and may be used by others).

Brief notes:

- left as is but renamed by removing the trailing '.ex'
- I'm not sure if this file is mandatory

Files that were deleted

The following files were deleted:

    cron.d.ex
    all files with names starting with 'emacsen'
    init.d.ex
    init.d.ls.ex
    myrss.default.ex
    manpage.sgml.ex
    manpage.xml.ex
    READE.Debian
    README.source

Files renamed

The following files were not edited but their names were changed by removing the trailing '.ex':

    postinst.ex
    postrm.ex
    preint.ex
    prerm.ex
    watch.ex

Files left unchanged:

The following files were left as is:

    compat
    docs

Tip - repetitive edits of the same Debian files can become rather tedious. I developed a simple short-cut by keeping a copy of these files in a separate folder, overwriting the 'newly' created ones

after dh_make and then just editing the changelog file to ensure that the version numbers changed, as appropriate.

Step 8: Create the final Debian binary package

And, finally, the Debian binary package can be created with the dpkg-buildpackage command as shown below. Make sure you execute this in the PACKAGES source folder – for your information, I've included the verbose output at the end of this document:

> azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.1$ dpkg-buildpackage

If you don't have a PGP key and don't want to sign the package, then add the flags '-us' and '-uc' so that neither the description .dsc and changes files are signed.

If you are building a package to be uploaded for building on Launchpad, then add the -S flag:

> azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.1$ dpkg-buildpackage -S

Launchpad only accepts source packages (i.e. without any binaries included).

Now check the output, fingers crossed, in the folder above the PACKAGES source folder – you should see a number of new files, specifically a .deb file if you produced a binary package or a _source.changes and a tar.gz file if you produced a source package.

The source package can be uploaded to your Launchpad PPA with the following command:

> dput ppa:your-name/your.ppa.name package-name_version_source.changes

where it will be automatically built for both x86 and amd64 architectures.

Step 9: Install the package on another computer and test it

The simplest way of installing your package is to drop the .deb file onto the target's Desktop (!), right-click on the package and select Open with GDebi Package Installer. This should also install any missing dependencies needed by your package.

You can also use the dpkg command, as below:

> azuregulf@azuregulf-laptop:~/Desktop$ sudo dpkg --install myrss_0.1-1_i386.deb
> [sudo] password for azuregulf:
> Selecting previously deselected package myrss.
> (Reading database ... 192759 files and directories currently installed.)
> Unpacking myrss (from myrss_0.1-1_i386.deb) ...
> Setting up myrss (0.1-1) ...
>
> Processing triggers for doc-base ...
> Processing 1 added doc-base file(s)...

Registering documents with scrollkeeper...
azuregulf@azuregulf-laptop:~/Desktop$

However, dpkg did not install additional dependencies (when I tested this on an amd64 machine).

Brief notes:

- The folder structure after a successful (Debian) install should be as follows.

  - A user executable shell named after your package name (all in lower case) is installed into:

    /user/bin

      in my case:
      azuregulf@azuregulf-desktop:/usr/bin$ <mark>cat myrss</mark>
      #!/bin/sh

      exec mono "/usr/lib/myrss/myRSS.exe" "$@"

  - The application executable binaries and associated program files are installed into:

    /usr/lib/<packagename>

      in my case:
      /usr/lib/myrss

  - The Desktop executable file is installed into:

    /usr/share/applications/<packagename>.desktop

      in my case:
      /usr/share/applications/myrss.desktop

  - Documentation files are installed into:

    /usr/share/doc/myrss

      in my case:
      /usr/share/doc/myrss

- On Ubuntu, Synaptic Package Manager can be used to cleanly remove the package.

References, appreciation and Terminal Output

References and appreciation:

The one document that really helped me, and which I only found after many many clicks was:

> Debian New Maintainers' Guide
> Josip Rodin <joy-mg@debian.org>
> version 1.2.23-svn, 2010-09-27 15:52:54 UTC

You can see the online HTML version at:
> http://www.us.debian.org/doc/manuals/maint-guide/index.en.html#contents

but I found a downloaded PDF copy easier to work with, from:
> http://www.debian.org/doc/devel-manuals#maint-guide

Needless to say, I wish I'd come across it earlier. Although, on reflection, I might not have appreciated it so much if I had and I probably wouldn't have understood it either. After reading it, I was determined to make the summary of my own process much shorter, but it's somehow ballooned into its own cloud...mind you, his oeuvre is 75 pages or so.

The Debian New Maintainers' Guide imposed a discipline and structure in the whole process for which I'm very grateful. You will notice that my simple procedural steps generally follow those outlined in the Guide, where they are described in much greater detail.

In my long hours of googling for answers to almost every step in the above process, I've kept a few web links and thank the many authors of & contributors to those pages for their assistance. I've included a brief list of urls below, in no particular order – there were many others...

http://lists.ximian.com/pipermail/monodevelop-list/ (with thanks to Michael Hutchinson, Jo Shields and Quandary for their helpful pointers)

http://pkg-mono.alioth.debian.org/cli-policy/ch-packaging.html#s-general-packaging
http://pkg-mono.alioth.debian.org/cli-policy/ch-mono.html (cli.make problem)
http://pkg-mono.alioth.debian.org/cli-policy/ch-appendix.html (see section on debhelper cli.make)
http://forums.debian.net/viewtopic.php?f=16&t=38976
http://www.debian.org/doc/FAQ/ch-pkg_basics.en.html
http://forums.debian.net/viewtopic.php?f=16&t=24362
http://www.linux.com/archive/feed/60383

http://download.banshee.fm/legacy/banshee-official-plugins/banshee-official-plugins-0.11.3.news
(useful notes on the Shamrock extensions for autotools)

http://www.linuxjournal.com/content/using-checkinstall-build-packages-source
(tried checkinstall, but it didn't quite work for me)
http://thedarkmaster.wordpress.com/2008/05/24/how-to-create-manipulate-a-deb-file-of-a-compiled-application/

http://www.clearchain.com/blog/posts/autotools
http://www.flameeyes.eu/autotools-mythbuster/autoconf/macros.html (useful)
http://sources.redhat.com/automake/automake.html#Creating-amhello

