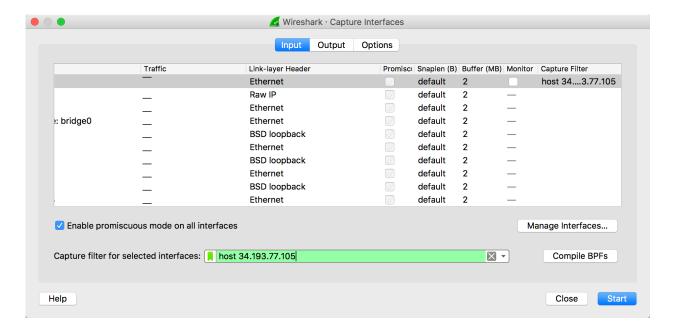
Table of Contents

1 Command Used	1
2 High level View	2
3 Answers	3
3.1 Part C (1)	3
3.2 Part C (2)	41
3.2.1 Port 1081	41
3.2.2 Port 1082	41
3.3 Part C (3)	42
3.3.1 HTTP/1.0	42
3.3.2 HTTP/1.1	42
3.3.3 HTTP/2.0	43
3.3.4 Compare and Explanation	43

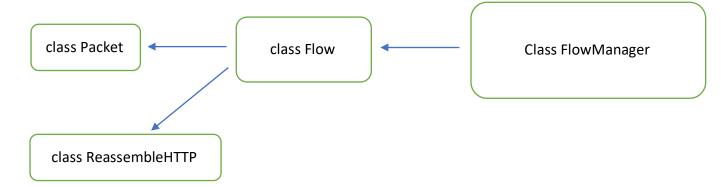
1 Command Used

host 34.193.77.105



2 High level View

There are four classes: Packet, Flow, FlowManager, and ReassembleHTTP



- 1. Class Packet encapsulates all the information in a packet. The most important method of this packet is **parsing** the **raw bytes** into **human readable TCP fields**.
- Class Flow encapsulates a list of all packets in a flow. A flow is identified by unique port pair (source, dest). This class contains important methods including reassemble_http(), data_from_server(), packet_from_server(), last_packet_time()
- 3. Class FlowManager encapsulates all the flows in a pcap file. It manages everything.
- 4. Class ReassembleHTTP encapsulates a HTTP Request, Response, and its **TCP segments in between** if exist.

How to run the program:

caitaos-mbp:homework-2 caitao\$ python analysis_pcap_http.py

The program is written in Python3

To tell HTTP/1.1 against HTTP/2.0, we count the **number of TCP connection** that server uses to **send website data** to the client. HTTP/2.0 uses single TCP connection while HTTP/1.1 uses parallel (multiple) connection.

3 Answers

3.1 Part C (1)

```
init a new flow 100
init a new flow 101
init a new flow 102
init a new flow 103
init a new flow 104
init a new flow 105
init a new flow 106
init a new flow 107
init a new flow 108
init a new flow 109
init a new flow 110
init a new flow 111
init a new flow 112
init a new flow 113
init a new flow 114
init a new flow 115
init a new flow 116
GET / HTTP/1.1\r\nHost: www.sbunetsyslabs.com:1080\r\n
The TCP segments are below:
(1080, 55865, 935115745, 38922553)
GET /img/apple.jpeg HTTP/1.1\r\nHost: www.sbunetsyslabs.com:1080\r\n
The TCP segments are below:
(1080, 55866, 1756326845, 496753041)
```

GET /js/hello.js HTTP/1.1\r\nHost: www.sbunetsyslabs.com:1080\r\n

(1080, 55866, 1756328219, 496753041) (1080, 55866, 1756329593, 496753041) (1080, 55866, 1756330967, 496753041)

```
GET /img/orange.jpeg HTTP/1.1\r\nHost: www.sbunetsyslabs.com:1080\r\n
The TCP segments are below:
(1080, 55868, 3376954948, 1666867240)
(1080, 55868, 3376956322, 1666867240)
(1080, 55868, 3376957696, 1666867240)
(1080, 55868, 3376959070, 1666867240)
(1080, 55868, 3376960444, 1666867240)
(1080, 55868, 3376961818, 1666867240)
GET /img/banana.jpeg HTTP/1.1\r\nHost: www.sbunetsyslabs.com:1080\r\n
The TCP segments are below:
(1080, 55869, 3402989076, 3225620044)
(1080, 55869, 3402990450, 3225620044)
(1080, 55869, 3402991824, 3225620044)
(1080, 55869, 3402993198, 3225620044)
GET /img/watermelon.jpeg HTTP/1.1\r\nHost: www.sbunetsyslabs.com:1080\r\n
The TCP segments are below:
(1080, 55870, 403903132, 1315392875)
(1080, 55870, 403904506, 1315392875)
(1080, 55870, 403905880, 1315392875)
(1080, 55870, 403907254, 1315392875)
(1080, 55870, 403908628, 1315392875)
(1080, 55870, 403910002, 1315392875)
(1080, 55870, 403911376, 1315392875)
(1080, 55870, 403912750, 1315392875)
(1080, 55870, 403914124, 1315392875)
(1080, 55870, 403915498, 1315392875)
(1080, 55870, 403916872, 1315392875)
(1080, 55870, 403918246, 1315392875)
(1080, 55870, 403919620, 1315392875)
(1080, 55870, 403920994, 1315392875)
(1080, 55870, 403922368, 1315392875)
(1080, 55870, 403923742, 1315392875)
```

The TCP segments are below:

(1080, 55867, 2007857031, 252569236)

(1080, 55870, 403925116, 1315392875)

```
(1080, 55870, 403926490, 1315392875)
(1080, 55870, 403927864, 1315392875)
(1080, 55870, 403929238, 1315392875)
(1080, 55870, 403930612, 1315392875)
(1080, 55870, 403931986, 1315392875)
(1080, 55870, 403933360, 1315392875)
(1080, 55870, 403934734, 1315392875)
(1080, 55870, 403936108, 1315392875)
(1080, 55870, 403937482, 1315392875)
(1080, 55870, 403938856, 1315392875)
(1080, 55870, 403940230, 1315392875)
(1080, 55870, 403941604, 1315392875)
(1080, 55870, 403942978, 1315392875)
(1080, 55870, 403944352, 1315392875)
(1080, 55870, 403945726, 1315392875)
(1080, 55870, 403947100, 1315392875)
(1080, 55870, 403948474, 1315392875)
(1080, 55870, 403949848, 1315392875)
(1080, 55870, 403951222, 1315392875)
(1080, 55870, 403952596, 1315392875)
```

GET /img/cantaloupe-melon.jpeg HTTP/1.1\r\nHost: www.sbunetsyslabs.com:1080\r\n The TCP segments are below:

(1080, 55871, 3167123858, 3011088454)

(1080, 55871, 3167125232, 3011088454)

(1080, 55871, 3167126606, 3011088454)

(1080, 55871, 3167127980, 3011088454)

(1080, 55871, 3167129354, 3011088454)

GET /img/honeydew-melon.jpeg HTTP/1.1\r\nHost: www.sbunetsyslabs.com:1080\r\n The TCP segments are below:

(1080, 55872, 3312723214, 2687146420)

(1080, 55872, 3312724588, 2687146420)

(1080, 55872, 3312725962, 2687146420)

(1080, 55872, 3312727336, 2687146420)

(1080, 55872, 3312728710, 2687146420)

(1080, 55872, 3312730084, 2687146420)

(1080, 55872, 3312731458, 2687146420)

(1080, 55872, 3312732832, 2687146420)

(1080, 55872, 3312734206, 2687146420)

```
(1080, 55872, 3312735580, 2687146420)
(1080, 55872, 3312736954, 2687146420)
(1080, 55872, 3312738328, 2687146420)
(1080, 55872, 3312739702, 2687146420)
(1080, 55872, 3312741076, 2687146420)
(1080, 55872, 3312742450, 2687146420)
(1080, 55872, 3312743824, 2687146420)
(1080, 55872, 3312745198, 2687146420)
(1080, 55872, 3312746572, 2687146420)
(1080, 55872, 3312747946, 2687146420)
```

GET /img/pomegranate.jpeg HTTP/1.1\r\nHost: www.sbunetsyslabs.com:1080\r\n The TCP segments are below: (1080, 55873, 1355898061, 3497948403) (1080, 55873, 1355899435, 3497948403) (1080, 55873, 1355900809, 3497948403) (1080, 55873, 1355902183, 3497948403) (1080, 55873, 1355903557, 3497948403) (1080, 55873, 1355904931, 3497948403) (1080, 55873, 1355906305, 3497948403) (1080, 55873, 1355907679, 3497948403) (1080, 55873, 1355909053, 3497948403) (1080, 55873, 1355910427, 3497948403) (1080, 55873, 1355911801, 3497948403) (1080, 55873, 1355913175, 3497948403) (1080, 55873, 1355914549, 3497948403) (1080, 55873, 1355915923, 3497948403) (1080, 55873, 1355917297, 3497948403) (1080, 55873, 1355918671, 3497948403) (1080, 55873, 1355920045, 3497948403) (1080, 55873, 1355921419, 3497948403) (1080, 55873, 1355922793, 3497948403) (1080, 55873, 1355924167, 3497948403) (1080, 55873, 1355925541, 3497948403) (1080, 55873, 1355926915, 3497948403) (1080, 55873, 1355928289, 3497948403) (1080, 55873, 1355929663, 3497948403) (1080, 55873, 1355931037, 3497948403) (1080, 55873, 1355932411, 3497948403) (1080, 55873, 1355933785, 3497948403) (1080, 55873, 1355935159, 3497948403) (1080, 55873, 1355936533, 3497948403)

```
(1080, 55873, 1355937907, 3497948403)
(1080, 55873, 1355939281, 3497948403)
(1080, 55873, 1355940655, 3497948403)
(1080, 55873, 1355942029, 3497948403)
(1080, 55873, 1355943403, 3497948403)
(1080, 55873, 1355944777, 3497948403)
(1080, 55873, 1355946151, 3497948403)
(1080, 55873, 1355947525, 3497948403)
(1080, 55873, 1355948899, 3497948403)
(1080, 55873, 1355950273, 3497948403)
(1080, 55873, 1355951647, 3497948403)
(1080, 55873, 1355953021, 3497948403)
(1080, 55873, 1355954395, 3497948403)
(1080, 55873, 1355955769, 3497948403)
(1080, 55873, 1355957143, 3497948403)
(1080, 55873, 1355958517, 3497948403)
(1080, 55873, 1355959891, 3497948403)
(1080, 55873, 1355961265, 3497948403)
(1080, 55873, 1355962639, 3497948403)
(1080, 55873, 1355964013, 3497948403)
(1080, 55873, 1355965387, 3497948403)
(1080, 55873, 1355966761, 3497948403)
(1080, 55873, 1355968135, 3497948403)
(1080, 55873, 1355969509, 3497948403)
(1080, 55873, 1355970883, 3497948403)
(1080, 55873, 1355972257, 3497948403)
(1080, 55873, 1355973631, 3497948403)
(1080, 55873, 1355975005, 3497948403)
(1080, 55873, 1355976379, 3497948403)
(1080, 55873, 1355977753, 3497948403)
(1080, 55873, 1355979127, 3497948403)
(1080, 55873, 1355980501, 3497948403)
(1080, 55873, 1355981875, 3497948403)
(1080, 55873, 1355983249, 3497948403)
(1080, 55873, 1355984623, 3497948403)
```

```
GET /img/raspberry.jpeg HTTP/1.1\r\nHost: www.sbunetsyslabs.com:1080\r\n The TCP segments are below: (1080, 55874, 239902560, 704837603) (1080, 55874, 239903934, 704837603)
```

