```
1: Linkload Test Preview: Summary for npd215 of c2
2: ----------------------------------------------
3:
4:   Preview Tests:
5:     Make Script Tests:      2 / 7
6:     last_touch Script Tests:  0 / 7
7:
8: Git Repo: git@gitlab.doc.ic.ac.uk:lab1617_autumn/linkload_npd215.git
9: Commit ID: 61b36
```

```
    1: # edit this file to build/clean chello as required for quesiton 6
    2: main: chello.c writeexit.s
    3:         gcc −c chello.c −o chello.o && as writeexit.s −o writeexit.o && ld −N
chello.o writeexit.o −o chello
    4:
    5: clean:
    6:         rm −rf *.o
```

```
 1: ------- Make Test Output -------
 2: #---- Testing the makefile ----#
 3:
 4: Running make for the first time:
 5: Test Failed
 6: --expecting--
 7: "gcc -c chello.c -o chello.o\nas writeexit.s -o writeexit.o\nld -N chello.o writeexit.o -o chello\n"
 8:  -OR-
 9: "gcc -c chello.c -o chello.o\nas writeexit.s -o writeexit.o\ngcc -N chello.o writeexit.o -o chello\n"
10: ---actual---
11: "gcc -c chello.c -o chello.o && as writeexit.s -o writeexit.o && ld -N chello.o writeexit.o -o chello\n"
12:
13: Checking files produced by make:
14:    executable 'chello' produced: true
15:    intermediate assembly not produced: true
16: Test Passed
17:
18: Running make again (nothing should be built):
19: Test Failed
20: --expecting--
21: "make: 'chello' is up to date.\n"
22:  -OR-
23: "make: Nothing to be done for 'all'.\n"
24: ---actual---
25: "gcc -c chello.c -o chello.o && as writeexit.s -o writeexit.o && ld -N chello.o writeexit.o -o chello\n"
26:
27: Running make with just chello.c modified:
28: Test Failed
29: --expecting--
30: "gcc -c chello.c -o chello.o\nld -N chello.o writeexit.o -o chello\n"
31:  -OR-
32: "gcc -c chello.c -o chello.o\ngcc -N chello.o writeexit.o -o chello\n"
33: ---actual---
34: "gcc -c chello.c -o chello.o && as writeexit.s -o writeexit.o && ld -N chello.o writeexit.o -o chello\n"
35:
36: Running make with just writeexit.s modified:
37: Test Failed
38: --expecting--
39: "as writeexit.s -o writeexit.o\nld -N chello.o writeexit.o -o chello\n"
40:  -OR-
41: "as writeexit.s -o writeexit.o\ngcc -N chello.o writeexit.o -o chello\n"
42: ---actual---
43: "gcc -c chello.c -o chello.o && as writeexit.s -o writeexit.o && ld -N chello.o writeexit.o -o chello\n"
44:
45: Checking behaviour of 'make clean':
46:    chello executable removed: false
```

```
47:    chello.o object file removed: true
48:    writeexit object file removed: true
49:    chello.c src file preserved: true
50:    writeexit.s src file preserved: true
51:    random txt file not affected true
52: Test Failed
53:
54: Checking behaviour of 'make all':
55: Test Passed
56:
57: #---- Test Results ----#
58: 2/7 make tests passed.
