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This runSnapshot.doc is a table w a bunch of rows – row 1 is smtp client window, row 2 is received email, row 3 is proxy window, row 4 and beyond is browser snapshots

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| Compile/run instructions for proxy w command line arguments, if any  On separate windows:  python proxy.py  python server.py |
| Proxy run window  //make sure you cout what is rcvd from browser, what is sent to proxy, what is rcvd from proxy, what is sent to browser  Proxy.py log  PS C:\Users\Xavie\CS4390\_HW4\Proxy> python proxy.py  GET / HTTP/1.1  Host: localhost:12345  Connection: keep-alive  Cache-Control: max-age=0  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-User: ?1  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  HTTP/1.1 400 Bad Request  Content-Type: text/html  <html><body><h1>400 Bad Request</h1></body></html>  GET /favicon.ico HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  sec-ch-ua-platform: "Windows"  Accept: image/avif,image/webp,image/apng,image/svg+xml,image/\*,\*/\*;q=0.8  Sec-Fetch-Site: same-origin  Sec-Fetch-Mode: no-cors  Sec-Fetch-Dest: image  Referer: http://localhost:12345/  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  HTTP/1.1 400 Bad Request  Content-Type: text/html  <html><body><h1>400 Bad Request</h1></body></html>  HTTP/1.1 400 Bad Request  Content-Type: text/html  <html><body><h1>400 Bad Request</h1></body></html>  GET /nottheserver HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-User: ?1  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  HTTP/1.1 400 Bad Request  Content-Type: text/html  <html><body><h1>400 Bad Request</h1></body></html>  GET /favicon.ico HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  sec-ch-ua-platform: "Windows"  Accept: image/avif,image/webp,image/apng,image/svg+xml,image/\*,\*/\*;q=0.8  Sec-Fetch-Site: same-origin  Sec-Fetch-Mode: no-cors  Sec-Fetch-Dest: image  Referer: http://localhost:12345/nottheserver  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  HTTP/1.1 400 Bad Request  Content-Type: text/html  <html><body><h1>400 Bad Request</h1></body></html>  GET /localhost:23456/f1 HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Purpose: prefetch  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-User: ?1  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  HTTP/1.1 401 Unauthorized  Content-Type: text/html  <html><body><h1>401 Unauthorized</h1></body></html>  GET /localhost:23456 HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-User: ?1  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  HTTP/1.1 401 Unauthorized  Content-Type: text/html  <html><body><h1>401 Unauthorized</h1></body></html>  GET /localhost:23456?auth=notthepassword HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-User: ?1  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  HTTP/1.1 403 Forbidden  Content-Type: text/html  <html><body><h1>403 Forbidden</h1></body></html>  GET /localhost:23456?auth=password HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  PS C:\Users\Xavie\CS4390\_HW4\Proxy> python proxy.py  GET /localhost:23456/?auth=password HTTP/1.1  Host: localhost:12345  Connection: keep-alive  Cache-Control: max-age=0  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-User: ?1  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  GET /localhost:23456/?auth=password HTTP/1.1  HTTP/1.1 404 Not Found  Content-Type: text/html  <html><body><h1>404 Not Found</h1></body></html>  HTTP/1.1 404 Not Found  Content-Type: text/html  <html><body><h1>404 Not Found</h1></body></html>  GET /favicon.ico HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  sec-ch-ua-platform: "Windows"  Accept: image/avif,image/webp,image/apng,image/svg+xml,image/\*,\*/\*;q=0.8  Sec-Fetch-Site: same-origin  Sec-Fetch-Mode: no-cors  Sec-Fetch-Dest: image  Referer: http://localhost:12345/localhost:23456/?auth=password  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  HTTP/1.1 400 Bad Request  Content-Type: text/html  <html><body><h1>400 Bad Request</h1></body></html>  GET /localhost:23456/f1?auth=password HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-User: ?1  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  GET /localhost:23456/f1?auth=password HTTP/1.1  HTTP/1.1 200 OK  Content-Type: text/html  File f1 is cached!  HTTP/1.1 200 OK  Content-Type: text/html  <html><body></body></html>  GET /favicon.ico HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  sec-ch-ua-platform: "Windows"  Accept: image/avif,image/webp,image/apng,image/svg+xml,image/\*,\*/\*;q=0.8  Sec-Fetch-Site: same-origin  Sec-Fetch-Mode: no-cors  Sec-Fetch-Dest: image  Referer: http://localhost:12345/localhost:23456/f1?auth=password  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  HTTP/1.1 400 Bad Request  Content-Type: text/html  <html><body><h1>400 Bad Request</h1></body></html>  GET /localhost:23456/endconn HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Purpose: prefetch  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  PS C:\Users\Xavie\CS4390\_HW4\Proxy> python proxy.py  GET /localhost:23456/endconn HTTP/1.1  Host: localhost:12345  Connection: keep-alive  Cache-Control: max-age=0  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  PS C:\Users\Xavie\CS4390\_HW4\Proxy> python proxy.py  GET /localhost:23456/f1?auth=password HTTP/1.1  Host: localhost:12345  Connection: keep-alive  Cache-Control: max-age=0  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-User: ?1  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  GET /localhost:23456/f1?auth=password HTTP/1.1  HTTP/1.1 200 OK  Content-Type: text/html  This is file 1!  