(1080, 55874, 239905308, 704837603) (1080, 55874, 239906682, 704837603)

```
GET /img/blueberry.jpeg HTTP/1.1\r\nHost: www.sbunetsyslabs.com:1080\r\n
The TCP segments are below:
(1080, 55875, 2089025976, 3924323886)
(1080, 55875, 2089027350, 3924323886)
(1080, 55875, 2089028724, 3924323886)
(1080, 55875, 2089030098, 3924323886)
(1080, 55875, 2089031472, 3924323886)
(1080, 55875, 2089032846, 3924323886)
(1080, 55875, 2089034220, 3924323886)
(1080, 55875, 2089035594, 3924323886)
(1080, 55875, 2089036968, 3924323886)
(1080, 55875, 2089038342, 3924323886)
(1080, 55875, 2089039716, 3924323886)
(1080, 55875, 2089041090, 3924323886)
(1080, 55875, 2089042464, 3924323886)
(1080, 55875, 2089043838, 3924323886)
(1080, 55875, 2089045212, 3924323886)
(1080, 55875, 2089046586, 3924323886)
(1080, 55875, 2089047960, 3924323886)
(1080, 55875, 2089049334, 3924323886)
(1080, 55875, 2089050708, 3924323886)
(1080, 55875, 2089052082, 3924323886)
(1080, 55875, 2089053456, 3924323886)
(1080, 55875, 2089054830, 3924323886)
(1080, 55875, 2089056204, 3924323886)
(1080, 55875, 2089057578, 3924323886)
(1080, 55875, 2089058952, 3924323886)
```

```
GET /img/raspberrypi.jpeg HTTP/1.1\r\nHost: www.sbunetsyslabs.com:1080\r\n The TCP segments are below: (1080, 55876, 2153038843, 1171225511) (1080, 55876, 2153040217, 1171225511) (1080, 55876, 2153041591, 1171225511) (1080, 55876, 2153042965, 1171225511) (1080, 55876, 2153044339, 1171225511) (1080, 55876, 2153045713, 1171225511)
```

```
GET /img/strawberry.jpeg HTTP/1.1\r\nHost: www.sbunetsyslabs.com:1080\r\n
The TCP segments are below:
(1080, 55877, 2762392716, 2158436670)
(1080, 55877, 2762394090, 2158436670)
(1080, 55877, 2762395464, 2158436670)
(1080, 55877, 2762396838, 2158436670)
(1080, 55877, 2762398212, 2158436670)
(1080, 55877, 2762399586, 2158436670)
(1080, 55877, 2762400960, 2158436670)
(1080, 55877, 2762402334, 2158436670)
(1080, 55877, 2762403708, 2158436670)
(1080, 55877, 2762405082, 2158436670)
(1080, 55877, 2762406456, 2158436670)
(1080, 55877, 2762407830, 2158436670)
(1080, 55877, 2762409204, 2158436670)
(1080, 55877, 2762410578, 2158436670)
(1080, 55877, 2762411952, 2158436670)
(1080, 55877, 2762413326, 2158436670)
(1080, 55877, 2762414700, 2158436670)
(1080, 55877, 2762416074, 2158436670)
(1080, 55877, 2762417448, 2158436670)
(1080, 55877, 2762418822, 2158436670)
(1080, 55877, 2762420196, 2158436670)
(1080, 55877, 2762421570, 2158436670)
(1080, 55877, 2762422944, 2158436670)
(1080, 55877, 2762424318, 2158436670)
(1080, 55877, 2762425692, 2158436670)
(1080, 55877, 2762427066, 2158436670)
(1080, 55877, 2762428440, 2158436670)
(1080, 55877, 2762429814, 2158436670)
```

GET /img/dragonfruit.jpeg HTTP/1.1\r\nHost: www.sbunetsyslabs.com:1080\r\n The TCP segments are below: (1080, 55878, 2288922974, 2954401113) (1080, 55878, 2288924348, 2954401113) (1080, 55878, 2288925722, 2954401113) (1080, 55878, 2288927096, 2954401113) (1080, 55878, 2288928470, 2954401113) (1080, 55878, 2288929844, 2954401113) (1080, 55878, 2288931218, 2954401113) (1080, 55878, 2288932592, 2954401113)