```

```
 1: ------- Last Touch Test Output -------
 2: #---- Testing the last_touch script ----#
 3:
 4: Test 1 - simple git repo:
 5:    running: ./last_touch Linkload-Test-1
 6: Test Failed
 7: --expected output--
 8: 2016-09-30T12:24:13+01:00 [aff4b]: sample.txt (Mark Wheelhouse)
 9: --actual output--
10:
11: 2016-09-30T15:36:13+00:00 [99b071]: answers.txt (Mark Wheelhouse)
12: 2016-09-30T15:36:13+00:00 [99b071]: chello.c    (Mark Wheelhouse)
13: 2016-09-30T15:36:13+00:00 [99b071]: example.c   (Mark Wheelhouse)
14: 2016-09-30T15:36:13+00:00 [99b071]: hello.s     (Mark Wheelhouse)
15: 2016-09-30T15:36:13+00:00 [99b071]: last_touch  (Mark Wheelhouse)
16: 2016-09-30T15:36:13+00:00 [99b071]: makefile    (Mark Wheelhouse)
17: 2016-09-30T15:36:13+00:00 [99b071]: simple.rb   (Mark Wheelhouse)
18: 2016-09-30T15:36:13+00:00 [99b071]: simple.sh   (Mark Wheelhouse)
19: 2016-09-30T15:36:13+00:00 [99b071]: writeexit.s (Mark Wheelhouse)
20: 2016-10-04T08:23:58+00:00 [7b71d1]: linkload.pdf(Mark Laptop)
21: 2016-10-13T08:03:40+00:00 [84765b]: test.rb     (npd215)
22: 2016-10-13T08:03:40+00:00 [84765b]: tuple.rb    (npd215)
23: 2016-10-13T10:45:45+00:00 [9491c9]: chello      (npd215)
24: 2016-10-13T10:45:45+00:00 [9491c9]: chello.o    (npd215)
25: 2016-10-13T10:45:45+00:00 [9491c9]: chello.s    (npd215)
26: 2016-10-13T10:45:45+00:00 [9491c9]: hello       (npd215)
27: 2016-10-13T10:45:45+00:00 [9491c9]: writeexit.o (npd215)
28: 2016-10-13T11:21:48+00:00 [61b36c]: hello.o     (npd215)
29:
30: Test 2 - simple git repo with no args
31:    running: ./last_touch
32: Test Failed
33: --expected output--
34: 2016-09-30T12:24:13+01:00 [aff4b]: sample.txt (Mark Wheelhouse)
35: [***not under version control***]: last_touch
36: --actual output--
37: ruby: No such file or directory -- test.rb (LoadError)
38:
39: Test 3 - non git repo:
40:    running: ./last_touch tmp
41: Test Failed
42: --expected output--
43: [***not under version control***]: notin1
44: [***not under version control***]: notin2
45: [***not under version control***]: notin3
46: --actual output--
```

```
47:
48: 2016-09-30T15:36:13+00:00 [99b071]: answers.txt (Mark Wheelhouse)
49: 2016-09-30T15:36:13+00:00 [99b071]: chello.c   (Mark Wheelhouse)
50: 2016-09-30T15:36:13+00:00 [99b071]: example.c  (Mark Wheelhouse)
51: 2016-09-30T15:36:13+00:00 [99b071]: hello.s    (Mark Wheelhouse)
52: 2016-09-30T15:36:13+00:00 [99b071]: last_touch (Mark Wheelhouse)
53: 2016-09-30T15:36:13+00:00 [99b071]: makefile   (Mark Wheelhouse)
54: 2016-09-30T15:36:13+00:00 [99b071]: simple.rb  (Mark Wheelhouse)
55: 2016-09-30T15:36:13+00:00 [99b071]: simple.sh  (Mark Wheelhouse)
56: 2016-09-30T15:36:13+00:00 [99b071]: writeexit.s (Mark Wheelhouse)
57: 2016-10-04T08:23:58+00:00 [7b71d1]: linkload.pdf(Mark Laptop)
