Syntax:

Case	Expected Output	$?	Required
Command + (>,<,<<,>>)	minishell: syntax error near unexpected token `newline'	2	Yes
(<,>,>>,<<) + (<,>,>>,<<)	./minishell: syntax error near unexpected token `operate'	2	Yes
| or ||| …….	./minishell: syntax error near unexpected token `newline'	2	Yes
.	./minishell: .: filename argument required	2	Yes
..	..: command not found	127	Yes
Test/	./minishell: test: No such file or directory	127	Yes
Makefile/	./minishell: Makefile: Not a directory	126	Yes
/	./minishell: /: Is a directory	126	Yes

Signal:

Case	Expected Output	$?	Required
cat CTRL+C	^C minishell>	130	Yes
cat CTRL+\	^\ minnshill >	131	Yes
cat CTRL+D	minishell > cat minishell >	0	Yes
CTRL+C	minishll >^C minishell >	130	Yes
CTRL + D	minishell > exit	0	Yes
CTRL + \	minishell >	0	Yes
<< end > (CTRL + C)	> ^C minishell >	130	--
<< end > (CTRL + D)	> ./minishell: warning minishell >	0	--
<< end > (CTRL + \)	Nothing…	--	--

Env:

Case	Expected Output	$?	Required
env	Should print the environment	0	Yes
echo $SHLVL ./minishell echo $SHLVL	first echo will output current shell lvl second will output SHLVL + 1	0	Yes
export SHLVL=999 ./minishell	minishell > ./minishell: warning: shell level (1000) too high, resetting to 1 *echo $SHLVL = 1*	0	Yes
export SHLVL=(neg num) ./minishell echo $SHLVL	0	0	Yes
cd echo $OLDPWD	The previous pwd	0	--
Cd echo $PWD	the current pwd	0	--
env + test/	./minishell: test: No such file or directory	127	--
env + src/	./minishell: src: Permission denied	126	--
env + Makefile/	./minishell: Makefile: Not a directory	126	--
env + (anything)	./minishell: 'fjl': No such file or directory	127	--

Echo:

Case	Expected Output	$?	Required
echo -n -nn -nnwn test -nnn	—nnwn test —nnnminishell >	0	Yes
echo -n-nnn-nnn-n djfk	-n-nnn-nnn-n djfk minishell >	0	Yes
echo -nnen -n tes	Testminishell >	0	NO
echo test	test minishell >	0	Yes
echo ~ == echo $HOME	$HOME	0	NO
echo $PATH	$PATH	0	Yes
echo $non_exist	\n minishell >	0	Yes

Cd:

Case	Expected Output	$?	Required
cd ../../../../../../../../.. pwd	/	0	Yes
cd	$HOME	0	Yes
cd + (~ or --)	$HOME	0	--
mkdir a mkdir a/b cd a/b rm –r ../../a cd ..	./minishell: error retrieving current directory: getcwd: cannot access parent directories: No such file or directory	0	Yes
cd Makefile/	./minishell: cd: no such file or directory	1	Yes
cd test	./minishell: cd: no such file or directory	1	Yes
cd a fs	minishell: cd: too many arguments	1	Yes

Unset:

Case	Expected Output	$?	Required
unset USER	Removes USER env	0	Yes
unset USER PATH	Removes USER and PATH envs	0	Yes
unset "" test	minishell >	0	--
unset '' test	minishell >	0	--
unset (any thing)	minishell >	0	--

Exit:

Case	Expected Output	$?	Required
exit -42	exit bash>	214	Yes
exit 9223372036854775808-	exit minishell: exit: 9223372036854775808- : numeric argument required bash>	2	Yes
exit -9223372036854775808	exit bash>	0	Yes
exit 9223372036854775808	exit ./minishell: 9223372036854775808: numeric argument required bash>	2	Yes
exit 1 abcd	exit minishell: exit: too many arguments	1	Yes
exit -+-42	exit ./minishell: -+-42: numeric argument required bash>	2	Yes
exit 1234 134 432	exit ./minishell: : too many arguments	1	Yes
exit 12WW24 43 432 532	exit ./minishell: 13f14: numeric argument required bash>	2	Yes
exit 123 34HELLO 52fds3	exit ./minishell: : too many arguments	1	Yes

Extra cases:

Case	Expected Output	$?	Required
/bin/echo shoaib	shoaib	0	Yes
cat /dev/urandom | ./minishell	Should creat random files	-	--
cat wfeh | cat csijdsji | cat nfwir	The error change every time	-	--

pipe:

