```
####
#
# Make and execute tests the rolodex system.
#



#
# Platform type.  Use to specify what platform the make is on.  At Cal Poly,
# the following platform names are used:
#
#       SUN4G:  SUN4s galaxy and phoenix
#       SUN4K:  SUN4 kdat
#       HP700:  HP 700 cobra cluster
#       HP400:  HP 400 garden cluster
PLATFORM =      SUN4G


#
# Relative paths to rolodex system design and implementation testing
# directories.
#
SYS_DESIGN_DIR =        ../../../design
SYS_IMPLE_DIR =         ../../../implementation
SYS_OBJ_DIR =           ../../../implementation/$(PLATFORM)-work


#
# Model testing object files.
#
ROLODEX_TEST_OBJS = \
                $(SYS_OBJ_DIR)/add-input-errors.o \
                $(SYS_OBJ_DIR)/card-list.o \
                $(SYS_OBJ_DIR)/card.o \
                $(SYS_OBJ_DIR)/change-input-errors.o \
                $(SYS_OBJ_DIR)/delete-input-error.o \
                $(SYS_OBJ_DIR)/rolodex.o \
                rolodex-test-driver.o \
                rolodex-test.o


# Add defintions for other rolodex module test programs


#
# View testing object files (NOTE: we are not testing designing automated view
# tests in 441 this quarter).
#


#
# Process testing object files.
#


#
# Relative paths to design and implementation testing directories.
#
DESIGN_DIR =            ../../design
IMPLE_DIR =             ..


#
# Relative paths to design and implementation directories in both system and
# testing subdirectories.
#


#
# Paths to relevant root project directories
#
PROJECTS_DIR =          /home/phoenix/faculty1/gfisher/projects/work
PROJECTS_INCLUDE_DIR =  $(PROJECTS_DIR)/include
PROJECTS_LIB_DIR =      $(PROJECTS_DIR)/lib/$(PLATFORM)
SUPPORT_DOC_DIR =       $(PROJECTS_DIR)/support/documentation


#
# Paths to the relevant directories of the InterViews GUI toolkit
#
IV_DIR =                $(PROJECTS_DIR)/interviews
IV_INCLUDE_DIR =        $(IV_DIR)/design
IV_LIB_DIR =            $(IV_DIR)/implementation/libInterViews/$(PLATFORM)
IV_LIB_GRAPHICS_DIR =   $(IV_DIR)/implementation/libgraphic/$(PLATFORM)

#
# InterViews libraries; the _g version is compiled with debugging on, so that
# GUI library functions can be traced if necessary.
#
IV_LIBS =       $(IV_LIB_DIR)/libInterViewsX11.a $(IV_LIB_DIR)/libgraphic.a
IV_LIBS_g =     $(IV_LIB_DIR)/libInterViewsX11-g.a \
                $(IV_LIB_GRAPHICS_DIR)/libgraphic-g.a

#
# X Windows and other system libraries.
#
X_LIB =         -lX11           # X Windows lib
OTHER_LIBS =    -lsupport \
                -liv-local \
                -lm -lg++ -lgen


#
# Compilation flags and related definitions
#
CFLAGS =        -c -g \
                -I$(DESIGN_DIR) -I$(SYS_DESIGN_DIR) \
                -I$(PROJECTS_INCLUDE_DIR) -I$(IV_INCLUDE_DIR) \
                -Dgcc_2_6_3 -DOLD_EXCEPTION_HANDLING
#               -Dgcc_2_6_3 -fhandle-exceptions
LDFLAGS =       -g -L/usr/openwin/lib -L$(PROJECTS_LIB_DIR)
CC =            g++
GCC =           gcc
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LIBS =          $(IV_LIBS) $(X_LIB) $(OTHER_LIBS)
LIBS_g =        $(IV_LIBS_g) $(X_LIB) $(OTHER_LIBS)
DEPEND_SRCS =   $(IMPLE_DIR)/*.C
DEPEND_FLAGS =  -I$(DESIGN_DIR) -I$(SYS_DESIGN_DIR) \
                -I$(PROJECTS_INCLUDE_DIR) -I$(IV_INCLUDE_DIR) \
                -Dgcc_2_6_3 -DOLD_EXCEPTION_HANDLING
#               -Dgcc_2_6_3


#
# Default definition to make.
#
default:        all-testing


#
# Add additional module test program names as they are developed.
#
all-testing:            links rolodex-testing

#
# Perform rolodex testing by running tests (which will compile if necessary)
# and comparing results with last good run
#
rolodex-testing:        rolodex-output rolodex-diffs


#
# Execute test scripts and save output results.  By convention, rules ending in
# "-output" do this work.
#
rolodex-output: rolodex-test
                @csh -q -c "source .make-rolodex-output"

#
# Compare current output results with last good results.  By convention, rules
# ending in "-diffs" do this work.
#
rolodex-diffs:
                @csh -q -c "source .make-rolodex-diffs"