58: 2016-10-13T08:03:40+00:00 [84765b]: test.rb    (npd215)
59: 2016-10-13T08:03:40+00:00 [84765b]: tuple.rb   (npd215)
60: 2016-10-13T10:45:45+00:00 [9491c9]: chello     (npd215)
61: 2016-10-13T10:45:45+00:00 [9491c9]: chello.o   (npd215)
62: 2016-10-13T10:45:45+00:00 [9491c9]: chello.s   (npd215)
63: 2016-10-13T10:45:45+00:00 [9491c9]: hello      (npd215)
64: 2016-10-13T10:45:45+00:00 [9491c9]: writeexit.o (npd215)
65: 2016-10-13T11:21:48+00:00 [61b36c]: hello.o    (npd215)
66:
67: Test 4 – bad args:
68: (too many args)
69:   running: ./last_touch Linkload-Test-1 Linkload-Test-2 Linkload-Test-3 Linkload-Test-4
70: Test Failed
71:   expected non-zero exit code, actual: 0
72: --test output--
73:
74: 2016-09-30T15:36:13+00:00 [99b071]: answers.txt (Mark Wheelhouse)
75: 2016-09-30T15:36:13+00:00 [99b071]: chello.c   (Mark Wheelhouse)
76: 2016-09-30T15:36:13+00:00 [99b071]: example.c  (Mark Wheelhouse)
77: 2016-09-30T15:36:13+00:00 [99b071]: hello.s    (Mark Wheelhouse)
78: 2016-09-30T15:36:13+00:00 [99b071]: last_touch (Mark Wheelhouse)
79: 2016-09-30T15:36:13+00:00 [99b071]: makefile   (Mark Wheelhouse)
80: 2016-09-30T15:36:13+00:00 [99b071]: simple.rb  (Mark Wheelhouse)
81: 2016-09-30T15:36:13+00:00 [99b071]: simple.sh  (Mark Wheelhouse)
82: 2016-09-30T15:36:13+00:00 [99b071]: writeexit.s (Mark Wheelhouse)
83: 2016-10-04T08:23:58+00:00 [7b71d1]: linkload.pdf(Mark Laptop)
84: 2016-10-13T08:03:40+00:00 [84765b]: test.rb    (npd215)
85: 2016-10-13T08:03:40+00:00 [84765b]: tuple.rb   (npd215)
86: 2016-10-13T10:45:45+00:00 [9491c9]: chello     (npd215)
87: 2016-10-13T10:45:45+00:00 [9491c9]: chello.o   (npd215)
88: 2016-10-13T10:45:45+00:00 [9491c9]: chello.s   (npd215)
89: 2016-10-13T10:45:45+00:00 [9491c9]: hello      (npd215)
90: 2016-10-13T10:45:45+00:00 [9491c9]: writeexit.o (npd215)
91: 2016-10-13T11:21:48+00:00 [61b36c]: hello.o    (npd215)
92:
```

```
 93: (non-directory target)
 94:   running: ./last_touch Linkload-Test-1/simple.txt
 95: Test Failed
 96:   expected non-zero exit code, actual: 0
 97: --test output--
 98:
 99: 2016-09-30T15:36:13+00:00 [99b071]: answers.txt (Mark Wheelhouse)
100: 2016-09-30T15:36:13+00:00 [99b071]: chello.c   (Mark Wheelhouse)
101: 2016-09-30T15:36:13+00:00 [99b071]: example.c   (Mark Wheelhouse)
102: 2016-09-30T15:36:13+00:00 [99b071]: hello.s     (Mark Wheelhouse)
103: 2016-09-30T15:36:13+00:00 [99b071]: last_touch  (Mark Wheelhouse)
104: 2016-09-30T15:36:13+00:00 [99b071]: makefile    (Mark Wheelhouse)
105: 2016-09-30T15:36:13+00:00 [99b071]: simple.rb   (Mark Wheelhouse)
106: 2016-09-30T15:36:13+00:00 [99b071]: simple.sh   (Mark Wheelhouse)
107: 2016-09-30T15:36:13+00:00 [99b071]: writeexit.s (Mark Wheelhouse)