(1080, 55878, 2288933966, 2954401113)

```
(1080, 55878, 2288935340, 2954401113)
(1080, 55878, 2288936714, 2954401113)
(1080, 55878, 2288938088, 2954401113)
(1080, 55878, 2288939462, 2954401113)
(1080, 55878, 2288940836, 2954401113)
(1080, 55878, 2288942210, 2954401113)
(1080, 55878, 2288943584, 2954401113)
(1080, 55878, 2288944958, 2954401113)
(1080, 55878, 2288946332, 2954401113)
(1080, 55878, 2288947706, 2954401113)
(1080, 55878, 2288949080, 2954401113)
(1080, 55878, 2288950454, 2954401113)
(1080, 55878, 2288951828, 2954401113)
(1080, 55878, 2288953202, 2954401113)
(1080, 55878, 2288954576, 2954401113)
(1080, 55878, 2288955950, 2954401113)
(1080, 55878, 2288957324, 2954401113)
(1080, 55878, 2288958698, 2954401113)
(1080, 55878, 2288960072, 2954401113)
(1080, 55878, 2288961446, 2954401113)
(1080, 55878, 2288962820, 2954401113)
(1080, 55878, 2288964194, 2954401113)
(1080, 55878, 2288965568, 2954401113)
(1080, 55878, 2288966942, 2954401113)
(1080, 55878, 2288968316, 2954401113)
(1080, 55878, 2288969690, 2954401113)
(1080, 55878, 2288971064, 2954401113)
(1080, 55878, 2288972438, 2954401113)
(1080, 55878, 2288973812, 2954401113)
(1080, 55878, 2288975186, 2954401113)
(1080, 55878, 2288976560, 2954401113)
(1080, 55878, 2288977934, 2954401113)
(1080, 55878, 2288979308, 2954401113)
(1080, 55878, 2288980682, 2954401113)
(1080, 55878, 2288982056, 2954401113)
(1080, 55878, 2288983430, 2954401113)
(1080, 55878, 2288984804, 2954401113)
(1080, 55878, 2288986178, 2954401113)
(1080, 55878, 2288987552, 2954401113)
(1080, 55878, 2288988926, 2954401113)
(1080, 55878, 2288990300, 2954401113)
(1080, 55878, 2288991674, 2954401113)
(1080, 55878, 2288993048, 2954401113)
(1080, 55878, 2288994422, 2954401113)
```

```
(1080, 55878, 2288995796, 2954401113)
(1080, 55878, 2288997170, 2954401113)
(1080, 55878, 2288998544, 2954401113)
(1080, 55878, 2288999918, 2954401113)
(1080, 55878, 2289001292, 2954401113)
(1080, 55878, 2289002666, 2954401113)
(1080, 55878, 2289004040, 2954401113)
(1080, 55878, 2289005414, 2954401113)
(1080, 55878, 2289006788, 2954401113)
(1080, 55878, 2289008162, 2954401113)
(1080, 55878, 2289009536, 2954401113)
(1080, 55878, 2289010910, 2954401113)
(1080, 55878, 2289012284, 2954401113)
(1080, 55878, 2289013658, 2954401113)
(1080, 55878, 2289015032, 2954401113)
(1080, 55878, 2289016406, 2954401113)
(1080, 55878, 2289017780, 2954401113)
(1080, 55878, 2289019154, 2954401113)
(1080, 55878, 2289020528, 2954401113)
(1080, 55878, 2289021902, 2954401113)
(1080, 55878, 2289023276, 2954401113)
(1080, 55878, 2289024650, 2954401113)
(1080, 55878, 2289026024, 2954401113)
(1080, 55878, 2289027398, 2954401113)
(1080, 55878, 2289028772, 2954401113)
(1080, 55878, 2289030146, 2954401113)
(1080, 55878, 2289031520, 2954401113)
(1080, 55878, 2289032894, 2954401113)
(1080, 55878, 2289034268, 2954401113)
(1080, 55878, 2289035642, 2954401113)
(1080, 55878, 2289037016, 2954401113)
(1080, 55878, 2289038390, 2954401113)
(1080, 55878, 2289039764, 2954401113)
(1080, 55878, 2289041138, 2954401113)
(1080, 55878, 2289042512, 2954401113)
(1080, 55878, 2289043886, 2954401113)
(1080, 55878, 2289045260, 2954401113)
(1080, 55878, 2289046634, 2954401113)
(1080, 55878, 2289048008, 2954401113)
(1080, 55878, 2289049382, 2954401113)
(1080, 55878, 2289050756, 2954401113)
(1080, 55878, 2289052130, 2954401113)
(1080, 55878, 2289053504, 2954401113)
(1080, 55878, 2289054878, 2954401113)
```

```
(1080, 55878, 2289056252, 2954401113)
(1080, 55878, 2289057626, 2954401113)
(1080, 55878, 2289059000, 2954401113)
(1080, 55878, 2289060374, 2954401113)
(1080, 55878, 2289061748, 2954401113)
(1080, 55878, 2289063122, 2954401113)
(1080, 55878, 2289064496, 2954401113)
(1080, 55878, 2289065870, 2954401113)
(1080, 55878, 2289067244, 2954401113)
(1080, 55878, 2289068618, 2954401113)
(1080, 55878, 2289069992, 2954401113)
(1080, 55878, 2289071366, 2954401113)
(1080, 55878, 2289072740, 2954401113)
(1080, 55878, 2289074114, 2954401113)
(1080, 55878, 2289075488, 2954401113)
(1080, 55878, 2289076862, 2954401113)
(1080, 55878, 2289078236, 2954401113)
(1080, 55878, 2289079610, 2954401113)
(1080, 55878, 2289080984, 2954401113)
(1080, 55878, 2289082358, 2954401113)
(1080, 55878, 2289083732, 2954401113)
(1080, 55878, 2289085106, 2954401113)
(1080, 55878, 2289086480, 2954401113)
(1080, 55878, 2289087854, 2954401113)
(1080, 55878, 2289089228, 2954401113)
(1080, 55878, 2289090602, 2954401113)
(1080, 55878, 2289091976, 2954401113)
(1080, 55878, 2289093350, 2954401113)
(1080, 55878, 2289094724, 2954401113)
(1080, 55878, 2289096098, 2954401113)
(1080, 55878, 2289097472, 2954401113)
(1080, 55878, 2289098846, 2954401113)
(1080, 55878, 2289100220, 2954401113)
(1080, 55878, 2289101594, 2954401113)
(1080, 55878, 2289102968, 2954401113)
(1080, 55878, 2289104342, 2954401113)
(1080, 55878, 2289105716, 2954401113)
(1080, 55878, 2289107090, 2954401113)
(1080, 55878, 2289108464, 2954401113)
(1080, 55878, 2289109838, 2954401113)
(1080, 55878, 2289111212, 2954401113)
(1080, 55878, 2289112586, 2954401113)
(1080, 55878, 2289113960, 2954401113)
(1080, 55878, 2289115334, 2954401113)
```

```
(1080, 55878, 2289116708, 2954401113)
(1080, 55878, 2289118082, 2954401113)
(1080, 55878, 2289119456, 2954401113)
(1080, 55878, 2289120830, 2954401113)
(1080, 55878, 2289122204, 2954401113)
(1080, 55878, 2289123578, 2954401113)
(1080, 55878, 2289124952, 2954401113)
(1080, 55878, 2289126326, 2954401113)
(1080, 55878, 2289127700, 2954401113)
(1080, 55878, 2289129074, 2954401113)
(1080, 55878, 2289130448, 2954401113)
(1080, 55878, 2289131822, 2954401113)
(1080, 55878, 2289133196, 2954401113)
(1080, 55878, 2289134570, 2954401113)
(1080, 55878, 2289135944, 2954401113)
(1080, 55878, 2289137318, 2954401113)
(1080, 55878, 2289138692, 2954401113)
(1080, 55878, 2289140066, 2954401113)
(1080, 55878, 2289141440, 2954401113)
(1080, 55878, 2289142814, 2954401113)
(1080, 55878, 2289144188, 2954401113)
(1080, 55878, 2289145562, 2954401113)
(1080, 55878, 2289146936, 2954401113)
(1080, 55878, 2289148310, 2954401113)
(1080, 55878, 2289149684, 2954401113)
(1080, 55878, 2289151058, 2954401113)
(1080, 55878, 2289152432, 2954401113)
(1080, 55878, 2289153806, 2954401113)
(1080, 55878, 2289155180, 2954401113)
(1080, 55878, 2289156554, 2954401113)
(1080, 55878, 2289157928, 2954401113)
(1080, 55878, 2289159302, 2954401113)
(1080, 55878, 2289160676, 2954401113)
(1080, 55878, 2289162050, 2954401113)
(1080, 55878, 2289163424, 2954401113)
(1080, 55878, 2289164798, 2954401113)
(1080, 55878, 2289166172, 2954401113)
(1080, 55878, 2289167546, 2954401113)
(1080, 55878, 2289168920, 2954401113)
(1080, 55878, 2289170294, 2954401113)
(1080, 55878, 2289171668, 2954401113)
(1080, 55878, 2289173042, 2954401113)
(1080, 55878, 2289174416, 2954401113)
(1080, 55878, 2289175790, 2954401113)
```

```
(1080, 55878, 2289177164, 2954401113)
(1080, 55878, 2289178538, 2954401113)
(1080, 55878, 2289179912, 2954401113)
(1080, 55878, 2289181286, 2954401113)
(1080, 55878, 2289182660, 2954401113)
(1080, 55878, 2289184034, 2954401113)
(1080, 55878, 2289185408, 2954401113)
(1080, 55878, 2289186782, 2954401113)
(1080, 55878, 2289188156, 2954401113)
(1080, 55878, 2289189530, 2954401113)
(1080, 55878, 2289190904, 2954401113)
(1080, 55878, 2289192278, 2954401113)
(1080, 55878, 2289193652, 2954401113)
(1080, 55878, 2289195026, 2954401113)
(1080, 55878, 2289196400, 2954401113)
(1080, 55878, 2289197774, 2954401113)
(1080, 55878, 2289199148, 2954401113)
(1080, 55878, 2289200522, 2954401113)
(1080, 55878, 2289201896, 2954401113)
(1080, 55878, 2289203270, 2954401113)
(1080, 55878, 2289204644, 2954401113)
(1080, 55878, 2289206018, 2954401113)
(1080, 55878, 2289207392, 2954401113)
(1080, 55878, 2289208766, 2954401113)
(1080, 55878, 2289210140, 2954401113)
(1080, 55878, 2289211514, 2954401113)
(1080, 55878, 2289212888, 2954401113)
(1080, 55878, 2289214262, 2954401113)
(1080, 55878, 2289215636, 2954401113)
(1080, 55878, 2289217010, 2954401113)
(1080, 55878, 2289218384, 2954401113)
(1080, 55878, 2289219758, 2954401113)
(1080, 55878, 2289221132, 2954401113)
(1080, 55878, 2289222506, 2954401113)
(1080, 55878, 2289223880, 2954401113)
(1080, 55878, 2289225254, 2954401113)
(1080, 55878, 2289226628, 2954401113)
(1080, 55878, 2289228002, 2954401113)
(1080, 55878, 2289229376, 2954401113)
(1080, 55878, 2289230750, 2954401113)
(1080, 55878, 2289232124, 2954401113)
(1080, 55878, 2289233498, 2954401113)
(1080, 55878, 2289234872, 2954401113)
(1080, 55878, 2289236246, 2954401113)
```

```
(1080, 55878, 2289237620, 2954401113)
(1080, 55878, 2289238994, 2954401113)
(1080, 55878, 2289240368, 2954401113)
(1080, 55878, 2289241742, 2954401113)
(1080, 55878, 2289243116, 2954401113)
(1080, 55878, 2289244490, 2954401113)
(1080, 55878, 2289245864, 2954401113)
(1080, 55878, 2289247238, 2954401113)
(1080, 55878, 2289248612, 2954401113)
(1080, 55878, 2289249986, 2954401113)
(1080, 55878, 2289251360, 2954401113)
(1080, 55878, 2289252734, 2954401113)
(1080, 55878, 2289254108, 2954401113)
(1080, 55878, 2289255482, 2954401113)
(1080, 55878, 2289256856, 2954401113)
(1080, 55878, 2289258230, 2954401113)
(1080, 55878, 2289259604, 2954401113)
(1080, 55878, 2289260978, 2954401113)
(1080, 55878, 2289262352, 2954401113)
(1080, 55878, 2289263726, 2954401113)
(1080, 55878, 2289265100, 2954401113)
(1080, 55878, 2289266474, 2954401113)
(1080, 55878, 2289267848, 2954401113)
(1080, 55878, 2289269222, 2954401113)
(1080, 55878, 2289270596, 2954401113)
(1080, 55878, 2289271970, 2954401113)
(1080, 55878, 2289273344, 2954401113)
(1080, 55878, 2289274718, 2954401113)
(1080, 55878, 2289276092, 2954401113)
(1080, 55878, 2289277466, 2954401113)
(1080, 55878, 2289278840, 2954401113)
(1080, 55878, 2289280214, 2954401113)
(1080, 55878, 2289281588, 2954401113)
(1080, 55878, 2289282962, 2954401113)
(1080, 55878, 2289284336, 2954401113)
(1080, 55878, 2289285710, 2954401113)
(1080, 55878, 2289287084, 2954401113)
(1080, 55878, 2289288458, 2954401113)
(1080, 55878, 2289289832, 2954401113)
(1080, 55878, 2289291206, 2954401113)
(1080, 55878, 2289292580, 2954401113)
(1080, 55878, 2289293954, 2954401113)
(1080, 55878, 2289295328, 2954401113)
(1080, 55878, 2289296702, 2954401113)
```

```
(1080, 55878, 2289298076, 2954401113)
(1080, 55878, 2289299450, 2954401113)
(1080, 55878, 2289300824, 2954401113)
(1080, 55878, 2289302198, 2954401113)
(1080, 55878, 2289303572, 2954401113)
(1080, 55878, 2289304946, 2954401113)
(1080, 55878, 2289306320, 2954401113)
(1080, 55878, 2289307694, 2954401113)
(1080, 55878, 2289309068, 2954401113)