http://www.lrde.epita.fr/~adl/autotools.html (for an excellent, probably definitive, tutorial on the GNU Autotools family, download Alexandre Duret-Lutz's pdf tutorial from this page – it will help you understand how these various scripts, macros and files interact)

http://www.mono-project.com/Guide:Running_Mono_Applications
(wasn't sure about mkbundle – not sure that it's in current use and it doesn't seem to solve the 'packaging' problem of how to provide something that's easy to install and is also a widely accepted solution – there is also a brief summary in mono docs http://www.go-mono.com/docs/)
http://www.mono-project.com/Guidelines:Application_Deployment#Layout_Recommendation
http://www.mono-project.com/Assemblies_and_the_GAC
http://wiki.maemo.org/Packaging (quite useful introduction)

https://wiki.ubuntu.com/Packaging/Training/Logs/2009-07-16
https://wiki.ubuntu.com/PackagingGuide/Complete (good summary together with useful list of Ubuntu related essential packaging software and important notes on package name/version as required for Launchpad)
https://wiki.ubuntu.com/PackagingGuide/Basic#Building%20the%20Source%20Package

https://help.ubuntu.com/community/GnuPrivacyGuardHowto (detailed overview on PGP although creating and using a key is actually quite simple – in Ubuntu 10.04 choose Applications>Accessories>Passwords and Encryption Keys)

Monodevelop developers might want to consider this note from: http://tirania.org/blog//texts/md-build.html by Miguel de Icaza (miguel@ximian.com):

> "Autoconf and automake are to be avoided for the traditional C# targets, as these systems are better suited for C and C++ development and have their own sets of portability and dependency problems."

So, was my choice of Autotools in Monodevelop correct? Who knows, it seems to work, for now.

Finally, you might have wondered why I was writing yet another RSS news feed reader. Well, I'd been following Paul Hudson's set of tutorials at http://www.tuxradar.com/hca which are generally console applications. I thought I'd try rewriting some of them as GUI Gtk based applications. Whilst looking for answers on deployment, I came across this link http://linuxformat.co.uk/wiki/index.php/Go_graphical_with_Gtk, which was sort of along the lines of my own effort! Anyway, thanks to Paul for stimulating my interest in a new language C#...

Terminal Output

Output from commands executed at the command line interface (in Terminal) for each step is shown below. This is rather verbose and is only really included for the sake of completeness and for those interested in checking or comparing with their own output.

Step 3: Copy the Source code – terminal output

The BUILDS folder after copying the source from the RELEASES folder:

```
azuregulf@azuregulf-desktop:~/AppsCSharp/BUILDS/myRSS$ ls -l
total 168
-rw-r--r-- 1 azuregulf azuregulf   971 2010-10-16 11:11        AssemblyInfo.cs
-rwxrwxr-x 1 azuregulf azuregulf  2182 2010-11-25 19:57        autogen.sh
-rw-r--r-- 1 azuregulf azuregulf 12012 2010-10-13 16:26        AZG_LOGO.gif
-rw-r--r-- 1 azuregulf azuregulf  1328 2010-11-22 23:52        AZG_RSS_Feeds.txt
drwxr-xr-x 4 azuregulf azuregulf  4096 2010-10-19 10:07        bin
-rw-r--r-- 1 azuregulf azuregulf  1697 2010-11-25 20:01        configure.ac
-rw-r--r-- 1 azuregulf azuregulf   822 2010-11-25 19:57        expansions.m4
drwxr-xr-x 2 azuregulf azuregulf  4096 2010-11-25 19:56        gtk-gui
-rw-r--r-- 1 azuregulf azuregulf 13792 2010-10-18 23:07        internet-feed-reader.svg
-rw-r--r-- 1 azuregulf azuregulf   309 2010-11-07 22:49        Main.cs
-rw-r--r-- 1 azuregulf azuregulf   233 2010-11-25 19:57        Makefile.am
-rw-r--r-- 1 azuregulf azuregulf  6805 2010-11-25 19:57        Makefile.include
-rw-r--r-- 1 azuregulf azuregulf  4267 2010-11-25 19:46        myRSS.csproj
-rw-r--r-- 1 azuregulf azuregulf   218 2010-11-07 22:46        myRSS.desktop
-rw-r--r-- 1 azuregulf azuregulf    66 2010-11-25 19:57        myrss.in
-rw-r--r-- 1 azuregulf azuregulf  2927 2010-11-25 19:57        myRSS.make
-rw-r--r-- 1 azuregulf azuregulf 13651 2010-11-25 19:58        myRSS.pidb
-rw------- 1 azuregulf azuregulf   927 2010-11-19 14:13        myRSS.sln
-rw-r--r-- 1 azuregulf azuregulf  1010 2010-11-25 19:58        myRSS.userprefs
-rw-r--r-- 1 azuregulf azuregulf   410 2010-10-19 17:32        NewsWebView.cs
-rw-r--r-- 1 azuregulf azuregulf 46730 2010-11-25 19:56        RSSreader.cs
azuregulf@azuregulf-desktop:~/AppsCSharp/BUILDS/myRSS$
```

Step 4: Run Autotools – terminal output

Output from autoreconf:

```
azuregulf@azuregulf-desktop:~/AppsCSharp/BUILDS/myRSS$ autoreconf -i -f
configure.ac:5: installing `./install-sh'
configure.ac:5: installing `./missing'
azuregulf@azuregulf-desktop:~/AppsCSharp/BUILDS/myRSS$
```

