Build a simple RPM that packages a single file

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# Tested on RHEL 6 & 7

# The 'rpmbuild' command is used to build a binary RPM from source
code, as configured
# with a .spec file.

# Install the necessary packages: rpm-build and rpmdevtools:

yum install rpm-build rpmdevtools


# If possible,  avoid creating packages as 'root' as this is quite
dangerous because we
# could delete or overwrite OS existing files.

# Set up the folder structure. Placed on the HOME folder of a user
without admin privileges,
# run following command:

user@myhost:/home/user#> rpmdev-setuptree

# This will create rpmbuild structure where we will work on building
packages:

   rpmbuild/SRPMS
   rpmbuild/SPECS
   rpmbuild/SOURCES
   rpmbuild/RPMS
```

```
   rpmbuild/BUILD


# This can be alternatively done by running these commands:

user@myhost:/home/user#> mkdir -p
~/rpmbuild/{BUILD,BUILDROOT,RPMS,SOURCES,SPECS,SRPMS}

user@myhost:/home/user#> echo '%_topdir %(echo $HOME)/rpmbuild' >
~/.rpmmacros



# Under rpmbuild/SOURCES create a folder with source file(s). Do not
forget to provide
# a revision number. For instance, our source file will be a script
named 'HelloWorld.sh'

user@myhost:/home/user/rpmbuild/SOURCES#> cd ~/rpmbuild/SOURCES

user@myhost:/home/user/rpmbuild/SOURCES#> mkdir HelloWorld-1.0

user@myhost:/home/user/rpmbuild/SOURCES#> vi
HelloWorld-1.0/HelloWorld.sh
   echo "Hello world!"

user@myhost:/home/user/rpmbuild/SOURCES#> chmod 755
HelloWorld-1.0/HelloWorld.sh

user@myhost:/home/user/rpmbuild/SOURCES#> touch
HelloWorld-1.0/configure

user@myhost:/home/user/rpmbuild/SOURCES#> chmod 755
HelloWorld-1.0/configure

user@myhost:/home/user/rpmbuild/SOURCES#> tar czvf
HelloWorld-1.0.tar.gz HelloWorld-1.0
```

```
# Create the spec file: This is the hard part - configuring the RPM
on what to build,
# install, and configure. A sample spec file can be created by
running:

user@myhost:/home/user/rpmbuild/SOURCES#> cd

user@myhost:/home/user#> rpmdev-newspec
rpmbuild/SPECS/HelloWorld-1.0.spec
Skeleton specfile (minimal) has been created to
"rpmbuild/SPECS/HelloWorld-1.0.spec".

# But there is still a lot to add and remove to make this work. This
is a spec file
# created using the sample file.

# Edit spec file and add/modify necessary parameters (my setup in
bold letters)

user@myhost:/home/user#> vi ~/rpmbuild/SPECS/HelloWorld-1.0.spec

Name: HelloWorld

Version: 1.0     <--- Version must be the same as the name of the
    folder containing the package file(s)

Release: 1%{?dist}    <--- Release number, added to package's name

Summary: Hello World Script

Group: Miscellaneous      <--- For general purposes use
'Miscellaneous'

License: License text

# URL:
```

```
Source0: HelloWorld-1.0.tar.gz      <--- Pay attention to the name of
tar file


BuildArch: noarch      <--- If nothing specified, current architecture
    is used [ i386 | x86_64 | noarch ]


BuildRoot: %{_tmppath}/%{name}-%{version}-%{release}-root-%(%{__id_u}
-n)


# BuildRequires:     <--- Required packages to build this one


# Requires:     <--- Required packages for installing this one


%description
This is a text describing what the Package is meant for


%prep


%setup -q


%build
# %configure     <--- We have nothing to configure or compile
# make %{?_smp_mflags}     so we comment these two lines out


%install


rm -rf $RPM_BUILD_ROOT


# make install DESTDIR=$RPM_BUILD_ROOT     <--- We have nothing to
compile


install -d -m 0755 $RPM_BUILD_ROOT/opt/HelloWorld
install -m 0755 HelloWorld.sh
$RPM_BUILD_ROOT/opt/HelloWorld/HelloWorld.sh


^ These two directives indicate where folders and files will be
    created/installed and their effective rights
```

```
%clean

rm -rf $RPM_BUILD_ROOT

%files

%defattr(-,root,root,-)

# %doc

/opt/HelloWorld/HelloWorld.sh     <--- We confirm the file(s) to
install

%changelog




# Once the spec file is complete, build the package with:

user@myhost:/home/user#> rpmbuild -ba
rpmbuild/SPECS/HelloWorld-1.0.spec

# Assuming no errors occurred, new package is under the RPMS folder
ready to be installed.


user@myhost:/home/user#> cd ~/rpmbuild/RPMS/noarch

user@myhost:/home/user/rpmbuild/RPMS/noarch#> ll
total 4
-rw-rw-r-- 1 user user 2104 Sep 26 16:53
HelloWorld-1.0-1.el6.noarch.rpm

user@myhost:/home/user/rpmbuild/RPMS/noarch#> rpm -qpl
HelloWorld-1.0-1.el6.noarch.rpm
/opt/HelloWorld/HelloWorld.sh
```

```
# Let's install our new package (as 'root')

root@myhost:/root#> rpm -ihv
/home/user/rpmbuild/RPMS/noarch/HelloWorld-1.0-1.el6.noarch.rpm
Preparing...
################################### [100%]
   1:HelloWorld
################################### [100%]



root@myhost:/root#> rpm -qa HelloWorld
HelloWorld-1.0-1.el6.noarch



root@myhost:/root#> /opt/HelloWorld/HelloWorld.sh
Hello world!
```

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