(1080, 55878, 2289310442, 2954401113)
(1080, 55878, 2289311816, 2954401113)
(1080, 55878, 2289313190, 2954401113)
(1080, 55878, 2289314564, 2954401113)
(1080, 55878, 2289315938, 2954401113)
(1080, 55878, 2289317312, 2954401113)
(1080, 55878, 2289318686, 2954401113)
(1080, 55878, 2289320060, 2954401113)
(1080, 55878, 2289321434, 2954401113)
(1080, 55878, 2289322808, 2954401113)
(1080, 55878, 2289324182, 2954401113)
(1080, 55878, 2289325556, 2954401113)
(1080, 55878, 2289326930, 2954401113)
(1080, 55878, 2289328304, 2954401113)
(1080, 55878, 2289329678, 2954401113)
(1080, 55878, 2289331052, 2954401113)
(1080, 55878, 2289332426, 2954401113)
(1080, 55878, 2289333800, 2954401113)
(1080, 55878, 2289335174, 2954401113)
(1080, 55878, 2289336548, 2954401113)
(1080, 55878, 2289337922, 2954401113)
(1080, 55878, 2289339296, 2954401113)
(1080, 55878, 2289340670, 2954401113)
(1080, 55878, 2289342044, 2954401113)
(1080, 55878, 2289343418, 2954401113)
(1080, 55878, 2289344792, 2954401113)
(1080, 55878, 2289346166, 2954401113)
(1080, 55878, 2289347540, 2954401113)
(1080, 55878, 2289348914, 2954401113)
(1080, 55878, 2289350288, 2954401113)
(1080, 55878, 2289351662, 2954401113)
(1080, 55878, 2289353036, 2954401113)
(1080, 55878, 2289354410, 2954401113)
(1080, 55878, 2289355784, 2954401113)
(1080, 55878, 2289357158, 2954401113)
```

```
(1080, 55878, 2289358532, 2954401113)
(1080, 55878, 2289359906, 2954401113)
(1080, 55878, 2289361280, 2954401113)
(1080, 55878, 2289362654, 2954401113)
(1080, 55878, 2289364028, 2954401113)
(1080, 55878, 2289365402, 2954401113)
(1080, 55878, 2289366776, 2954401113)
(1080, 55878, 2289368150, 2954401113)
(1080, 55878, 2289369524, 2954401113)
(1080, 55878, 2289370898, 2954401113)
(1080, 55878, 2289372272, 2954401113)
(1080, 55878, 2289373646, 2954401113)
(1080, 55878, 2289375020, 2954401113)
(1080, 55878, 2289376394, 2954401113)
(1080, 55878, 2289377768, 2954401113)
(1080, 55878, 2289379142, 2954401113)
(1080, 55878, 2289380516, 2954401113)
(1080, 55878, 2289381890, 2954401113)
(1080, 55878, 2289383264, 2954401113)
(1080, 55878, 2289384638, 2954401113)
(1080, 55878, 2289386012, 2954401113)
(1080, 55878, 2289387386, 2954401113)
(1080, 55878, 2289388760, 2954401113)
(1080, 55878, 2289390134, 2954401113)
(1080, 55878, 2289391508, 2954401113)
(1080, 55878, 2289392882, 2954401113)
(1080, 55878, 2289394256, 2954401113)
(1080, 55878, 2289395630, 2954401113)
(1080, 55878, 2289397004, 2954401113)
(1080, 55878, 2289398378, 2954401113)
(1080, 55878, 2289399752, 2954401113)
(1080, 55878, 2289401126, 2954401113)
(1080, 55878, 2289402500, 2954401113)
(1080, 55878, 2289403874, 2954401113)
(1080, 55878, 2289405248, 2954401113)
(1080, 55878, 2289406622, 2954401113)
(1080, 55878, 2289407996, 2954401113)
(1080, 55878, 2289409370, 2954401113)
(1080, 55878, 2289410744, 2954401113)
(1080, 55878, 2289412118, 2954401113)
(1080, 55878, 2289413492, 2954401113)
(1080, 55878, 2289414866, 2954401113)
(1080, 55878, 2289416240, 2954401113)
(1080, 55878, 2289417614, 2954401113)
```

```
(1080, 55878, 2289418988, 2954401113)
(1080, 55878, 2289420362, 2954401113)
(1080, 55878, 2289421736, 2954401113)
(1080, 55878, 2289423110, 2954401113)
(1080, 55878, 2289424484, 2954401113)
(1080, 55878, 2289425858, 2954401113)
(1080, 55878, 2289427232, 2954401113)
(1080, 55878, 2289428606, 2954401113)
(1080, 55878, 2289429980, 2954401113)
(1080, 55878, 2289431354, 2954401113)
(1080, 55878, 2289432728, 2954401113)
(1080, 55878, 2289434102, 2954401113)
(1080, 55878, 2289435476, 2954401113)
(1080, 55878, 2289436850, 2954401113)
(1080, 55878, 2289438224, 2954401113)
(1080, 55878, 2289439598, 2954401113)
(1080, 55878, 2289440972, 2954401113)
(1080, 55878, 2289442346, 2954401113)
(1080, 55878, 2289443720, 2954401113)
(1080, 55878, 2289445094, 2954401113)
(1080, 55878, 2289446468, 2954401113)
(1080, 55878, 2289447842, 2954401113)
(1080, 55878, 2289449216, 2954401113)
(1080, 55878, 2289450590, 2954401113)
(1080, 55878, 2289451964, 2954401113)
(1080, 55878, 2289453338, 2954401113)
(1080, 55878, 2289454712, 2954401113)
(1080, 55878, 2289456086, 2954401113)
(1080, 55878, 2289457460, 2954401113)
(1080, 55878, 2289458834, 2954401113)
(1080, 55878, 2289460208, 2954401113)
(1080, 55878, 2289461582, 2954401113)
(1080, 55878, 2289462956, 2954401113)
(1080, 55878, 2289464330, 2954401113)
(1080, 55878, 2289465704, 2954401113)
(1080, 55878, 2289467078, 2954401113)
(1080, 55878, 2289468452, 2954401113)
(1080, 55878, 2289469826, 2954401113)
(1080, 55878, 2289471200, 2954401113)
(1080, 55878, 2289472574, 2954401113)
(1080, 55878, 2289473948, 2954401113)
(1080, 55878, 2289475322, 2954401113)
(1080, 55878, 2289476696, 2954401113)
(1080, 55878, 2289478070, 2954401113)
```

```
(1080, 55878, 2289479444, 2954401113)
(1080, 55878, 2289480818, 2954401113)
(1080, 55878, 2289482192, 2954401113)
(1080, 55878, 2289483566, 2954401113)
(1080, 55878, 2289484940, 2954401113)
(1080, 55878, 2289486314, 2954401113)
(1080, 55878, 2289487688, 2954401113)
(1080, 55878, 2289489062, 2954401113)
(1080, 55878, 2289490436, 2954401113)
(1080, 55878, 2289491810, 2954401113)
(1080, 55878, 2289493184, 2954401113)
(1080, 55878, 2289494558, 2954401113)
(1080, 55878, 2289495932, 2954401113)
(1080, 55878, 2289497306, 2954401113)
(1080, 55878, 2289498680, 2954401113)
(1080, 55878, 2289500054, 2954401113)
(1080, 55878, 2289501428, 2954401113)
(1080, 55878, 2289502802, 2954401113)
(1080, 55878, 2289504176, 2954401113)
(1080, 55878, 2289505550, 2954401113)
(1080, 55878, 2289506924, 2954401113)
(1080, 55878, 2289508298, 2954401113)
(1080, 55878, 2289509672, 2954401113)
(1080, 55878, 2289511046, 2954401113)
(1080, 55878, 2289512420, 2954401113)
(1080, 55878, 2289513794, 2954401113)
(1080, 55878, 2289515168, 2954401113)
(1080, 55878, 2289516542, 2954401113)
(1080, 55878, 2289517916, 2954401113)
(1080, 55878, 2289519290, 2954401113)
(1080, 55878, 2289520664, 2954401113)
(1080, 55878, 2289522038, 2954401113)
(1080, 55878, 2289523412, 2954401113)
(1080, 55878, 2289524786, 2954401113)
(1080, 55878, 2289526160, 2954401113)
(1080, 55878, 2289527534, 2954401113)
(1080, 55878, 2289528908, 2954401113)
(1080, 55878, 2289530282, 2954401113)
(1080, 55878, 2289531656, 2954401113)
(1080, 55878, 2289533030, 2954401113)
(1080, 55878, 2289534404, 2954401113)
(1080, 55878, 2289535778, 2954401113)
(1080, 55878, 2289537152, 2954401113)
(1080, 55878, 2289538526, 2954401113)
```

```
(1080, 55878, 2289539900, 2954401113)
(1080, 55878, 2289541274, 2954401113)
(1080, 55878, 2289542648, 2954401113)
(1080, 55878, 2289544022, 2954401113)
(1080, 55878, 2289545396, 2954401113)
(1080, 55878, 2289546770, 2954401113)
(1080, 55878, 2289548144, 2954401113)
(1080, 55878, 2289549518, 2954401113)
(1080, 55878, 2289550892, 2954401113)
(1080, 55878, 2289552266, 2954401113)
(1080, 55878, 2289553640, 2954401113)
(1080, 55878, 2289555014, 2954401113)
(1080, 55878, 2289556388, 2954401113)
(1080, 55878, 2289557762, 2954401113)
(1080, 55878, 2289559136, 2954401113)
(1080, 55878, 2289560510, 2954401113)
(1080, 55878, 2289561884, 2954401113)
(1080, 55878, 2289563258, 2954401113)
(1080, 55878, 2289564632, 2954401113)
(1080, 55878, 2289566006, 2954401113)
(1080, 55878, 2289567380, 2954401113)
(1080, 55878, 2289568754, 2954401113)
(1080, 55878, 2289570128, 2954401113)
(1080, 55878, 2289571502, 2954401113)
(1080, 55878, 2289572876, 2954401113)
(1080, 55878, 2289574250, 2954401113)
(1080, 55878, 2289575624, 2954401113)
(1080, 55878, 2289576998, 2954401113)
(1080, 55878, 2289578372, 2954401113)
(1080, 55878, 2289579746, 2954401113)
(1080, 55878, 2289581120, 2954401113)
(1080, 55878, 2289582494, 2954401113)
(1080, 55878, 2289583868, 2954401113)
(1080, 55878, 2289585242, 2954401113)
(1080, 55878, 2289586616, 2954401113)
(1080, 55878, 2289587990, 2954401113)
(1080, 55878, 2289589364, 2954401113)
(1080, 55878, 2289590738, 2954401113)
(1080, 55878, 2289592112, 2954401113)
(1080, 55878, 2289593486, 2954401113)
(1080, 55878, 2289594860, 2954401113)
(1080, 55878, 2289596234, 2954401113)
(1080, 55878, 2289597608, 2954401113)
(1080, 55878, 2289598982, 2954401113)
```

```
(1080, 55878, 2289600356, 2954401113)
(1080, 55878, 2289601730, 2954401113)
(1080, 55878, 2289603104, 2954401113)
(1080, 55878, 2289604478, 2954401113)
(1080, 55878, 2289605852, 2954401113)
(1080, 55878, 2289607226, 2954401113)
(1080, 55878, 2289608600, 2954401113)
(1080, 55878, 2289609974, 2954401113)
(1080, 55878, 2289611348, 2954401113)
(1080, 55878, 2289612722, 2954401113)
(1080, 55878, 2289614096, 2954401113)
(1080, 55878, 2289615470, 2954401113)
(1080, 55878, 2289616844, 2954401113)
(1080, 55878, 2289618218, 2954401113)
(1080, 55878, 2289619592, 2954401113)
(1080, 55878, 2289620966, 2954401113)
(1080, 55878, 2289622340, 2954401113)
(1080, 55878, 2289623714, 2954401113)
(1080, 55878, 2289625088, 2954401113)
(1080, 55878, 2289626462, 2954401113)
(1080, 55878, 2289627836, 2954401113)
(1080, 55878, 2289629210, 2954401113)
(1080, 55878, 2289630584, 2954401113)
(1080, 55878, 2289631958, 2954401113)
(1080, 55878, 2289633332, 2954401113)
(1080, 55878, 2289634706, 2954401113)
(1080, 55878, 2289636080, 2954401113)
(1080, 55878, 2289637454, 2954401113)
(1080, 55878, 2289638828, 2954401113)
(1080, 55878, 2289639850, 2954401113)
(1080, 55878, 2289641224, 2954401113)
(1080, 55878, 2289642598, 2954401113)
(1080, 55878, 2289643972, 2954401113)
(1080, 55878, 2289645346, 2954401113)
(1080, 55878, 2289646720, 2954401113)
(1080, 55878, 2289648094, 2954401113)
(1080, 55878, 2289649468, 2954401113)
(1080, 55878, 2289650842, 2954401113)
(1080, 55878, 2289652216, 2954401113)
(1080, 55878, 2289653590, 2954401113)
(1080, 55878, 2289654964, 2954401113)
(1080, 55878, 2289656338, 2954401113)
(1080, 55878, 2289657712, 2954401113)
(1080, 55878, 2289659086, 2954401113)
```

```
(1080, 55878, 2289660460, 2954401113)
(1080, 55878, 2289661832, 2954401113)
(1080, 55878, 2289663206, 2954401113)
(1080, 55878, 2289664580, 2954401113)
(1080, 55878, 2289665954, 2954401113)
(1080, 55878, 2289667328, 2954401113)
(1080, 55878, 2289668702, 2954401113)
(1080, 55878, 2289670076, 2954401113)
(1080, 55878, 2289671450, 2954401113)
(1080, 55878, 2289672824, 2954401113)
(1080, 55878, 2289674198, 2954401113)
(1080, 55878, 2289675572, 2954401113)
(1080, 55878, 2289676946, 2954401113)
(1080, 55878, 2289678320, 2954401113)
(1080, 55878, 2289679694, 2954401113)
(1080, 55878, 2289681068, 2954401113)
(1080, 55878, 2289682442, 2954401113)
(1080, 55878, 2289683816, 2954401113)
(1080, 55878, 2289685190, 2954401113)
```