Output from the 'configure' and 'make' scripts:

```
azuregulf@azuregulf-desktop:~/AppsCSharp/BUILDS/myRSS$ ./configure && make
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a thread-safe mkdir -p... /bin/mkdir -p
checking for gawk... gawk
checking whether make sets $(MAKE)... yes
checking whether to enable maintainer-specific portions of Makefiles... no
```

```
checking for pkg-config... /usr/bin/pkg-config
checking for gmcs... /usr/bin/gmcs
checking pkg-config is at least version 0.9.0... yes
checking for GTK_SHARP_20... yes
checking for GLIB_SHARP_20... yes
checking for GLADE_SHARP_20... yes
checking for WEBKIT_SHARP_10... yes
configure: creating ./config.status
config.status: creating myrss
config.status: creating Makefile
Making all in .
make[1]: Entering directory `/home/azuregulf/AppsCSharp/BUILDS/myRSS'
mkdir -p 'bin/Release'
cp 'myrss' 'bin/Release/myrss'
chmod +x 'bin/Release/myrss'
mkdir -p bin/Release
gmcs -noconfig -codepage:utf8 -warn:4 -optimize- -out:bin/Release/myRSS.exe -target:winexe './gtk-
gui/generated.cs' './Main.cs' './AssemblyInfo.cs' './RSSreader.cs' './NewsWebView.cs' './gtk-
gui/myRSS.RSSreader.cs' './gtk-gui/myRSS.NewsWebView.cs' '-resource:./gtk-gui/gui.stetic'   -r:System
-r:/usr/lib/pkgconfig/../../lib/cli/pango-sharp-2.0/pango-sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/atk-sharp-
2.0/atk-sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/gdk-sharp-2.0/gdk-sharp.dll
-r:/usr/lib/pkgconfig/../../lib/cli/gtk-sharp-2.0/gtk-sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/glib-sharp-2.0/glib-
sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/glib-sharp-2.0/glib-sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/glade-
sharp-2.0/glade-sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/pango-sharp-2.0/pango-sharp.dll
-r:/usr/lib/pkgconfig/../../lib/cli/atk-sharp-2.0/atk-sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/gdk-sharp-2.0/gdk-
sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/gtk-sharp-2.0/gtk-sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/glib-
sharp-2.0/glib-sharp.dll    -r:Mono.Posix   -r:System.Xml    -r:/usr/lib/cli/webkit-sharp-1.1/webkit-sharp.dll
-r:/usr/lib/pkgconfig/../../lib/cli/pango-sharp-2.0/pango-sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/atk-sharp-
2.0/atk-sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/gdk-sharp-2.0/gdk-sharp.dll
-r:/usr/lib/pkgconfig/../../lib/cli/gtk-sharp-2.0/gtk-sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/glib-sharp-2.0/glib-
sharp.dll
mkdir -p 'bin/Release'
cp 'myRSS.desktop' 'bin/Release/myRSS.desktop'
mkdir -p 'bin/Release'
cp 'internet-feed-reader.svg' 'bin/Release/internet-feed-reader.svg'
mkdir -p 'bin/Release'
cp 'AZG_RSS_Feeds.txt' 'bin/Release/AZG_RSS_Feeds.txt'
mkdir -p 'bin/Release'
cp 'AZG_LOGO.gif' 'bin/Release/AZG_LOGO.gif'
make[1]: Leaving directory `/home/azuregulf/AppsCSharp/BUILDS/myRSS'
azuregulf@azuregulf-desktop:~/AppsCSharp/BUILDS/myRSS$
```

Step 5: Create the "package" environment for Debian – terminal output

After copying the source from the BUILDS folder, the newly named folder in PACKAGES looks
like:

```
azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.3$ ls -l
total 476
-rw-r--r-- 1 azuregulf azuregulf  30061 2010-11-25 20:17    aclocal.m4
-rw-r--r-- 1 azuregulf azuregulf    971 2010-10-16 11:11    AssemblyInfo.cs
-rwxrwxr-x 1 azuregulf azuregulf   2182 2010-11-25 19:57    autogen.sh
drwxr-xr-x 2 azuregulf azuregulf   4096 2010-11-25 20:17    autom4te.cache
-rw-r--r-- 1 azuregulf azuregulf  12012 2010-10-13 16:26    AZG_LOGO.gif
-rw-r--r-- 1 azuregulf azuregulf   1328 2010-11-22 23:52    AZG_RSS_Feeds.txt
drwxr-xr-x 3 azuregulf azuregulf   4096 2010-11-25 20:19    bin
```

```
-rw-r--r-- 1 azuregulf azuregulf  11720 2010-11-25 20:19      config.log
-rwxr-xr-x 1 azuregulf azuregulf  27912 2010-11-25 20:19      config.status
-rwxr-xr-x 1 azuregulf azuregulf 121669 2010-11-25 20:18      configure
-rw-r--r-- 1 azuregulf azuregulf   1709 2010-11-25 20:17      configure.ac
-rw-r--r-- 1 azuregulf azuregulf    822 2010-11-25 19:57      expansions.m4
drwxr-xr-x 2 azuregulf azuregulf   4096 2010-11-25 19:56      gtk-gui
-rwxr-xr-x 1 azuregulf azuregulf  13663 2010-11-25 20:18      install-sh
-rw-r--r-- 1 azuregulf azuregulf  13792 2010-10-18 23:07      internet-feed-reader.svg
-rw-r--r-- 1 azuregulf azuregulf    309 2010-11-07 22:49      Main.cs
-rw-r--r-- 1 azuregulf azuregulf  40282 2010-11-25 20:19      Makefile
-rw-r--r-- 1 azuregulf azuregulf    233 2010-11-25 19:57      Makefile.am
-rw-r--r-- 1 azuregulf azuregulf  38528 2010-11-25 20:18      Makefile.in
-rw-r--r-- 1 azuregulf azuregulf   6805 2010-11-25 19:57      Makefile.include
-rwxr-xr-x 1 azuregulf azuregulf  11419 2010-11-25 20:18      missing
-rw-r--r-- 1 azuregulf azuregulf     53 2010-11-25 20:19      myrss
-rw-r--r-- 1 azuregulf azuregulf   4267 2010-11-25 19:46      myRSS.csproj
-rw-r--r-- 1 azuregulf azuregulf    218 2010-11-07 22:46      myRSS.desktop
-rw-r--r-- 1 azuregulf azuregulf     66 2010-11-25 19:57      myrss.in
-rw-r--r-- 1 azuregulf azuregulf   2927 2010-11-25 19:57      myRSS.make
-rw-r--r-- 1 azuregulf azuregulf  13651 2010-11-25 19:58      myRSS.pidb
-rw------- 1 azuregulf azuregulf    927 2010-11-19 14:13      myRSS.sln
-rw-r--r-- 1 azuregulf azuregulf   1010 2010-11-25 19:58      myRSS.userprefs
-rw-r--r-- 1 azuregulf azuregulf    410 2010-10-19 17:32      NewsWebView.cs
-rw-r--r-- 1 azuregulf azuregulf  46730 2010-11-25 19:56      RSSreader.cs
azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.3$
```