108: 2016-10-04T08:23:58+00:00 [7b71d1]: linkload.pdf(Mark Laptop)
109: 2016-10-13T08:03:40+00:00 [84765b]: test.rb     (npd215)
110: 2016-10-13T08:03:40+00:00 [84765b]: tuple.rb    (npd215)
111: 2016-10-13T10:45:45+00:00 [9491c9]: chello      (npd215)
112: 2016-10-13T10:45:45+00:00 [9491c9]: chello.o    (npd215)
113: 2016-10-13T10:45:45+00:00 [9491c9]: chello.s    (npd215)
114: 2016-10-13T10:45:45+00:00 [9491c9]: hello       (npd215)
115: 2016-10-13T10:45:45+00:00 [9491c9]: writeexit.o (npd215)
116: 2016-10-13T11:21:48+00:00 [61b36c]: hello.o     (npd215)
117:
118: Test 5 – multi-file git repo:
119:   running: ./last_touch Linkload-Test-2
120: Test Failed
121: --expected output--
122: 2016-09-30T12:36:21+01:00 [5cfc8]: another_file.txt  (Mark Wheelhouse)
123: 2016-09-30T12:31:49+01:00 [4e0b6]: late_addition.txt (Mark Laptop)
124: 2016-09-30T12:30:44+01:00 [a6550]: my_other_file.txt (Mark Laptop)
125: 2016-09-30T12:27:47+01:00 [46bfc]: my_file.txt       (Mark Wheelhouse)
126: --actual output--
127:
128: 2016-09-30T15:36:13+00:00 [99b071]: answers.txt (Mark Wheelhouse)
129: 2016-09-30T15:36:13+00:00 [99b071]: chello.c   (Mark Wheelhouse)
130: 2016-09-30T15:36:13+00:00 [99b071]: example.c   (Mark Wheelhouse)
131: 2016-09-30T15:36:13+00:00 [99b071]: hello.s     (Mark Wheelhouse)
132: 2016-09-30T15:36:13+00:00 [99b071]: last_touch  (Mark Wheelhouse)
133: 2016-09-30T15:36:13+00:00 [99b071]: makefile    (Mark Wheelhouse)
134: 2016-09-30T15:36:13+00:00 [99b071]: simple.rb   (Mark Wheelhouse)
135: 2016-09-30T15:36:13+00:00 [99b071]: simple.sh   (Mark Wheelhouse)
136: 2016-09-30T15:36:13+00:00 [99b071]: writeexit.s (Mark Wheelhouse)
137: 2016-10-04T08:23:58+00:00 [7b71d1]: linkload.pdf(Mark Laptop)
138: 2016-10-13T08:03:40+00:00 [84765b]: test.rb     (npd215)
```

```
139: 2016-10-13T08:03:40+00:00 [84765b]: tuple.rb     (npd215)
140: 2016-10-13T10:45:45+00:00 [9491c9]: chello       (npd215)
141: 2016-10-13T10:45:45+00:00 [9491c9]: chello.o     (npd215)
142: 2016-10-13T10:45:45+00:00 [9491c9]: chello.s     (npd215)
143: 2016-10-13T10:45:45+00:00 [9491c9]: hello        (npd215)
144: 2016-10-13T10:45:45+00:00 [9491c9]: writeexit.o  (npd215)
145: 2016-10-13T11:21:48+00:00 [61b36c]: hello.o      (npd215)
146:
147: Test 6 – recursive directory repo:
148:    running: ./last_touch Linkload-Test-3
149: Test Failed
150: --expected output--
151: 2016-09-30T12:45:54+01:00 [8ebe6]: a_file          (Mark Laptop)
152: 2016-09-30T12:45:54+01:00 [8ebe6]: version3/a_file (Mark Laptop)
153: 2016-09-30T12:45:16+01:00 [a80d7]: version2/a_file (Mark Laptop)
154: 2016-09-30T12:44:39+01:00 [111ac]: version1/a_file (Mark Laptop)
155: --actual output--
156:
157: 2016-09-30T15:36:13+00:00 [99b071]: answers.txt (Mark Wheelhouse)