 $GET\ /img/starfruit.jpeg\ HTTP/1.1\ r\ hHost:\ www.sbunetsyslabs.com: 1080\ r\ hHost:\ heavy for the constraints of the const$

The TCP segments are below:

```
(1080, 55879, 915982643, 1790169958)
```

(1080, 55879, 915984017, 1790169958)

(1080, 55879, 915985391, 1790169958)

(1080, 55879, 915986765, 1790169958)

(1080, 55879, 915988139, 1790169958)

(1080, 55879, 915989513, 1790169958)

(1080, 55879, 915990887, 1790169958)

(1080, 55879, 915992261, 1790169958)

(1000) ---- (1000----)

(1080, 55879, 915993635, 1790169958)

(1080, 55879, 915995009, 1790169958)

(1080, 55879, 915996383, 1790169958)

(1080, 55879, 915997757, 1790169958)

(1080, 55879, 915999131, 1790169958)

(1080, 55879, 916000505, 1790169958)

(1080, 55879, 916001879, 1790169958)

(1080, 55879, 916003253, 1790169958)

(1080, 55879, 916004627, 1790169958)

(1080, 55879, 916006001, 1790169958)

(1080, 55879, 916007375, 1790169958)

(1080, 55879, 916008749, 1790169958)

```
(1080, 55879, 916010123, 1790169958)
(1080, 55879, 916011497, 1790169958)
(1080, 55879, 916012871, 1790169958)
(1080, 55879, 916014245, 1790169958)
(1080, 55879, 916015619, 1790169958)
(1080, 55879, 916016993, 1790169958)
(1080, 55879, 916018367, 1790169958)
(1080, 55879, 916019741, 1790169958)
(1080, 55879, 916021115, 1790169958)
(1080, 55879, 916022489, 1790169958)
(1080, 55879, 916023863, 1790169958)
(1080, 55879, 916025237, 1790169958)
(1080, 55879, 916026611, 1790169958)
(1080, 55879, 916027985, 1790169958)
(1080, 55879, 916029359, 1790169958)
(1080, 55879, 916030733, 1790169958)
(1080, 55879, 916032107, 1790169958)
(1080, 55879, 916033481, 1790169958)
(1080, 55879, 916034855, 1790169958)
(1080, 55879, 916036229, 1790169958)
(1080, 55879, 916037603, 1790169958)
(1080, 55879, 916038977, 1790169958)
(1080, 55879, 916040351, 1790169958)
(1080, 55879, 916041725, 1790169958)
(1080, 55879, 916043099, 1790169958)
(1080, 55879, 916044473, 1790169958)
(1080, 55879, 916045847, 1790169958)
(1080, 55879, 916047221, 1790169958)
(1080, 55879, 916048595, 1790169958)
(1080, 55879, 916049969, 1790169958)
(1080, 55879, 916051343, 1790169958)
(1080, 55879, 916052717, 1790169958)
(1080, 55879, 916054091, 1790169958)
(1080, 55879, 916055465, 1790169958)
(1080, 55879, 916056839, 1790169958)
(1080, 55879, 916058213, 1790169958)
(1080, 55879, 916059587, 1790169958)
(1080, 55879, 916060961, 1790169958)
(1080, 55879, 916062335, 1790169958)
(1080, 55879, 916063709, 1790169958)
(1080, 55879, 916065083, 1790169958)
(1080, 55879, 916066457, 1790169958)
(1080, 55879, 916067831, 1790169958)
(1080, 55879, 916069205, 1790169958)
```

```
(1080, 55879, 916070579, 1790169958)
(1080, 55879, 916071953, 1790169958)
(1080, 55879, 916073327, 1790169958)
(1080, 55879, 916074701, 1790169958)
(1080, 55879, 916076075, 1790169958)
(1080, 55879, 916077449, 1790169958)
(1080, 55879, 916078823, 1790169958)
(1080, 55879, 916080197, 1790169958)
(1080, 55879, 916081571, 1790169958)
(1080, 55879, 916082945, 1790169958)
(1080, 55879, 916084319, 1790169958)
(1080, 55879, 916085693, 1790169958)
(1080, 55879, 916087067, 1790169958)
(1080, 55879, 916088441, 1790169958)
(1080, 55879, 916089815, 1790169958)
(1080, 55879, 916091189, 1790169958)
(1080, 55879, 916092563, 1790169958)
(1080, 55879, 916093937, 1790169958)
(1080, 55879, 916095311, 1790169958)
(1080, 55879, 916096685, 1790169958)
(1080, 55879, 916098059, 1790169958)
(1080, 55879, 916099433, 1790169958)
(1080, 55879, 916100807, 1790169958)
(1080, 55879, 916102181, 1790169958)
(1080, 55879, 916103555, 1790169958)
(1080, 55879, 916104929, 1790169958)
(1080, 55879, 916106303, 1790169958)
(1080, 55879, 916107677, 1790169958)
(1080, 55879, 916109051, 1790169958)
(1080, 55879, 916110425, 1790169958)
(1080, 55879, 916111799, 1790169958)
(1080, 55879, 916113173, 1790169958)
(1080, 55879, 916114547, 1790169958)
(1080, 55879, 916115921, 1790169958)
(1080, 55879, 916117295, 1790169958)
(1080, 55879, 916118669, 1790169958)
(1080, 55879, 916120043, 1790169958)
(1080, 55879, 916121417, 1790169958)
(1080, 55879, 916122791, 1790169958)
(1080, 55879, 916124165, 1790169958)
(1080, 55879, 916125539, 1790169958)
(1080, 55879, 916126913, 1790169958)
(1080, 55879, 916128287, 1790169958)
(1080, 55879, 916129661, 1790169958)
```

```
(1080, 55879, 916131035, 1790169958)
(1080, 55879, 916132409, 1790169958)
(1080, 55879, 916133783, 1790169958)
(1080, 55879, 916135157, 1790169958)
(1080, 55879, 916136531, 1790169958)
(1080, 55879, 916137905, 1790169958)
(1080, 55879, 916139279, 1790169958)
(1080, 55879, 916140653, 1790169958)
(1080, 55879, 916142027, 1790169958)
(1080, 55879, 916143401, 1790169958)
(1080, 55879, 916144775, 1790169958)
(1080, 55879, 916146149, 1790169958)
(1080, 55879, 916147523, 1790169958)
(1080, 55879, 916148897, 1790169958)
(1080, 55879, 916150271, 1790169958)
(1080, 55879, 916151645, 1790169958)
(1080, 55879, 916153019, 1790169958)
(1080, 55879, 916154393, 1790169958)
(1080, 55879, 916155767, 1790169958)
(1080, 55879, 916157141, 1790169958)
(1080, 55879, 916158515, 1790169958)
(1080, 55879, 916159889, 1790169958)
(1080, 55879, 916161263, 1790169958)
(1080, 55879, 916162637, 1790169958)
(1080, 55879, 916164011, 1790169958)
(1080, 55879, 916165385, 1790169958)
(1080, 55879, 916166759, 1790169958)
(1080, 55879, 916168133, 1790169958)
(1080, 55879, 916169507, 1790169958)
(1080, 55879, 916170881, 1790169958)
(1080, 55879, 916172255, 1790169958)
(1080, 55879, 916173629, 1790169958)
(1080, 55879, 916175003, 1790169958)
(1080, 55879, 916176377, 1790169958)
(1080, 55879, 916177751, 1790169958)
(1080, 55879, 916179125, 1790169958)
(1080, 55879, 916180499, 1790169958)
(1080, 55879, 916181873, 1790169958)
(1080, 55879, 916183247, 1790169958)
(1080, 55879, 916184621, 1790169958)
(1080, 55879, 916185995, 1790169958)
(1080, 55879, 916187369, 1790169958)
(1080, 55879, 916188743, 1790169958)
(1080, 55879, 916190117, 1790169958)
```

```
(1080, 55879, 916191491, 1790169958)
(1080, 55879, 916192865, 1790169958)
(1080, 55879, 916194239, 1790169958)
(1080, 55879, 916195613, 1790169958)
(1080, 55879, 916196987, 1790169958)
(1080, 55879, 916198361, 1790169958)
(1080, 55879, 916199735, 1790169958)
(1080, 55879, 916201109, 1790169958)
(1080, 55879, 916202483, 1790169958)
(1080, 55879, 916203857, 1790169958)
(1080, 55879, 916205231, 1790169958)
(1080, 55879, 916206605, 1790169958)
(1080, 55879, 916207979, 1790169958)
(1080, 55879, 916209353, 1790169958)
(1080, 55879, 916210727, 1790169958)
(1080, 55879, 916212101, 1790169958)
(1080, 55879, 916213475, 1790169958)
(1080, 55879, 916214849, 1790169958)
(1080, 55879, 916216223, 1790169958)
(1080, 55879, 916217597, 1790169958)
(1080, 55879, 916218971, 1790169958)
(1080, 55879, 916220345, 1790169958)
(1080, 55879, 916221719, 1790169958)
(1080, 55879, 916223093, 1790169958)
(1080, 55879, 916224467, 1790169958)
(1080, 55879, 916225841, 1790169958)
(1080, 55879, 916227215, 1790169958)
(1080, 55879, 916228589, 1790169958)
(1080, 55879, 916229963, 1790169958)
(1080, 55879, 916231337, 1790169958)
(1080, 55879, 916232711, 1790169958)
(1080, 55879, 916234085, 1790169958)
(1080, 55879, 916235459, 1790169958)
(1080, 55879, 916236833, 1790169958)
(1080, 55879, 916238207, 1790169958)
(1080, 55879, 916239581, 1790169958)
(1080, 55879, 916240955, 1790169958)
(1080, 55879, 916242329, 1790169958)
(1080, 55879, 916243703, 1790169958)
(1080, 55879, 916245077, 1790169958)
(1080, 55879, 916246451, 1790169958)
(1080, 55879, 916247825, 1790169958)
(1080, 55879, 916249199, 1790169958)
(1080, 55879, 916250573, 1790169958)
```

```
(1080, 55879, 916251947, 1790169958)
(1080, 55879, 916253321, 1790169958)
(1080, 55879, 916254695, 1790169958)
(1080, 55879, 916256069, 1790169958)
(1080, 55879, 916257443, 1790169958)
(1080, 55879, 916258817, 1790169958)
(1080, 55879, 916260191, 1790169958)
(1080, 55879, 916261565, 1790169958)
(1080, 55879, 916262939, 1790169958)
(1080, 55879, 916264313, 1790169958)
(1080, 55879, 916265687, 1790169958)
(1080, 55879, 916267061, 1790169958)
(1080, 55879, 916268435, 1790169958)
(1080, 55879, 916269809, 1790169958)
(1080, 55879, 916271183, 1790169958)
(1080, 55879, 916272557, 1790169958)
(1080, 55879, 916273931, 1790169958)
(1080, 55879, 916275305, 1790169958)
(1080, 55879, 916276679, 1790169958)
(1080, 55879, 916278053, 1790169958)
(1080, 55879, 916279427, 1790169958)
(1080, 55879, 916280801, 1790169958)
(1080, 55879, 916282175, 1790169958)
(1080, 55879, 916283549, 1790169958)
(1080, 55879, 916284923, 1790169958)
(1080, 55879, 916286297, 1790169958)
(1080, 55879, 916287671, 1790169958)
(1080, 55879, 916289045, 1790169958)
(1080, 55879, 916290419, 1790169958)
(1080, 55879, 916291793, 1790169958)
(1080, 55879, 916293167, 1790169958)
(1080, 55879, 916294541, 1790169958)
(1080, 55879, 916295915, 1790169958)
(1080, 55879, 916297289, 1790169958)
(1080, 55879, 916298663, 1790169958)
(1080, 55879, 916300037, 1790169958)
(1080, 55879, 916301411, 1790169958)
(1080, 55879, 916302785, 1790169958)
(1080, 55879, 916304159, 1790169958)
(1080, 55879, 916305533, 1790169958)
(1080, 55879, 916306907, 1790169958)
(1080, 55879, 916308281, 1790169958)
(1080, 55879, 916309655, 1790169958)
(1080, 55879, 916311029, 1790169958)
```

```
(1080, 55879, 916312403, 1790169958)
(1080, 55879, 916313777, 1790169958)
(1080, 55879, 916315151, 1790169958)
(1080, 55879, 916316525, 1790169958)
(1080, 55879, 916317899, 1790169958)
(1080, 55879, 916319273, 1790169958)
(1080, 55879, 916320647, 1790169958)
(1080, 55879, 916322021, 1790169958)
(1080, 55879, 916323395, 1790169958)
(1080, 55879, 916324769, 1790169958)
(1080, 55879, 916326143, 1790169958)
(1080, 55879, 916327517, 1790169958)
(1080, 55879, 916328891, 1790169958)
(1080, 55879, 916330265, 1790169958)
(1080, 55879, 916331639, 1790169958)
(1080, 55879, 916333013, 1790169958)
(1080, 55879, 916334387, 1790169958)
(1080, 55879, 916335761, 1790169958)
(1080, 55879, 916337135, 1790169958)
(1080, 55879, 916338509, 1790169958)
(1080, 55879, 916339883, 1790169958)
(1080, 55879, 916341257, 1790169958)
(1080, 55879, 916342631, 1790169958)
(1080, 55879, 916344005, 1790169958)