Step 6: Initialise the Debian package – terminal output

Output from the dh_make command:

```
azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.3$ dh_make --createorig

Type of package: single binary, indep binary, multiple binary, library, kernel module, kernel patch or cdbs?
 [s/i/m/l/k/n/b] s

Maintainer name : DJW Cahusac de Caux
Email-Address   : derek@azuregulf.com
Date            : Thu, 25 Nov 2010 20:27:06 +0000
Package Name    : myrss
Version         : 0.3
License         : blank
Using dpatch    : no
Using quilt     : no
Type of Package : Single
Hit <enter> to confirm:
Done. Please edit the files in the debian/ subdirectory now. myrss
uses a configure script, so you probably don't have to edit the Makefiles.
azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.3$
```

These files are created in the debian sub-folder:

```
azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.3$
azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.3$ ls ./debian -l
total 124
-rw-r--r-- 1 azuregulf azuregulf    191 2010-11-25 20:27      changelog
```

```
-rw-r--r-- 1 azuregulf azuregulf     2 2010-11-25 20:27        compat
-rw-r--r-- 1 azuregulf azuregulf   398 2010-11-25 20:27        control
-rw-r--r-- 1 azuregulf azuregulf  1095 2010-11-25 20:27        copyright
-rw-r--r-- 1 azuregulf azuregulf   125 2010-11-25 20:27        cron.d.ex
-rw-r--r-- 1 azuregulf azuregulf    18 2010-11-25 20:27        docs
-rw-r--r-- 1 azuregulf azuregulf  1231 2010-11-25 20:27        emacsen-install.ex
-rw-r--r-- 1 azuregulf azuregulf   465 2010-11-25 20:27        emacsen-remove.ex
-rw-r--r-- 1 azuregulf azuregulf  1108 2010-11-25 20:27        emacsen-startup.ex
-rw-r--r-- 1 azuregulf azuregulf  4392 2010-11-25 20:27        init.d.ex
-rw-r--r-- 1 azuregulf azuregulf  9407 2010-11-25 20:27        init.d.lsb.ex
-rw-r--r-- 1 azuregulf azuregulf  1746 2010-11-25 20:27        manpage.1.ex
-rw-r--r-- 1 azuregulf azuregulf  4660 2010-11-25 20:27        manpage.sgml.ex
-rw-r--r-- 1 azuregulf azuregulf 11001 2010-11-25 20:27        manpage.xml.ex
-rw-r--r-- 1 azuregulf azuregulf   120 2010-11-25 20:27        menu.ex
-rw-r--r-- 1 azuregulf azuregulf   229 2010-11-25 20:27        myrss.default.ex
-rw-r--r-- 1 azuregulf azuregulf   493 2010-11-25 20:27        myrss.doc-base.EX
-rw-r--r-- 1 azuregulf azuregulf   955 2010-11-25 20:27        postinst.ex
-rw-r--r-- 1 azuregulf azuregulf   928 2010-11-25 20:27        postrm.ex
-rw-r--r-- 1 azuregulf azuregulf   688 2010-11-25 20:27        preinst.ex
-rw-r--r-- 1 azuregulf azuregulf   875 2010-11-25 20:27        prerm.ex
-rw-r--r-- 1 azuregulf azuregulf   183 2010-11-25 20:27        README.Debian
-rw-r--r-- 1 azuregulf azuregulf   189 2010-11-25 20:27        README.source
-rwxr-xr-x 1 azuregulf azuregulf   442 2010-11-25 20:27        rules
-rw-r--r-- 1 azuregulf azuregulf   769 2010-11-25 20:27        watch.ex
azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.3$
```

Step 7: Configure the Debian files – terminal output

The configured 'debian' files in the debian sub-folder prior to running the dpkg-buildpackage command are as shown:

```
azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.3$
azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.3$ ls ./debian -l
total 56
-rw-r--r-- 1 azuregulf azuregulf   175 2010-11-25 20:50        changelog
-rw-r--r-- 1 azuregulf azuregulf     2 2010-11-07 11:24        compat
-rw-r--r-- 1 azuregulf azuregulf   688 2010-11-25 20:51        control
-rw-r--r-- 1 azuregulf azuregulf   988 2010-11-22 00:47        copyright
-rw-r--r-- 1 azuregulf azuregulf    18 2010-11-07 11:24        docs
-rw-r--r-- 1 azuregulf azuregulf  1746 2010-11-07 11:24        manpage.1
-rw-r--r-- 1 azuregulf azuregulf   102 2010-11-07 11:30        menu
-rw-r--r-- 1 azuregulf azuregulf   313 2010-11-07 11:29        myrss.doc-base
-rw-r--r-- 1 azuregulf azuregulf   955 2010-11-07 11:24        postinst
-rw-r--r-- 1 azuregulf azuregulf   928 2010-11-07 11:24        postrm
-rw-r--r-- 1 azuregulf azuregulf   688 2010-11-07 11:24        preinst
-rw-r--r-- 1 azuregulf azuregulf   875 2010-11-07 11:24        prerm
-rwxr-xr-x 1 azuregulf azuregulf   506 2010-11-07 13:44        rules
-rw-r--r-- 1 azuregulf azuregulf   769 2010-11-07 11:24        watch

azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.3$
```

