```
    1: 2A: 1.0 / 1 mark
    2: 2C: 1.0 / 1 mark
    3: == Setup ==
    4:   Username: assignment
    5:   Filename: tools/c20007a1/submitted/lachen1/20210415132858_lachen1_c20
007a1.zip
    6:   Submit Server Accept Timestamp: 2021/04/15 14:07:16
    7:   Filesize: 3564714156
    8:   Submitted File Signature: cc312225a40db6118ab01f051186056c0a098dae
    9:   Server File Signature: cc312225a40db6118ab01f051186056c0a098dae
   10:   Submission Certificate Plaintext: assignment-tools/c20007a1/submitted
/lachen1/20210415132858_lachen1_c20007a1.zip-cc312225a40db6118ab01f051186056c0
a098dae-2021/04/15 14:07:16
   11:   Submission Verification Certificate: hico03Dopy/nLiHhyCsSHQtdKGH7iT/F
YpobV7WFmnnFFCN/qxbpXE4I9Tyi5zk97N6bkNQxfmqC8s/PltAMBGJK1Et+yWatosaMe9Xub3+CvM
8KVxjftLDnO9Ep7KdJzIWEbQuce7Pqduci8ruE8p3g5UoEPX4fvnvrQt3AtvmLCLqzhiMdGmFZK3L1
RNmr98iRNt5+fmk9YX5QokwV6EcxWeN+enyWUvgveQoONlxIx1rrN9u3bn8xr/WTQwWlg6/hJxOWvZ
bjB4daAcBTkeSQZCDEZQcBbsxbw+Ei/Dgm2JQimU2hMcimSDJ+eH8cRxc57x1tX3cLFhpgMwmyUQ==
   12:   Please keep the certificate plaintext, the verification certificate
   13:   and the zip file submitted on your behalf stored somewhere safe
   14:   as proof of your submission at the time given in the plaintext
   15:
   16: == Verify ==
   17: [2021/04/15 16:43:38] Beginning verification - Using script
   18: Archive contents match CRCs provided, zip file OK.
   19: Requirement already satisfied: patool in /opt/conda/lib/python3.7/site-
packages (1.12)
   20: Requirement already satisfied: pyunpack in /opt/conda/lib/python3.7/sit
e-packages (0.2.2)
   21: Requirement already satisfied: easyprocess in /opt/conda/lib/python3.7/
site-packages (from pyunpack) (0.3)
   22: Requirement already satisfied: entrypoint2 in /opt/conda/lib/python3.7/
site-packages (from pyunpack) (0.2.3)
   23: Requirement already satisfied: argparse in /opt/conda/lib/python3.7/sit
e-packages (from entrypoint2->pyunpack) (1.4.0)
   24: gcc -g -Wall   -c -o catProg.o catProg.c
   25: gcc -g -Wall -o catProg catProg.o
   26:
   27:
   28: Filesize 10117 < 10485760
   29: Expected under 10MiB - Passed Verification
   30: Submitted File Hashes
   31:         submission_settings.json
   32:         SHA1: 032de420db4e8b9cf62277608c9963a891942a09
   33:         20210415T125712Z_Submission2.zip
   34:         SHA1: 5aff99d2ab433b59fd037606356f0c1eb93defcd
   35:
   36: Building problem2a
   37: ==================
   38: gcc -c problem2a.c -Wall -g
   39: gcc -c utils.c -Wall -g
   40: gcc -c graph.c -Wall -g
   41: gcc -c pq.c -Wall -g
```

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42: gcc -c list.c -Wall -g
43: gcc -Wall -o problem2a -g -lm problem2a.o utils.o graph.o pq.o list.o
44: ==================
45: ==================
46: Building problem2c
47: gcc -c problem2c.c -Wall -g
48: gcc -c utils.c -Wall -g
49: gcc -c graph.c -Wall -g
50: gcc -c pq.c -Wall -g
51: gcc -c list.c -Wall -g
52: gcc -Wall -o problem2c -g -lm problem2c.o utils.o graph.o pq.o list.o
53: ==================
54: Building problem3
55: gcc -c problem3.c -Wall -g
56: gcc -Wall -o problem3 -g -lm problem3.o
57: ==================
58:
59:
60: == Test ==
61: [2021/04/15 16:43:50] Beginning testing - Using script
62:
63: == Results ==
64:
65: [2021/04/15 16:43:50] Running program for 2a - test case 1
66: [2021/04/15 16:43:51] Script exit code: 0
67: [2021/04/15 16:43:51] Running program for 2a - test case 2
68: [2021/04/15 16:43:51] Script exit code: 0
69: [2021/04/15 16:43:51] Running program for 2a - test case 3
70: [2021/04/15 16:43:51] Script exit code: 0
71: [2021/04/15 16:43:51] Running program for 2c - test case 1
72: [2021/04/15 16:43:51] Script exit code: 0
73: [2021/04/15 16:43:51] Running program for 2c - test case 2
74: [2021/04/15 16:43:51] Script exit code: 0
75: [2021/04/15 16:43:51] Running program for 2c - test case 3
76: [2021/04/15 16:43:51] Script exit code: 0
77: [2021/04/15 16:43:51] Running program for 3 - test case 0
78: [2021/04/15 16:43:51] Script exit code: 0
79: [2021/04/15 16:45:11] Evaluating results.
80: gcc -Wall -c -o main.o main.c -g
81: gcc -Wall -c -o read.o read.c -g
82: gcc -Wall -c -o ll.o ll.c -g
83: gcc -Wall -c -o dict.o dict.c -g
84: gcc -Wall -c -o utils.o utils.c -g
85: gcc -Wall -c -o data.o data.c -g
86: gcc -Wall -o dict main.o read.o ll.o dict.o utils.o data.o -g
87: [2021/04/15 16:45:12] Evaluating test outputs.
88: [2021/04/15 16:45:12] 2a
89: [2021/04/15 16:45:12] ===
90: [2021/04/15 16:45:12] Test p2a-1-in:
91: [2021/04/15 16:45:12] Test p2a-1-in passed
92: [2021/04/15 16:45:12] Test p2a-2-in:
93: [2021/04/15 16:45:12] Test p2a-2-in passed
94: [2021/04/15 16:45:12] Test p2a-3-in:
```

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 95: [2021/04/15 16:45:12] Test p2a-3-in passed
 96: [2021/04/15 16:45:12] 2c
 97: [2021/04/15 16:45:12] ===
 98: [2021/04/15 16:45:12] Test p2c-1-in:
 99: [2021/04/15 16:45:13] Test p2c-1-in passed
100: [2021/04/15 16:45:13] Test p2c-2-in:
101: [2021/04/15 16:45:13] Test p2c-2-in passed
102: [2021/04/15 16:45:13] Test p2c-3-in:
103: [2021/04/15 16:45:13] Test p2c-3-in passed
104: [2021/04/15 16:45:13] Problem 3 output:
105: Old chip (Euclid):
106: Minimum operations: 22
107: Average operations: 48.843400
108: Maximum operations: 103
109:
110: New chip (Euclid)
111: Minimum operations: 22
112: Average operations: 48.843400
113: Maximum operations: 103
114:
115: Old chip (Sieve)
116: Minimum operations: 6
117: Average operations: 818.965800
118: Maximum operations: 2764
119:
120: New chip (Sieve)
121: Minimum operations: 6
122: Average operations: 244.945500
123: Maximum operations: 717
124:
125: [2021/04/15 16:45:13]  -- Problem 3 Output End --
126: [2021/04/15 16:45:13] Handling results.
127: == Notes on General Errors (if any) ==
```