(1080, 55879, 916345379, 1790169958)
(1080, 55879, 916346753, 1790169958)
(1080, 55879, 916348127, 1790169958)
(1080, 55879, 916349501, 1790169958)
(1080, 55879, 916350875, 1790169958)
(1080, 55879, 916352249, 1790169958)
(1080, 55879, 916353623, 1790169958)
(1080, 55879, 916354997, 1790169958)
(1080, 55879, 916356371, 1790169958)
(1080, 55879, 916357745, 1790169958)
(1080, 55879, 916359119, 1790169958)
(1080, 55879, 916360493, 1790169958)
(1080, 55879, 916361867, 1790169958)
(1080, 55879, 916363241, 1790169958)
(1080, 55879, 916364615, 1790169958)
(1080, 55879, 916365989, 1790169958)
(1080, 55879, 916367363, 1790169958)
(1080, 55879, 916368737, 1790169958)
(1080, 55879, 916370111, 1790169958)
(1080, 55879, 916371485, 1790169958)
```

```
(1080, 55879, 916372859, 1790169958)
(1080, 55879, 916374233, 1790169958)
(1080, 55879, 916375607, 1790169958)
(1080, 55879, 916376981, 1790169958)
(1080, 55879, 916378355, 1790169958)
(1080, 55879, 916379729, 1790169958)
(1080, 55879, 916381103, 1790169958)
(1080, 55879, 916382477, 1790169958)
(1080, 55879, 916383851, 1790169958)
(1080, 55879, 916385225, 1790169958)
(1080, 55879, 916386599, 1790169958)
(1080, 55879, 916387973, 1790169958)
(1080, 55879, 916389347, 1790169958)
(1080, 55879, 916390721, 1790169958)
(1080, 55879, 916392095, 1790169958)
(1080, 55879, 916393469, 1790169958)
(1080, 55879, 916394843, 1790169958)
(1080, 55879, 916396217, 1790169958)
(1080, 55879, 916397591, 1790169958)
(1080, 55879, 916398965, 1790169958)
(1080, 55879, 916400339, 1790169958)
(1080, 55879, 916401713, 1790169958)
(1080, 55879, 916403087, 1790169958)
(1080, 55879, 916404461, 1790169958)
(1080, 55879, 916405835, 1790169958)
(1080, 55879, 916407209, 1790169958)
(1080, 55879, 916408583, 1790169958)
(1080, 55879, 916409957, 1790169958)
(1080, 55879, 916411331, 1790169958)
(1080, 55879, 916412705, 1790169958)
(1080, 55879, 916414079, 1790169958)
(1080, 55879, 916415453, 1790169958)
(1080, 55879, 916416827, 1790169958)
(1080, 55879, 916418201, 1790169958)
(1080, 55879, 916419575, 1790169958)
(1080, 55879, 916420949, 1790169958)
(1080, 55879, 916422323, 1790169958)
(1080, 55879, 916423697, 1790169958)
(1080, 55879, 916425071, 1790169958)
(1080, 55879, 916426445, 1790169958)
(1080, 55879, 916427819, 1790169958)
(1080, 55879, 916429193, 1790169958)
(1080, 55879, 916430567, 1790169958)
(1080, 55879, 916431941, 1790169958)
```

```
(1080, 55879, 916433315, 1790169958)
(1080, 55879, 916434689, 1790169958)
(1080, 55879, 916436063, 1790169958)
(1080, 55879, 916437437, 1790169958)
(1080, 55879, 916438811, 1790169958)
(1080, 55879, 916440185, 1790169958)
(1080, 55879, 916441559, 1790169958)
(1080, 55879, 916442933, 1790169958)
(1080, 55879, 916444307, 1790169958)
(1080, 55879, 916445681, 1790169958)
(1080, 55879, 916447055, 1790169958)
(1080, 55879, 916448429, 1790169958)
(1080, 55879, 916449803, 1790169958)
(1080, 55879, 916451177, 1790169958)
(1080, 55879, 916452551, 1790169958)
(1080, 55879, 916453925, 1790169958)
(1080, 55879, 916455299, 1790169958)
(1080, 55879, 916456673, 1790169958)
(1080, 55879, 916458047, 1790169958)
(1080, 55879, 916459421, 1790169958)
(1080, 55879, 916460795, 1790169958)
(1080, 55879, 916462169, 1790169958)
(1080, 55879, 916463543, 1790169958)
(1080, 55879, 916464917, 1790169958)
(1080, 55879, 916466291, 1790169958)
(1080, 55879, 916467665, 1790169958)
(1080, 55879, 916469039, 1790169958)
(1080, 55879, 916470413, 1790169958)
(1080, 55879, 916471787, 1790169958)
(1080, 55879, 916473161, 1790169958)
(1080, 55879, 916474535, 1790169958)
(1080, 55879, 916475909, 1790169958)
(1080, 55879, 916477283, 1790169958)
(1080, 55879, 916478657, 1790169958)
(1080, 55879, 916480031, 1790169958)
(1080, 55879, 916481405, 1790169958)
(1080, 55879, 916482779, 1790169958)
(1080, 55879, 916484153, 1790169958)
(1080, 55879, 916485527, 1790169958)
(1080, 55879, 916486901, 1790169958)
(1080, 55879, 916488275, 1790169958)
(1080, 55879, 916489649, 1790169958)
(1080, 55879, 916491023, 1790169958)
(1080, 55879, 916492397, 1790169958)
```

```
(1080, 55879, 916493771, 1790169958)
(1080, 55879, 916495145, 1790169958)
(1080, 55879, 916496519, 1790169958)
(1080, 55879, 916497893, 1790169958)
(1080, 55879, 916499267, 1790169958)
(1080, 55879, 916500641, 1790169958)
(1080, 55879, 916502015, 1790169958)
(1080, 55879, 916503389, 1790169958)
(1080, 55879, 916504763, 1790169958)
(1080, 55879, 916506137, 1790169958)
(1080, 55879, 916507511, 1790169958)
(1080, 55879, 916508885, 1790169958)
(1080, 55879, 916510259, 1790169958)
(1080, 55879, 916511633, 1790169958)
(1080, 55879, 916513007, 1790169958)
(1080, 55879, 916514381, 1790169958)
(1080, 55879, 916515755, 1790169958)
(1080, 55879, 916517129, 1790169958)
(1080, 55879, 916518503, 1790169958)
(1080, 55879, 916519877, 1790169958)
(1080, 55879, 916521251, 1790169958)
(1080, 55879, 916522625, 1790169958)
(1080, 55879, 916523999, 1790169958)
(1080, 55879, 916525373, 1790169958)
(1080, 55879, 916526747, 1790169958)
(1080, 55879, 916528121, 1790169958)
(1080, 55879, 916529495, 1790169958)
(1080, 55879, 916530869, 1790169958)
(1080, 55879, 916532243, 1790169958)
(1080, 55879, 916533617, 1790169958)
(1080, 55879, 916534991, 1790169958)
(1080, 55879, 916536365, 1790169958)
(1080, 55879, 916537739, 1790169958)
(1080, 55879, 916539113, 1790169958)
(1080, 55879, 916540487, 1790169958)
(1080, 55879, 916541861, 1790169958)
(1080, 55879, 916543235, 1790169958)
(1080, 55879, 916544609, 1790169958)
(1080, 55879, 916545983, 1790169958)
(1080, 55879, 916547357, 1790169958)
(1080, 55879, 916548731, 1790169958)
(1080, 55879, 916550105, 1790169958)
(1080, 55879, 916551479, 1790169958)
(1080, 55879, 916552853, 1790169958)
```

```
(1080, 55879, 916554227, 1790169958)
(1080, 55879, 916555601, 1790169958)
(1080, 55879, 916556975, 1790169958)
(1080, 55879, 916558349, 1790169958)
(1080, 55879, 916559723, 1790169958)
(1080, 55879, 916561097, 1790169958)
(1080, 55879, 916562471, 1790169958)
(1080, 55879, 916563845, 1790169958)
(1080, 55879, 916565219, 1790169958)
(1080, 55879, 916566593, 1790169958)
(1080, 55879, 916567967, 1790169958)
(1080, 55879, 916569341, 1790169958)
(1080, 55879, 916570715, 1790169958)
(1080, 55879, 916572089, 1790169958)
(1080, 55879, 916573463, 1790169958)
(1080, 55879, 916574837, 1790169958)
(1080, 55879, 916576211, 1790169958)
(1080, 55879, 916577585, 1790169958)
(1080, 55879, 916578959, 1790169958)
(1080, 55879, 916580333, 1790169958)
(1080, 55879, 916581707, 1790169958)
(1080, 55879, 916583081, 1790169958)
(1080, 55879, 916584455, 1790169958)
(1080, 55879, 916585829, 1790169958)
(1080, 55879, 916587203, 1790169958)
(1080, 55879, 916588577, 1790169958)
(1080, 55879, 916589951, 1790169958)
(1080, 55879, 916591325, 1790169958)
(1080, 55879, 916592699, 1790169958)
(1080, 55879, 916594073, 1790169958)
(1080, 55879, 916595447, 1790169958)
(1080, 55879, 916596821, 1790169958)
(1080, 55879, 916598195, 1790169958)
(1080, 55879, 916599569, 1790169958)
(1080, 55879, 916600943, 1790169958)
(1080, 55879, 916602317, 1790169958)
(1080, 55879, 916603691, 1790169958)
(1080, 55879, 916605065, 1790169958)
(1080, 55879, 916606439, 1790169958)
(1080, 55879, 916607813, 1790169958)
(1080, 55879, 916609187, 1790169958)
(1080, 55879, 916610561, 1790169958)
(1080, 55879, 916611935, 1790169958)
(1080, 55879, 916613309, 1790169958)
```

```
(1080, 55879, 916614683, 1790169958)
(1080, 55879, 916616057, 1790169958)
(1080, 55879, 916617431, 1790169958)
(1080, 55879, 916618805, 1790169958)
(1080, 55879, 916620179, 1790169958)
(1080, 55879, 916621553, 1790169958)
(1080, 55879, 916622927, 1790169958)
(1080, 55879, 916624301, 1790169958)
(1080, 55879, 916625675, 1790169958)
(1080, 55879, 916627049, 1790169958)
(1080, 55879, 916628423, 1790169958)
(1080, 55879, 916629797, 1790169958)
(1080, 55879, 916631171, 1790169958)
(1080, 55879, 916632545, 1790169958)
(1080, 55879, 916633919, 1790169958)
(1080, 55879, 916635293, 1790169958)
(1080, 55879, 916636667, 1790169958)
(1080, 55879, 916638041, 1790169958)
(1080, 55879, 916639415, 1790169958)
(1080, 55879, 916640789, 1790169958)
(1080, 55879, 916642163, 1790169958)
(1080, 55879, 916643537, 1790169958)
(1080, 55879, 916644911, 1790169958)
(1080, 55879, 916646285, 1790169958)
(1080, 55879, 916647659, 1790169958)
(1080, 55879, 916649033, 1790169958)
(1080, 55879, 916650407, 1790169958)
(1080, 55879, 916651781, 1790169958)
(1080, 55879, 916653155, 1790169958)
(1080, 55879, 916654529, 1790169958)
(1080, 55879, 916655903, 1790169958)
(1080, 55879, 916657277, 1790169958)
(1080, 55879, 916658651, 1790169958)
(1080, 55879, 916660025, 1790169958)
(1080, 55879, 916661399, 1790169958)
(1080, 55879, 916662773, 1790169958)
(1080, 55879, 916664147, 1790169958)
(1080, 55879, 916665521, 1790169958)
(1080, 55879, 916666895, 1790169958)
(1080, 55879, 916668269, 1790169958)
(1080, 55879, 916669643, 1790169958)
(1080, 55879, 916671017, 1790169958)
(1080, 55879, 916672391, 1790169958)
(1080, 55879, 916673765, 1790169958)
```

```
(1080, 55879, 916675139, 1790169958)
(1080, 55879, 916676513, 1790169958)
(1080, 55879, 916677887, 1790169958)
(1080, 55879, 916679261, 1790169958)
(1080, 55879, 916680635, 1790169958)
(1080, 55879, 916682009, 1790169958)
(1080, 55879, 916683383, 1790169958)
(1080, 55879, 916684757, 1790169958)
(1080, 55879, 916686131, 1790169958)
(1080, 55879, 916687505, 1790169958)
(1080, 55879, 916688879, 1790169958)
(1080, 55879, 916690253, 1790169958)
(1080, 55879, 916691627, 1790169958)
(1080, 55879, 916693001, 1790169958)
(1080, 55879, 916694375, 1790169958)
(1080, 55879, 916695749, 1790169958)
(1080, 55879, 916697123, 1790169958)
(1080, 55879, 916698497, 1790169958)
(1080, 55879, 916699517, 1790169958)
(1080, 55879, 916700891, 1790169958)
(1080, 55879, 916702265, 1790169958)
(1080, 55879, 916703639, 1790169958)
(1080, 55879, 916705013, 1790169958)
(1080, 55879, 916706387, 1790169958)
(1080, 55879, 916707761, 1790169958)
(1080, 55879, 916709135, 1790169958)
(1080, 55879, 916710509, 1790169958)
(1080, 55879, 916711883, 1790169958)
(1080, 55879, 916712237, 1790169958)