Step 8: Create the final Debian binary package – terminal output

The dpkg-buildpackage output for creating a Source only package is as below:

azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.3$ <mark>dpkg-buildpackage -S</mark>
dpkg-buildpackage: set CFLAGS to default value: -g -O2
dpkg-buildpackage: set CPPFLAGS to default value:
dpkg-buildpackage: set LDFLAGS to default value: -Wl,-Bsymbolic-functions
dpkg-buildpackage: set FFLAGS to default value: -g -O2
dpkg-buildpackage: set CXXFLAGS to default value: -g -O2
dpkg-buildpackage: source package myrss
dpkg-buildpackage: source version 0.3-6-0ubuntu1
dpkg-buildpackage: source changed by Derek JW Cahusac de Caux (PGP key) <derek@azuregulf.com>
 fakeroot debian/rules clean
dh clean
   dh_testdir
Unknown option: with
dh_testdir: warning: ignored unknown options in DH_OPTIONS
   dh_auto_clean
Unknown option: with
dh_auto_clean: warning: ignored unknown options in DH_OPTIONS
make[1]: Entering directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
Making distclean in .
make[2]: Entering directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
test -z "bin/Release/internet-feed-reader.svg bin/Release/AZG_RSS_Feeds.txt bin/Release/AZG_LOGO.gif
bin/Release/myRSS.desktop   bin/Release/myrss   bin/Release/myRSS.exe bin/Release/myRSS.exe.mdb
bin/Release/myrss   " || rm -f bin/Release/internet-feed-reader.svg bin/Release/AZG_RSS_Feeds.txt
bin/Release/AZG_LOGO.gif   bin/Release/myRSS.desktop   bin/Release/myrss   bin/Release/myRSS.exe
bin/Release/myRSS.exe.mdb bin/Release/myrss
test -z "myrss" || rm -f myrss
test . = "." || test -z "" || rm -f
test -z " bin/Release/*" || rm -f   bin/Release/*
rm -f TAGS ID GTAGS GRTAGS GSYMS GPATH tags
make[2]: Leaving directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
rm -f config.status config.cache config.log configure.lineno config.status.lineno
rm -f Makefile
make[1]: Leaving directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
   dh_clean
Unknown option: with
dh_clean: warning: ignored unknown options in DH_OPTIONS
 dpkg-source -b myrss-0.3
dpkg-source: info: using source format `1.0'
dpkg-source: warning: Version number suggests Ubuntu changes, but Maintainer: does not have Ubuntu
address
dpkg-source: warning: Version number suggests Ubuntu changes, but there is no XSBC-Original-Maintainer
field
dpkg-source: warning: source directory 'myrss-0.3' is not <sourcepackage>-<upstreamversion> 'myrss-0.3-6'
dpkg-source: warning: .orig directory name myrss-0.3.orig is not <package>-<upstreamversion> (wanted
myrss-0.3-6.orig)
dpkg-source: info: building myrss in myrss_0.3-6.orig.tar.gz
dpkg-source: info: building myrss in myrss_0.3-6-0ubuntu1.diff.gz
dpkg-source: warning: ignoring deletion of file Makefile
dpkg-source: warning: ignoring deletion of file config.log
dpkg-source: warning: ignoring deletion of file myrss
dpkg-source: warning: ignoring deletion of file config.status
dpkg-source: warning: ignoring deletion of file bin/Release/myRSS.exe
dpkg-source: warning: ignoring deletion of file bin/Release/AZG_RSS_Feeds.txt
dpkg-source: warning: ignoring deletion of file bin/Release/myrss
dpkg-source: warning: ignoring deletion of file bin/Release/AZG_LOGO.gif
dpkg-source: warning: ignoring deletion of file bin/Release/internet-feed-reader.svg
dpkg-source: warning: ignoring deletion of file bin/Release/myRSS.desktop

```
dpkg-source: warning: ignoring deletion of directory autom4te.cache
dpkg-source: warning: ignoring deletion of file autom4te.cache/traces.0
dpkg-source: warning: ignoring deletion of file autom4te.cache/traces.1
dpkg-source: warning: ignoring deletion of file autom4te.cache/output.0
dpkg-source: warning: ignoring deletion of file autom4te.cache/output.1
dpkg-source: warning: ignoring deletion of file autom4te.cache/requests
dpkg-source: info: building myrss in myrss_0.3-6-0ubuntu1.dsc
 signfile myrss_0.3-6-0ubuntu1.dsc

You need a passphrase to unlock the secret key for
user: "Derek JW Cahusac de Caux (PGP key) <derek@azuregulf.com>"
2048-bit RSA key, ID 17XXXXXF, created 2010-11-21


 dpkg-genchanges -S >../myrss_0.3-6-0ubuntu1_source.changes
dpkg-genchanges: including full source code in upload
 signfile myrss_0.3-6-0ubuntu1_source.changes

You need a passphrase to unlock the secret key for
user: "Derek JW Cahusac de Caux (PGP key) <derek@azuregulf.com>"
2048-bit RSA key, ID 17XXXXXF, created 2010-11-21

dpkg-buildpackage: source only upload (original source is included)

azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.3$
```

These package files are created in the parent folder:

```
azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES$ ls -l

drwxr-xr-x  5 azuregulf azuregulf   4096 2010-11-25 20:55   myrss-0.3
-rw-r--r--  1 azuregulf azuregulf   3410 2010-11-25 20:55   myrss_0.3-6-0ubuntu1.diff.gz
-rw-r--r--  1 azuregulf azuregulf   1408 2010-11-25 20:55   myrss_0.3-6-0ubuntu1.dsc
-rw-r--r--  1 azuregulf azuregulf   1779 2010-11-25 20:55   myrss_0.3-6-0ubuntu1_source.changes
-rw-r--r--  1 azuregulf azuregulf 218328 2010-11-25 20:55   myrss_0.3-6.orig.tar.gz

azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES$
```