#
# Make the current output results the good results.  By convention, rules
# ending in "-good" so this work.
#
# NOTE WELL: 'make good' should only be performed after thorough analysis of
# current output results to ensure that they are absolutely correct.
#
good:           rolodex-good

rolodex-good:
                @csh -q -c "source .make-rolodex-good"


#
# Compile the testing scripts.  By convention, rules ending in "-test" do this
# work.
#
rolodex-test:   $(ROLODEX_TEST_OBJS)
                $(CC) $(LDFLAGS) $(ROLODEX_TEST_OBJS) $(LIBS_g) -o rolodex-test


#
# Build the design only, which means just compile the .h files, all of which
# are included in compile-stub.C.
#
design:
                $(CC) $(CFLAGS) $(DESIGN_DIR)/compile-stub.C


#
# Generic pattern rules to make testing implemenation files.
#
%.o:            $(IMPLE_DIR)/%.C
                $(CC) $(CFLAGS) $<

%.E:            $(IMPLE_DIR)/%.C
                $(CC) -E $(CFLAGS) $< > $*.E


#
# Force a remake of any implementation file, if necessary.  This is a
# convenience during the course of testing.  I.e., if a bug is detected during
# testing, the implementation fix can be made, and then make can be rerun in
# the testing dir, without having to run it separately in the implementation
# dir.
#
%.o:            $(SYS_IMPLEDIR)/%.C
                @echo in 2nd %.o rule
                $(CC) $(CFLAGS) $< -o $(IMPLEOBJDIR)/$@
                rm -f $@
                ln -s $(IMPLEOBJDIR)/$@ .


#
# Automatically create symbolic
#
links:
                @csh -q -c ".make-links $(SYS_OBJ_DIR)/*.o"


#
# Run this once to make the testing subdirectories
#
dirs:
                @csh -q -c ".make-dirs"

#
# Delete all testing object files.
#
clean:
                rm -f *.o *-test
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#
# Delete all testing AND system object files.
#
reallyclean:
		rm -f *.o *-test
		cd $(SYS_OBJ_DIR); gmake clean


#
# Generate dependencies using makedepend.
#
depend:		$(DEPEND_SRCS)
		makedepend $(DEPEND_FLAGS) $?


#
# Generate printable PostScript output for source files.  Format is two-column
# 7 point courier font in landscape page layout.
#
print:		print_design print_implementation print_makefile print_support


print_design:
		csh -f -c "cd $(DESIGN_DIR); \
			$(SUPPORT_DOC_DIR)/codeprint2.csh \
			../documentation/formatted-code \
			rolodex/testing/design \
			*.h"

print_implementation:
		csh -f -c "cd $(IMPLE_DIR); \
			$(SUPPORT_DOC_DIR)/codeprint2.csh \
			../documentation/formatted-code \
			rolodex/testing/implementation \
			*.C"

print_makefile:
		csh -f -c "$(SUPPORT_DOC_DIR)/codeprint2.csh \
			../../documentation/formatted-code \
			rolodex/testing/implementation \
			Makefile"

print_support:
		csh -f -c "cd $(PROJECTS_INCLUDE_DIR) ; \
			../support/documentation/codeprint2.csh \
			../rolodex/documentation/formatted-code \
			support/design \
			view.h model.h"


# DO NOT DELETE THIS LINE -- make depend depends on it.

rolodex-test-driver.o: ../../design/rolodex-test.h ../../../design/rolodex.h
rolodex-test-driver.o: ../../../design/add-input-errors.h
rolodex-test-driver.o: /home/phoenix/faculty1/gfisher/projects/work/include/std-macros.h
rolodex-test-driver.o: /usr/include/setjmp.h /usr/include/sys/feature_tests.h
rolodex-test-driver.o: /home/phoenix/faculty1/gfisher/projects/work/include/str.h
rolodex-test-driver.o: /home/phoenix/faculty1/gfisher/projects/work/include/strlist.h
rolodex-test-driver.o: /home/phoenix/faculty1/gfisher/projects/work/include/list.h
rolodex-test-driver.o: ../../../design/basic-types.h
rolodex-test-driver.o: ../../../design/card-list.h ../../../design/card.h
rolodex-test-driver.o: /home/phoenix/faculty1/gfisher/projects/work/include/model.h
rolodex-test-driver.o: ../../../design/change-input-errors.h
rolodex-test-driver.o: ../../../design/delete-input-error.h
rolodex-test.o: ../../design/rolodex-test.h ../../../design/rolodex.h
rolodex-test.o: ../../../design/add-input-errors.h
rolodex-test.o: /home/phoenix/faculty1/gfisher/projects/work/include/std-macros.h
rolodex-test.o: /usr/include/setjmp.h /usr/include/sys/feature_tests.h
rolodex-test.o: /home/phoenix/faculty1/gfisher/projects/work/include/str.h
rolodex-test.o: /home/phoenix/faculty1/gfisher/projects/work/include/strlist.h
rolodex-test.o: /home/phoenix/faculty1/gfisher/projects/work/include/list.h
rolodex-test.o: ../../../design/basic-types.h ../../../design/card-list.h
rolodex-test.o: ../../../design/card.h
rolodex-test.o: /home/phoenix/faculty1/gfisher/projects/work/include/model.h
rolodex-test.o: ../../../design/change-input-errors.h
rolodex-test.o: ../../../design/delete-input-error.h /usr/include/stdio.h
rolodex-test.o: /usr/include/stdlib.h
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