(1080, 55879, 916713611, 1790169958)
(1080, 55879, 916714985, 1790169958)
(1080, 55879, 916716359, 1790169958)
(1080, 55879, 916717733, 1790169958)
(1080, 55879, 916719107, 1790169958)
(1080, 55879, 916720481, 1790169958)
(1080, 55879, 916721529, 1790169958)
(1080, 55879, 916722903, 1790169958)
(1080, 55879, 916724277, 1790169958)
(1080, 55879, 916725651, 1790169958)
(1080, 55879, 916727025, 1790169958)
(1080, 55879, 916728399, 1790169958)
(1080, 55879, 916729773, 1790169958)
(1080, 55879, 916731147, 1790169958)
(1080, 55879, 916732521, 1790169958)
```

```
(1080, 55879, 916733895, 1790169958)
(1080, 55879, 916735269, 1790169958)
(1080, 55879, 916736643, 1790169958)
(1080, 55879, 916738017, 1790169958)
(1080, 55879, 916739391, 1790169958)
(1080, 55879, 916740765, 1790169958)
(1080, 55879, 916742139, 1790169958)
(1080, 55879, 916743513, 1790169958)
(1080, 55879, 916744887, 1790169958)
(1080, 55879, 916746261, 1790169958)
(1080, 55879, 916747635, 1790169958)
(1080, 55879, 916749009, 1790169958)
(1080, 55879, 916750383, 1790169958)
(1080, 55879, 916751757, 1790169958)
(1080, 55879, 916753131, 1790169958)
(1080, 55879, 916754505, 1790169958)
(1080, 55879, 916755879, 1790169958)
(1080, 55879, 916757253, 1790169958)
(1080, 55879, 916758627, 1790169958)
(1080, 55879, 916760001, 1790169958)
(1080, 55879, 916761375, 1790169958)
(1080, 55879, 916762749, 1790169958)
(1080, 55879, 916764123, 1790169958)
(1080, 55879, 916765069, 1790169958)
(1080, 55879, 916766443, 1790169958)
(1080, 55879, 916767817, 1790169958)
(1080, 55879, 916769191, 1790169958)
(1080, 55879, 916770565, 1790169958)
(1080, 55879, 916771939, 1790169958)
(1080, 55879, 916773313, 1790169958)
(1080, 55879, 916774687, 1790169958)
(1080, 55879, 916776061, 1790169958)
(1080, 55879, 916776815, 1790169958)
(1080, 55879, 916778189, 1790169958)
(1080, 55879, 916779563, 1790169958)
(1080, 55879, 916780937, 1790169958)
(1080, 55879, 916782311, 1790169958)
(1080, 55879, 916783685, 1790169958)
(1080, 55879, 916785059, 1790169958)
(1080, 55879, 916786433, 1790169958)
(1080, 55879, 916787807, 1790169958)
(1080, 55879, 916789181, 1790169958)
(1080, 55879, 916790555, 1790169958)
(1080, 55879, 916791929, 1790169958)
```

```
(1080, 55879, 916793303, 1790169958)
(1080, 55879, 916794677, 1790169958)
(1080, 55879, 916796051, 1790169958)
(1080, 55879, 916797425, 1790169958)
(1080, 55879, 916798799, 1790169958)
(1080, 55879, 916800173, 1790169958)
(1080, 55879, 916801547, 1790169958)
(1080, 55879, 916802921, 1790169958)
(1080, 55879, 916804295, 1790169958)
(1080, 55879, 916805669, 1790169958)
(1080, 55879, 916807043, 1790169958)
(1080, 55879, 916808417, 1790169958)
(1080, 55879, 916809791, 1790169958)
(1080, 55879, 916811165, 1790169958)
(1080, 55879, 916812539, 1790169958)
(1080, 55879, 916813913, 1790169958)
(1080, 55879, 916815287, 1790169958)
(1080, 55879, 916816661, 1790169958)
(1080, 55879, 916818035, 1790169958)
(1080, 55879, 916819409, 1790169958)
(1080, 55879, 916820783, 1790169958)
(1080, 55879, 916822157, 1790169958)
(1080, 55879, 916823531, 1790169958)
(1080, 55879, 916824905, 1790169958)
(1080, 55879, 916826279, 1790169958)
(1080, 55879, 916827653, 1790169958)
(1080, 55879, 916829027, 1790169958)
(1080, 55879, 916830401, 1790169958)
(1080, 55879, 916830601, 1790169958)
(1080, 55879, 916831975, 1790169958)
(1080, 55879, 916833349, 1790169958)
(1080, 55879, 916834723, 1790169958)
(1080, 55879, 916836097, 1790169958)
(1080, 55879, 916837471, 1790169958)
(1080, 55879, 916838845, 1790169958)
(1080, 55879, 916840219, 1790169958)
(1080, 55879, 916841393, 1790169958)
(1080, 55879, 916842767, 1790169958)
(1080, 55879, 916844141, 1790169958)
(1080, 55879, 916845515, 1790169958)
(1080, 55879, 916846889, 1790169958)
(1080, 55879, 916848263, 1790169958)
(1080, 55879, 916849637, 1790169958)
(1080, 55879, 916851011, 1790169958)
```

```
(1080, 55879, 916852385, 1790169958)
(1080, 55879, 916853759, 1790169958)
(1080, 55879, 916855133, 1790169958)
(1080, 55879, 916856507, 1790169958)
(1080, 55879, 916857881, 1790169958)
(1080, 55879, 916859255, 1790169958)
(1080, 55879, 916860629, 1790169958)
(1080, 55879, 916862003, 1790169958)
(1080, 55879, 916863377, 1790169958)
(1080, 55879, 916864751, 1790169958)
(1080, 55879, 916866125, 1790169958)
(1080, 55879, 916867499, 1790169958)
(1080, 55879, 916868873, 1790169958)
(1080, 55879, 916870247, 1790169958)
(1080, 55879, 916871621, 1790169958)
(1080, 55879, 916872995, 1790169958)
(1080, 55879, 916874369, 1790169958)
(1080, 55879, 916875743, 1790169958)
(1080, 55879, 916877117, 1790169958)
(1080, 55879, 916878491, 1790169958)
(1080, 55879, 916879865, 1790169958)
(1080, 55879, 916881239, 1790169958)
(1080, 55879, 916882613, 1790169958)
(1080, 55879, 916883987, 1790169958)
(1080, 55879, 916885361, 1790169958)
(1080, 55879, 916886735, 1790169958)
(1080, 55879, 916888109, 1790169958)
(1080, 55879, 916889483, 1790169958)
(1080, 55879, 916890857, 1790169958)
(1080, 55879, 916892231, 1790169958)
(1080, 55879, 916893605, 1790169958)
(1080, 55879, 916894979, 1790169958)
(1080, 55879, 916896353, 1790169958)
(1080, 55879, 916897727, 1790169958)
(1080, 55879, 916899101, 1790169958)
(1080, 55879, 916900475, 1790169958)
(1080, 55879, 916901849, 1790169958)
(1080, 55879, 916903223, 1790169958)
(1080, 55879, 916904597, 1790169958)
(1080, 55879, 916905971, 1790169958)
(1080, 55879, 916907345, 1790169958)
(1080, 55879, 916908719, 1790169958)
(1080, 55879, 916910093, 1790169958)
(1080, 55879, 916911467, 1790169958)
```

```
(1080, 55879, 916912841, 1790169958)
(1080, 55879, 916914215, 1790169958)
(1080, 55879, 916915589, 1790169958)
(1080, 55879, 916916963, 1790169958)
(1080, 55879, 916918337, 1790169958)
(1080, 55879, 916919711, 1790169958)
(1080, 55879, 916921085, 1790169958)
(1080, 55879, 916922459, 1790169958)
(1080, 55879, 916923833, 1790169958)
(1080, 55879, 916925207, 1790169958)
(1080, 55879, 916926581, 1790169958)
(1080, 55879, 916927955, 1790169958)
(1080, 55879, 916928905, 1790169958)
(1080, 55879, 916930279, 1790169958)
(1080, 55879, 916931653, 1790169958)
(1080, 55879, 916933027, 1790169958)
(1080, 55879, 916934401, 1790169958)
(1080, 55879, 916935775, 1790169958)
(1080, 55879, 916937149, 1790169958)
(1080, 55879, 916938523, 1790169958)
(1080, 55879, 916939897, 1790169958)
(1080, 55879, 916941271, 1790169958)
(1080, 55879, 916942645, 1790169958)
(1080, 55879, 916944019, 1790169958)
(1080, 55879, 916945393, 1790169958)
(1080, 55879, 916946767, 1790169958)
(1080, 55879, 916948141, 1790169958)
(1080, 55879, 916949515, 1790169958)
(1080, 55879, 916950889, 1790169958)
(1080, 55879, 916952263, 1790169958)
(1080, 55879, 916953637, 1790169958)
(1080, 55879, 916955011, 1790169958)
(1080, 55879, 916956385, 1790169958)
(1080, 55879, 916957759, 1790169958)
(1080, 55879, 916959133, 1790169958)
```

```
GET /img/grapes.jpeg HTTP/1.1\r\nHost: www.sbunetsyslabs.com:1080\r\n The TCP segments are below: (1080, 55880, 2767383618, 1758715922) (1080, 55880, 2767384992, 1758715922) (1080, 55880, 2767386366, 1758715922) (1080, 55880, 2767387740, 1758715922)
```

```
GET /img/tomato.jpeg HTTP/1.1\r\nHost: www.sbunetsyslabs.com:1080\r\n
The TCP segments are below:
(1080, 55881, 568328970, 1694213523)
(1080, 55881, 568330344, 1694213523)
(1080, 55881, 568331718, 1694213523)
(1080, 55881, 568333092, 1694213523)
(1080, 55881, 568334466, 1694213523)
(1080, 55881, 568335840, 1694213523)
(1080, 55881, 568337214, 1694213523)
(1080, 55881, 568338588, 1694213523)
(1080, 55881, 568339962, 1694213523)
(1080, 55881, 568341336, 1694213523)
(1080, 55881, 568342710, 1694213523)
(1080, 55881, 568344084, 1694213523)
(1080, 55881, 568345458, 1694213523)
(1080, 55881, 568346832, 1694213523)
(1080, 55881, 568348206, 1694213523)
(1080, 55881, 568349580, 1694213523)
(1080, 55881, 568350954, 1694213523)
(1080, 55881, 568352328, 1694213523)
(1080, 55881, 568353702, 1694213523)
(1080, 55881, 568355076, 1694213523)
(1080, 55881, 568356450, 1694213523)
(1080, 55881, 568357824, 1694213523)
(1080, 55881, 568359198, 1694213523)
(1080, 55881, 568360572, 1694213523)
(1080, 55881, 568361946, 1694213523)
(1080, 55881, 568363320, 1694213523)
(1080, 55881, 568364694, 1694213523)
(1080, 55881, 568366068, 1694213523)
(1080, 55881, 568367442, 1694213523)
(1080, 55881, 568368816, 1694213523)
(1080, 55881, 568370190, 1694213523)
(1080, 55881, 568371564, 1694213523)
(1080, 55881, 568372938, 1694213523)
(1080, 55881, 568374312, 1694213523)
(1080, 55881, 568375686, 1694213523)
(1080, 55881, 568377060, 1694213523)
(1080, 55881, 568378434, 1694213523)
(1080, 55881, 568379808, 1694213523)
(1080, 55881, 568381182, 1694213523)
```

```
(1080, 55881, 568382556, 1694213523)
(1080, 55881, 568383930, 1694213523)
(1080, 55881, 568385304, 1694213523)
(1080, 55881, 568386678, 1694213523)
(1080, 55881, 568388052, 1694213523)
(1080, 55881, 568389426, 1694213523)
(1080, 55881, 568390800, 1694213523)
(1080, 55881, 568392174, 1694213523)
(1080, 55881, 568393548, 1694213523)
(1080, 55881, 568394922, 1694213523)
(1080, 55881, 568396296, 1694213523)
(1080, 55881, 568397670, 1694213523)
(1080, 55881, 568399044, 1694213523)
(1080, 55881, 568400418, 1694213523)
(1080, 55881, 568401792, 1694213523)
(1080, 55881, 568403166, 1694213523)
(1080, 55881, 568404540, 1694213523)
(1080, 55881, 568405914, 1694213523)
(1080, 55881, 568407288, 1694213523)
(1080, 55881, 568408662, 1694213523)
(1080, 55881, 568410036, 1694213523)
(1080, 55881, 568411410, 1694213523)
(1080, 55881, 568412784, 1694213523)
(1080, 55881, 568414158, 1694213523)
(1080, 55881, 568415532, 1694213523)
(1080, 55881, 568416906, 1694213523)
(1080, 55881, 568418280, 1694213523)
(1080, 55881, 568419654, 1694213523)
(1080, 55881, 568421028, 1694213523)
(1080, 55881, 568422402, 1694213523)
(1080, 55881, 568423776, 1694213523)
(1080, 55881, 568425150, 1694213523)
(1080, 55881, 568426524, 1694213523)
(1080, 55881, 568427898, 1694213523)
(1080, 55881, 568429272, 1694213523)
(1080, 55881, 568430646, 1694213523)
(1080, 55881, 568432020, 1694213523)
(1080, 55881, 568433394, 1694213523)
```