Output from the upload to Launchpad:

```
azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES$ dput ppa:myname/my.ppa myrss_0.3-6-
0ubuntu1_source.changes

Checking signature on .changes
gpg: Signature made Thu 25 Nov 2010 20:55:55 GMT using RSA key ID 17XXXXXF
gpg: Good signature from "Derek JW Cahusac de Caux (PGP key) <derek@azuregulf.com>"
Good signature on /home/azuregulf/AppsCSharp/PACKAGES/myrss_0.3-6-0ubuntu1_source.changes.
Checking signature on .dsc
gpg: Signature made Thu 25 Nov 2010 20:55:37 GMT using RSA key ID 17XXXXXF
gpg: Good signature from "Derek JW Cahusac de Caux (PGP key) <derek@azuregulf.com>"
Good signature on /home/azuregulf/AppsCSharp/PACKAGES/myrss_0.3-6-0ubuntu1.dsc.
Uploading to ppa (via ftp to ppa.launchpad.net):
  Uploading myrss_0.3-6-0ubuntu1.dsc: done.
  Uploading myrss_0.3-6.orig.tar.gz: done.
  Uploading myrss_0.3-6-0ubuntu1.diff.gz: done.
  Uploading myrss_0.3-6-0ubuntu1_source.changes: done.
Successfully uploaded packages.
```

azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES$

Output for building the Debian binary package is as below:

```
azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.3$ dpkg-buildpackage
dpkg-buildpackage: set CFLAGS to default value: -g -O2
dpkg-buildpackage: set CPPFLAGS to default value:
dpkg-buildpackage: set LDFLAGS to default value: -Wl,-Bsymbolic-functions
dpkg-buildpackage: set FFLAGS to default value: -g -O2
dpkg-buildpackage: set CXXFLAGS to default value: -g -O2
dpkg-buildpackage: source package myrss
dpkg-buildpackage: source version 0.3-6-0ubuntu1
dpkg-buildpackage: source changed by Derek JW Cahusac de Caux (PGP key) <derek@azuregulf.com>
dpkg-buildpackage: host architecture i386
 fakeroot debian/rules clean
dh  clean
   dh_testdir
Unknown option: with
dh_testdir: warning: ignored unknown options in DH_OPTIONS
   dh_auto_clean
Unknown option: with
dh_auto_clean: warning: ignored unknown options in DH_OPTIONS
   dh_clean
Unknown option: with
dh_clean: warning: ignored unknown options in DH_OPTIONS
 dpkg-source -b myrss-0.3
dpkg-source: info: using source format `1.0'
dpkg-source: warning: Version number suggests Ubuntu changes, but Maintainer: does not have Ubuntu
address
dpkg-source: warning: Version number suggests Ubuntu changes, but there is no XSBC-Original-Maintainer
field
dpkg-source: warning: source directory 'myrss-0.3' is not <sourcepackage>-<upstreamversion> 'myrss-0.3-6'
dpkg-source: warning: .orig directory name myrss-0.3.orig is not <package>-<upstreamversion> (wanted
myrss-0.3-6.orig)
dpkg-source: info: building myrss using existing myrss_0.3-6.orig.tar.gz
dpkg-source: info: building myrss in myrss_0.3-6-0ubuntu1.diff.gz
dpkg-source: warning: ignoring deletion of file Makefile
dpkg-source: warning: ignoring deletion of file config.log
dpkg-source: warning: ignoring deletion of file myrss
dpkg-source: warning: ignoring deletion of file config.status
dpkg-source: warning: ignoring deletion of file bin/Release/myRSS.exe
dpkg-source: warning: ignoring deletion of file bin/Release/AZG_RSS_Feeds.txt
dpkg-source: warning: ignoring deletion of file bin/Release/myrss
dpkg-source: warning: ignoring deletion of file bin/Release/AZG_LOGO.gif
dpkg-source: warning: ignoring deletion of file bin/Release/internet-feed-reader.svg
dpkg-source: warning: ignoring deletion of file bin/Release/myRSS.desktop
dpkg-source: warning: ignoring deletion of directory autom4te.cache
dpkg-source: warning: ignoring deletion of file autom4te.cache/traces.0
dpkg-source: warning: ignoring deletion of file autom4te.cache/traces.1
dpkg-source: warning: ignoring deletion of file autom4te.cache/output.0
dpkg-source: warning: ignoring deletion of file autom4te.cache/output.1
dpkg-source: warning: ignoring deletion of file autom4te.cache/requests
dpkg-source: info: building myrss in myrss_0.3-6-0ubuntu1.dsc
 debian/rules build
dh  build
```

```
  dh_testdir
Unknown option: with
dh_testdir: warning: ignored unknown options in DH_OPTIONS
  dh_auto_configure
Unknown option: with
dh_auto_configure: warning: ignored unknown options in DH_OPTIONS
configure: WARNING: unrecognized options: --disable-dependency-tracking
checking for a BSD-compatible install... /usr/bin/install -c
checking whether build environment is sane... yes
checking for a thread-safe mkdir -p... /bin/mkdir -p
checking for gawk... gawk
checking whether make sets $(MAKE)... yes
checking whether to enable maintainer-specific portions of Makefiles... no
checking for pkg-config... /usr/bin/pkg-config
checking for gmcs... /usr/bin/gmcs
checking pkg-config is at least version 0.9.0... yes
checking for GTK_SHARP_20... yes
checking for GLIB_SHARP_20... yes
checking for GLADE_SHARP_20... yes
checking for WEBKIT_SHARP_10... yes
configure: creating ./config.status
config.status: creating myrss
config.status: creating Makefile
configure: WARNING: unrecognized options: --disable-dependency-tracking
  dh_auto_build
Unknown option: with
dh_auto_build: warning: ignored unknown options in DH_OPTIONS
make[1]: Entering directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
Making all in .
make[2]: Entering directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
mkdir -p 'bin/Release'
cp 'myrss' 'bin/Release/myrss'
chmod +x 'bin/Release/myrss'
mkdir -p bin/Release
gmcs -noconfig -codepage:utf8 -warn:4 -optimize- -out:bin/Release/myRSS.exe -target:winexe './gtk-
gui/generated.cs' './Main.cs' './AssemblyInfo.cs' './RSSreader.cs' './NewsWebView.cs' './gtk-
gui/myRSS.RSSreader.cs' './gtk-gui/myRSS.NewsWebView.cs' '-resource:./gtk-gui/gui.stetic'   -r:System
-r:/usr/lib/pkgconfig/../../lib/cli/pango-sharp-2.0/pango-sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/atk-sharp-
2.0/atk-sharp.dll   -r:/usr/lib/pkgconfig/../../lib/cli/gdk-sharp-2.0/gdk-sharp.dll
-r:/usr/lib/pkgconfig/../../lib/cli/gtk-sharp-2.0/gtk-sharp.dll   -r:/usr/lib/pkgconfig/../../lib/cli/glib-sharp-2.0/glib-
sharp.dll   -r:/usr/lib/pkgconfig/../../lib/cli/glib-sharp-2.0/glib-sharp.dll   -r:/usr/lib/pkgconfig/../../lib/cli/glade-
sharp-2.0/glade-sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/pango-sharp-2.0/pango-sharp.dll
-r:/usr/lib/pkgconfig/../../lib/cli/atk-sharp-2.0/atk-sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/gdk-sharp-2.0/gdk-
sharp.dll   -r:/usr/lib/pkgconfig/../../lib/cli/gtk-sharp-2.0/gtk-sharp.dll   -r:/usr/lib/pkgconfig/../../lib/cli/glib-
sharp-2.0/glib-sharp.dll   -r:Mono.Posix  -r:System.Xml   -r:/usr/lib/cli/webkit-sharp-1.1/webkit-sharp.dll
-r:/usr/lib/pkgconfig/../../lib/cli/pango-sharp-2.0/pango-sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/atk-sharp-
2.0/atk-sharp.dll    -r:/usr/lib/pkgconfig/../../lib/cli/gdk-sharp-2.0/gdk-sharp.dll
-r:/usr/lib/pkgconfig/../../lib/cli/gtk-sharp-2.0/gtk-sharp.dll   -r:/usr/lib/pkgconfig/../../lib/cli/glib-sharp-2.0/glib-
sharp.dll
mkdir -p 'bin/Release'
cp 'myRSS.desktop' 'bin/Release/myRSS.desktop'
mkdir -p 'bin/Release'
cp 'internet-feed-reader.svg' 'bin/Release/internet-feed-reader.svg'
mkdir -p 'bin/Release'
cp 'AZG_RSS_Feeds.txt' 'bin/Release/AZG_RSS_Feeds.txt'
mkdir -p 'bin/Release'
cp 'AZG_LOGO.gif' 'bin/Release/AZG_LOGO.gif'
make[2]: Leaving directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
```