158: 2016-09-30T15:36:13+00:00 [99b071]: chello.c    (Mark Wheelhouse)
159: 2016-09-30T15:36:13+00:00 [99b071]: example.c   (Mark Wheelhouse)
160: 2016-09-30T15:36:13+00:00 [99b071]: hello.s     (Mark Wheelhouse)
161: 2016-09-30T15:36:13+00:00 [99b071]: last_touch  (Mark Wheelhouse)
162: 2016-09-30T15:36:13+00:00 [99b071]: makefile    (Mark Wheelhouse)
163: 2016-09-30T15:36:13+00:00 [99b071]: simple.rb   (Mark Wheelhouse)
164: 2016-09-30T15:36:13+00:00 [99b071]: simple.sh   (Mark Wheelhouse)
165: 2016-09-30T15:36:13+00:00 [99b071]: writeexit.s (Mark Wheelhouse)
166: 2016-10-04T08:23:58+00:00 [7b71d1]: linkload.pdf(Mark Laptop)
167: 2016-10-13T08:03:40+00:00 [84765b]: test.rb     (npd215)
168: 2016-10-13T08:03:40+00:00 [84765b]: tuple.rb    (npd215)
169: 2016-10-13T10:45:45+00:00 [9491c9]: chello      (npd215)
170: 2016-10-13T10:45:45+00:00 [9491c9]: chello.o    (npd215)
171: 2016-10-13T10:45:45+00:00 [9491c9]: chello.s    (npd215)
172: 2016-10-13T10:45:45+00:00 [9491c9]: hello       (npd215)
173: 2016-10-13T10:45:45+00:00 [9491c9]: writeexit.o (npd215)
174: 2016-10-13T11:21:48+00:00 [61b36c]: hello.o     (npd215)
175:
176: Test 7 – repo with automated merges:
177:    running: ./last_touch Linkload-Test-4
178: Test Failed
179: --expected output--
180: 2016-09-30T12:53:25+01:00 [11d6b]: file3 (Mark Wheelhouse)
181: 2016-09-30T12:51:03+01:00 [bc9ef]: file2 (Mark Wheelhouse)
182: 2016-09-30T12:49:36+01:00 [b8b09]: file1 (Mark Laptop)
183: --actual output--
184:
```

```
185: 2016-09-30T15:36:13+00:00 [99b071]: answers.txt (Mark Wheelhouse)
186: 2016-09-30T15:36:13+00:00 [99b071]: chello.c   (Mark Wheelhouse)
187: 2016-09-30T15:36:13+00:00 [99b071]: example.c  (Mark Wheelhouse)
188: 2016-09-30T15:36:13+00:00 [99b071]: hello.s    (Mark Wheelhouse)
189: 2016-09-30T15:36:13+00:00 [99b071]: last_touch (Mark Wheelhouse)
190: 2016-09-30T15:36:13+00:00 [99b071]: makefile   (Mark Wheelhouse)
191: 2016-09-30T15:36:13+00:00 [99b071]: simple.rb  (Mark Wheelhouse)
192: 2016-09-30T15:36:13+00:00 [99b071]: simple.sh  (Mark Wheelhouse)
193: 2016-09-30T15:36:13+00:00 [99b071]: writeexit.s (Mark Wheelhouse)
194: 2016-10-04T08:23:58+00:00 [7b71d1]: linkload.pdf(Mark Laptop)
195: 2016-10-13T08:03:40+00:00 [84765b]: test.rb    (npd215)
196: 2016-10-13T08:03:40+00:00 [84765b]: tuple.rb   (npd215)
197: 2016-10-13T10:45:45+00:00 [9491c9]: chello     (npd215)
198: 2016-10-13T10:45:45+00:00 [9491c9]: chello.o   (npd215)
199: 2016-10-13T10:45:45+00:00 [9491c9]: chello.s   (npd215)
200: 2016-10-13T10:45:45+00:00 [9491c9]: hello      (npd215)
201: 2016-10-13T10:45:45+00:00 [9491c9]: writeexit.o (npd215)
202: 2016-10-13T11:21:48+00:00 [61b36c]: hello.o    (npd215)
203:
204: ""
205:
206: #---- Test Results ----#
207: 0/7 last_touch tests passed
```