3.2 Part C (2)

Port 1081 uses HTTP/1.1 Port 1082 uses HTTP/2.0

3.2.1 Port 1081

init a new flow 117 init a new flow 118 init a new flow 119 init a new flow 120

Flow 117: 980190 byte of data has been send from server to client 1051066 byte of data has been send from server to client 106420 byte of data has been send from server to client Flow 120: 6586 byte of data has been send from server to client

Data from all flows: 2144262

4 TCP connection opened on server side to send website data to client.

This is HTTP/1.1 since it uses parallel(multiple) TCP connection to send website data

3.2.2 Port **1082**

init a new flow 121 init a new flow 122

Flow 121: 2174340 byte of data has been send from server to client Flow 122: 3261 byte of data has been send from server to client

Data from all flows: 2177601

1 TCP connection opened on server side to send website data to client.

1 TCP connection opened merely for TLS key exchange

This is HTTP/2.0 since it uses single TCP connection to send website data

3.3 Part C (3)

3.3.1 HTTP/1.0

Flow 100: 825 byte of data has been send from server to client Flow 101: 4304 byte of data has been send from server to client Flow 102: 457 byte of data has been send from server to client Flow 103: 9116 byte of data has been send from server to client Flow 104: 4148 byte of data has been send from server to client Flow 105: 51305 byte of data has been send from server to client Flow 106: 7791 byte of data has been send from server to client 26744 byte of data has been send from server to client Flow 107: Flow 108: 88088 byte of data has been send from server to client Flow 109: 6433 byte of data has been send from server to client Flow 110: 34890 byte of data has been send from server to client Flow 111: 9591 byte of data has been send from server to client Flow 112: 39450 byte of data has been send from server to client Flow 113: 764771 byte of data has been send from server to client Flow 114: 978201 byte of data has been send from server to client Flow 115: 6308 byte of data has been send from server to client Flow 116: 105968 byte of data has been send from server to client

Load time = 0.5521 s Number of packets = 1624

Raw bytes = 2138390 byte

3.3.2 HTTP/1.1

Flow 117: 9 80190 byte of data has been send from server to client Flow 118: 1051066 byte of data has been send from server to client Flow 119: 106420 byte of data has been send from server to client Flow 120: 6586 byte of data has been send from server to client

Load time = 0.4662 sNumber of packets = 1611

Raw bytes = 2144262 byte

3.3.3 HTTP/2.0

Flow 121: 2174340 byte of data has been send from server to client Flow 122: 3261 byte of data has been send from server to client

Load time = 0.2544 s Number of packets = 1609

Raw bytes = 2177601 byte

3.3.4 Compare and Explanation

	HTTP/1.0	HTTP/1.1	HTTP/2.0
# of Connections	17	4	2 (only 1 sends website data)
Load Time	0.5521	0.4662	0.2544
# of Packets	1624	1611	1609
Raw Bytes	2138390	2144262	2177601

- 1. HTTP/2.0 is the fastest and HTTP/1.0 is the slowest. Note that 1.1 and 2.0 finishes sending data faster than 1.0, but their TCP connection close a lot later than 1.0.
- 2. HTTP/1.0 is the slowest because one TCP connection only deliver one object. HTTP/1.1 speeds up by using parallel (multiple) TCP connection. HTTP/2.0 speeds up by using a single TCP connection with pipelining or multiplexing. HTTP/2.0 performs good when objects are small, and loss rate is low (SPDY paper). This is exactly the case in this homework.
- 3. HTTP/1.1 sends less # of packets than HTTP/1.0, and HTTP/2.0 sends less # of packets than HTTP/1.1. This is because HTTP/1.1 compresses payload data, and HTTP/2.0 compress both payload data and header.
- 4. Note that JPEG images are already compressed. So, they are hard to compress furthermore. Therefore, the reduction of # of packets are not that impressive comparing HTTP/1.1 and HTTP/1.0. Headers data are small; thus, the compressing of header will only save a few # of packets comparing HTTP/1.1 and HTTP/2.0.
- 5. The total amount of raw bytes send are quite the same. HTTP/2.0 is slightly bigger than HTTP/1.1, and HTTP/1.1 is slightly bigger than HTTP/1.0. My guess that HTTP/2.0 and HTTP/1.1 send more raw bytes due to bytes relating to secure stuff.