make[1]: Leaving directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
   dh_auto_test
Unknown option: with
dh_auto_test: warning: ignored unknown options in DH_OPTIONS
make[1]: Entering directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
Making check in .
make[2]: Entering directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
make[2]: Nothing to be done for `check-am'.
make[2]: Leaving directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
make[1]: Leaving directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
 fakeroot debian/rules binary
dh binary
   dh_testroot
   dh_prep
Unknown option: with
dh_prep: warning: ignored unknown options in DH_OPTIONS
   dh_installdirs
Unknown option: with
dh_installdirs: warning: ignored unknown options in DH_OPTIONS
   dh_auto_install
Unknown option: with
dh_auto_install: warning: ignored unknown options in DH_OPTIONS
make[1]: Entering directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
Making install in .
make[2]: Entering directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
make[3]: Entering directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
test -z "/usr/bin" || /bin/mkdir -p "/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3/debian/myrss/usr/bin"
 /usr/bin/install -c bin/Release/myrss '/home/azuregulf/AppsCSharp/PACKAGES/myrss-
0.3/debian/myrss/usr/bin'
test -z "/usr/lib/myrss" || /bin/mkdir -p "/home/azuregulf/AppsCSharp/PACKAGES/myrss-
0.3/debian/myrss/usr/lib/myrss"
 /usr/bin/install -c bin/Release/myRSS.exe '/home/azuregulf/AppsCSharp/PACKAGES/myrss-
0.3/debian/myrss/usr/lib/myrss'
test -z "/usr/share/applications" || /bin/mkdir -p "/home/azuregulf/AppsCSharp/PACKAGES/myrss-
0.3/debian/myrss/usr/share/applications"
 /usr/bin/install -c -m 644 bin/Release/myRSS.desktop '/home/azuregulf/AppsCSharp/PACKAGES/myrss-
0.3/debian/myrss/usr/share/applications'
test -z "/usr/lib/myrss" || /bin/mkdir -p "/home/azuregulf/AppsCSharp/PACKAGES/myrss-
0.3/debian/myrss/usr/lib/myrss"
 /usr/bin/install -c -m 644 bin/Release/internet-feed-reader.svg bin/Release/AZG_RSS_Feeds.txt
bin/Release/AZG_LOGO.gif '/home/azuregulf/AppsCSharp/PACKAGES/myrss-
0.3/debian/myrss/usr/lib/myrss'
make[3]: Leaving directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
make[2]: Leaving directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
make[1]: Leaving directory `/home/azuregulf/AppsCSharp/PACKAGES/myrss-0.3'
   dh_install
Unknown option: with
dh_install: warning: ignored unknown options in DH_OPTIONS
   dh_installdocs
Unknown option: with
dh_installdocs: warning: ignored unknown options in DH_OPTIONS
   dh_installchangelogs
Unknown option: with
dh_installchangelogs: warning: ignored unknown options in DH_OPTIONS
   dh_installexamples
Unknown option: with
dh_installexamples: warning: ignored unknown options in DH_OPTIONS
   dh_installman