Case	Expected Output	$?	Required
cat | cat | cat | ls	Press enter 3 times	0	Yes
cat Makefile | grep pr | head -n 5 | cd file_not_exit	./minishell: cd: no such file or directory	1	Yes
cat Makefile | grep pr | head -n 5 | hello	./minishell: hello: Command not found	127	Yes
ls | exit 42 | echo shoaib	shoaib	0	Yes
exit 1 | exit 255 | exit 42	minishell >	42	Yes
cat Makefile | base64 | xxd -p | xxd -r -p | base64 --decode	cat Makefile	0	Yes
cat Makefile | cat -e | cat -e | cat -e | cat -e | cat -e | cat -e | cat -e | cat -e | cat -e	$$$$$$$$$ SRC_DIR = src$$$$$$$$$$ OBJ_DIR = build$$$$$$$$$ ...	0	Yes
yes yes | head -n 10000000 | wc	10000000 10000000 40000000	0	Yes
echo | echo | echo | echo | echo | echo | echo | echo | echo | echo | echo | echo | echo	\n minishell >	0	Yes

Redir:

Case	Expected Output	$?	Required
> test | ls	creat test & the result of ls should include test folder	0	Yes
exit 42 > file	exit & creat file bash>	42	Yes
cat -e > test1 < test2	error: test2 does not exist	1	Yes
echo -nnnnn > out1 -nn>>o2 hi cat out1 cat o2	out1 : o2 : hellominishell >	0	Yes
cat <<123 -e <<234 It should be work like bash	cat will read from 234 with -e option and output to out	0	Yes
> /	error opening output file: Is a directory	1	Yes
ls> test1 > test2 -l>test3 -a	test1 : test2 : test3 : result of ls -l -a	0	Yes

Expander:

Case	Expected Output	$?	Required
echo $0$1230$0	./minishell230./minishell	0	Yes
"ls -l"	./minishell: ls -l: Command not found	127	Yes
""ls -l""	Work as expect	0	Yes
> "out " >>" out2"	Creat file 'out ' && ' out2'	0	Yes
$non_exist	minishell >	0	Yes
"e"cho shoaib	shoaib minishell >	0	Yes

Export:

Case	Expected Output	$?	Required
export x1="abcd" x2="123" x3"shoaib"	Must add x1 x2 to envs and to export ,x3 just in export and show like this: declare -x x3shoaib	0	Yes
export 1x	export: `1c': not a valid identifier	1	Yes
export test="123" 1test="test" test3="abcd"	export: `1test=test': not a valid identifier it will add test and test3 to export and env	1	Yes
export test_empty bash export	All envs except test_empty	0	Yes
export var=a export $var=test echo $var $a	a test	0	Yes
export test1 env	You will not see test1 in "env", but you will it in "export"	0	Yes
export test2= env	You will see test2 in "env" and "export"	0	Yes
export test - export export test=shoaib - export	test="shoaib"	0	Yes
export test=$HOME - export	test=/home/user 42	0	Yes
export x="s -l -a " l$x	It should work	0	Yes
export x=" s -l -a" l$x	./minishell: l: Command not found	127	Yes
export $non_exist	Should run export	0	Yes
export $non_exist=	export: `=': not a valid identifier	1	Yes

Export with expander:

Case	Expected Output	$?	Required
export "" test=a	export: `': not a valid identifier	1	Yes
export var=" shoaib" echo $var | cat –e	[shoaib$]	0	Yes
export var="shoaib " echo $var | cat –e	[shoaib$]	0	Yes
echo "$tests""Makefile"	[Makefile]	0	Yes
echo "$tests"Makefile	[Makefile]	0	Yes
echo "$tests" "Makefile"	[Makefile]	0	Yes
export test=" shoaib ft " echo $test	[shoaib ft]	0	Yes
export test=" shoaib ft " echo ab$test	[ab shoib ft]	0	Yes
export test=" shoaib ft " echo "ab"$test	[ab shoib ft]	0	Yes
export test=" shoaib ft " echo ""$test""	[shoaib ft]	0	Yes
export test=" shoaib ft " echo """$test"""	[shoaib ft]	0	Yes
export "test=shoaib"=ft echo $test	shoaib=ft	0	Yes
export test=" " echo $test $test $test abcd $non_exist $test 123 $test	[abcd 123]	0	Yes
export test=" abcd 123 " 1.echo $test "$test" 2. echo $test"$test" 3 .echo "$test" $test 4 .echo "$test"$test 5 .echo "$test"v$test 6. echo $testv"$test"	1.[abcd 123 abcd 123] 2.[abcd 123 abcd 123] 3.[abcd 123 abcd 123] 4.[abcd 123 abcd 123] 5.[abcd 123 v abcd 123] 6.[abcd 123]	0	Yes
export x=" ismail" 1.echo $x 2.echo "$x"	1.[ismail] 2.[ismail] 3.[ismail]	0	Yes

3.echo ""$x"" 4.echo "$x"$x 5.echo $x "$x" * Check the same cases but on x="ismail " *	4.[ismail ismail] 5.[ismail ismail]		