Unknown option: with
dh_installman: warning: ignored unknown options in DH_OPTIONS
  dh_installcatalogs
Unknown option: with
dh_installcatalogs: warning: ignored unknown options in DH_OPTIONS
  dh_installcron
Unknown option: with
dh_installcron: warning: ignored unknown options in DH_OPTIONS
  dh_installdebconf
Unknown option: with
dh_installdebconf: warning: ignored unknown options in DH_OPTIONS
  dh_installemacsen
Unknown option: with
dh_installemacsen: warning: ignored unknown options in DH_OPTIONS
  dh_installifupdown
Unknown option: with
dh_installifupdown: warning: ignored unknown options in DH_OPTIONS
  dh_installinfo
Unknown option: with
dh_installinfo: warning: ignored unknown options in DH_OPTIONS
  dh_pysupport
Unknown option: with
dh_pysupport: warning: ignored unknown options in DH_OPTIONS
  dh_installinit
Duplicate specification "O=s" for option "O"
Unknown option: with
dh_installinit: warning: ignored unknown options in DH_OPTIONS
Duplicate specification "O=s" for option "O"
  dh_installmenu
Unknown option: with
dh_installmenu: warning: ignored unknown options in DH_OPTIONS
  dh_installmime
Unknown option: with
dh_installmime: warning: ignored unknown options in DH_OPTIONS
  dh_installmodules
Unknown option: with
dh_installmodules: warning: ignored unknown options in DH_OPTIONS
  dh_installlogcheck
Unknown option: with
dh_installlogcheck: warning: ignored unknown options in DH_OPTIONS
  dh_installlogrotate
Unknown option: with
dh_installlogrotate: warning: ignored unknown options in DH_OPTIONS
  dh_installpam
Unknown option: with
dh_installpam: warning: ignored unknown options in DH_OPTIONS
  dh_installppp
Unknown option: with
dh_installppp: warning: ignored unknown options in DH_OPTIONS
  dh_installudev
Unknown option: with
dh_installudev: warning: ignored unknown options in DH_OPTIONS
  dh_installwm
Unknown option: with
dh_installwm: warning: ignored unknown options in DH_OPTIONS
  dh_installxfonts
Unknown option: with
dh_installxfonts: warning: ignored unknown options in DH_OPTIONS

```
    dh_bugfiles
Unknown option: with
dh_bugfiles: warning: ignored unknown options in DH_OPTIONS
    dh_lintian
Unknown option: with
dh_lintian: warning: ignored unknown options in DH_OPTIONS
    dh_gconf
Unknown option: with
dh_gconf: warning: ignored unknown options in DH_OPTIONS
    dh_icons
Unknown option: with
dh_icons: warning: ignored unknown options in DH_OPTIONS
    dh_perl
Unknown option: with
dh_perl: warning: ignored unknown options in DH_OPTIONS
    dh_usrlocal
Unknown option: with
dh_usrlocal: warning: ignored unknown options in DH_OPTIONS
    dh_link
Unknown option: with
dh_link: warning: ignored unknown options in DH_OPTIONS
    dh_compress
Unknown option: with
dh_compress: warning: ignored unknown options in DH_OPTIONS
    dh_fixperms
Unknown option: with
dh_fixperms: warning: ignored unknown options in DH_OPTIONS
    dh_clifixperms
Unknown option: with
dh_clifixperms: warning: ignored unknown options in DH_OPTIONS
    dh_strip
Unknown option: with
dh_strip: warning: ignored unknown options in DH_OPTIONS
    dh_makeshlibs
Unknown option: with
dh_makeshlibs: warning: ignored unknown options in DH_OPTIONS
    dh_shlibdeps
Unknown option: with
dh_shlibdeps: warning: ignored unknown options in DH_OPTIONS
    dh_clistrip
Unknown option: with
dh_clistrip: warning: ignored unknown options in DH_OPTIONS
    dh_cligacpolicy
Unknown option: with
dh_cligacpolicy: warning: ignored unknown options in DH_OPTIONS
dh_cligacpolicy: Warning! No Build-Depends(-Indep) on cli-common-dev (>= 0.5.7)!
    dh_makeclilibs
Unknown option: with
dh_makeclilibs: warning: ignored unknown options in DH_OPTIONS
    dh_installcligac
Unknown option: with
dh_installcligac: warning: ignored unknown options in DH_OPTIONS
    dh_clideps
Unknown option: with
dh_clideps: warning: ignored unknown options in DH_OPTIONS
    dh_installdeb
Unknown option: with
dh_installdeb: warning: ignored unknown options in DH_OPTIONS
```

```
    dh_gencontrol
Unknown option: with
dh_gencontrol: warning: ignored unknown options in DH_OPTIONS
dpkg-gencontrol: warning: unknown substitution variable ${shlibs:Depends}
   dh_md5sums
Unknown option: with
dh_md5sums: warning: ignored unknown options in DH_OPTIONS
   dh_builddeb
Unknown option: with
dh_builddeb: warning: ignored unknown options in DH_OPTIONS
dpkg-deb: building package `myrss' in `../myrss_0.3-6-0ubuntu1_i386.deb'.
 signfile myrss_0.3-6-0ubuntu1.dsc

You need a passphrase to unlock the secret key for
user: "Derek JW Cahusac de Caux (PGP key) <derek@azuregulf.com>"
2048-bit RSA key, ID 17XXXXXF, created 2010-11-21


 dpkg-genchanges  >../myrss_0.3-6-0ubuntu1_i386.changes
dpkg-genchanges: including full source code in upload
 signfile myrss_0.3-6-0ubuntu1_i386.changes

You need a passphrase to unlock the secret key for
user: "Derek JW Cahusac de Caux (PGP key) <derek@azuregulf.com>"
2048-bit RSA key, ID 17XXXXXF, created 2010-11-21


dpkg-buildpackage: full upload (original source is included)

azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.3$
```

Files created in the parent folder are:

```
azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES/myrss-0.3$ cd ..

azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES$ ls -l

drwxr-xr-x  5 azuregulf azuregulf   4096 2010-11-25 21:06   myrss-0.3
-rw-r--r--  1 azuregulf azuregulf   3410 2010-11-25 21:06   myrss_0.3-6-0ubuntu1.diff.gz
-rw-r--r--  1 azuregulf azuregulf   1408 2010-11-25 21:07   myrss_0.3-6-0ubuntu1.dsc
-rw-r--r--  1 azuregulf azuregulf   2047 2010-11-25 21:07   myrss_0.3-6-0ubuntu1_i386.changes
-rw-r--r--  1 azuregulf azuregulf  35298 2010-11-25 21:06   myrss_0.3-6-0ubuntu1_i386.deb
-rw-r--r--  1 azuregulf azuregulf 218328 2010-11-25 20:55   myrss_0.3-6.orig.tar.gz

azuregulf@azuregulf-desktop:~/AppsCSharp/PACKAGES$
```