File f1 is cached!  HTTP/1.1 200 OK  Content-Type: text/html  <html><body>This is file 1!</body></html>  GET /favicon.ico HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  sec-ch-ua-platform: "Windows"  Accept: image/avif,image/webp,image/apng,image/svg+xml,image/\*,\*/\*;q=0.8  Sec-Fetch-Site: same-origin  Sec-Fetch-Mode: no-cors  Sec-Fetch-Dest: image  Referer: http://localhost:12345/localhost:23456/f1?auth=password  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  HTTP/1.1 400 Bad Request  Content-Type: text/html  <html><body><h1>400 Bad Request</h1></body></html>  GET /localhost:23456/f1?auth=password HTTP/1.1  Host: localhost:12345  Connection: keep-alive  Cache-Control: max-age=0  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-User: ?1  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  This file is cached, sending now  HTTP/1.1 200 OK  Content-Type: text/html  <html><body><p>Here is your cached file:</p><p>This is file 1!</p></body></html>  GET /favicon.ico HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  sec-ch-ua-platform: "Windows"  Accept: image/avif,image/webp,image/apng,image/svg+xml,image/\*,\*/\*;q=0.8  Sec-Fetch-Site: same-origin  Sec-Fetch-Mode: no-cors  Sec-Fetch-Dest: image  Referer: http://localhost:12345/localhost:23456/f1?auth=password  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  HTTP/1.1 400 Bad Request  Content-Type: text/html  <html><body><h1>400 Bad Request</h1></body></html>  GET /localhost:23456/f1 HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Purpose: prefetch  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-User: ?1  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  HTTP/1.1 401 Unauthorized  Content-Type: text/html  <html><body><h1>401 Unauthorized</h1></body></html>  GET /localhost:23456/endconn HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  PS C:\Users\Xavie\CS4390\_HW4\Proxy> python proxy.py  GET /localhost:23456/f1?auth=password HTTP/1.1  Host: localhost:12345  Connection: keep-alive  Cache-Control: max-age=0  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-User: ?1  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  GET /localhost:23456/f1?auth=password HTTP/1.1  HTTP/1.1 200 OK  Content-Type: text/html  This is file 1!  File f1 is cached!  HTTP/1.1 200 OK  Content-Type: text/html  <html><body>This is file 1!</body></html>  GET /favicon.ico HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  sec-ch-ua-platform: "Windows"  Accept: image/avif,image/webp,image/apng,image/svg+xml,image/\*,\*/\*;q=0.8  Sec-Fetch-Site: same-origin  Sec-Fetch-Mode: no-cors  Sec-Fetch-Dest: image  Referer: http://localhost:12345/localhost:23456/f1?auth=password  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  HTTP/1.1 400 Bad Request  Content-Type: text/html  <html><body><h1>400 Bad Request</h1></body></html>  GET /localhost:23456/f1?auth=password HTTP/1.1  Host: localhost:12345  Connection: keep-alive  Cache-Control: max-age=0  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-User: ?1  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  This file is cached, sending now  HTTP/1.1 200 OK  Content-Type: text/html  <html><body><p>Here is your cached file:</p><p>This is file 1!</p></body></html>  GET /localhost:23456/f2?auth=password HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-User: ?1  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  GET /localhost:23456/f2?auth=password HTTP/1.1  HTTP/1.1 404 Not Found  Content-Type: text/html  <html><body><h1>404 Not Found</h1></body></html>  HTTP/1.1 404 Not Found  Content-Type: text/html  <html><body><h1>404 Not Found</h1></body></html>  GET /favicon.ico HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  sec-ch-ua-platform: "Windows"  Accept: image/avif,image/webp,image/apng,image/svg+xml,image/\*,\*/\*;q=0.8  Sec-Fetch-Site: same-origin  Sec-Fetch-Mode: no-cors  Sec-Fetch-Dest: image  Referer: http://localhost:12345/localhost:23456/f2?auth=password  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  HTTP/1.1 400 Bad Request  Content-Type: text/html  <html><body><h1>400 Bad Request</h1></body></html>  GET /localhost:23456/f3?auth=password HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-User: ?1  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  GET /localhost:23456/f3?auth=password HTTP/1.1  HTTP/1.1 200 OK  Content-Type: text/html  This is definitely the 3rd file.  File f3 is cached!  HTTP/1.1 200 OK  Content-Type: text/html  <html><body>This is definitely the 3rd file.</body></html>  GET /localhost:23456/f3?auth=password HTTP/1.1  Host: localhost:12345  Connection: keep-alive  Cache-Control: max-age=0  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  sec-ch-ua-platform: "Windows"  Upgrade-Insecure-Requests: 1  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,image/apng,\*/\*;q=0.8,application/signed-exchange;v=b3;q=0.9  Sec-Fetch-Site: none  Sec-Fetch-Mode: navigate  Sec-Fetch-User: ?1  Sec-Fetch-Dest: document  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  This file is cached, sending now  HTTP/1.1 200 OK  Content-Type: text/html  <html><body><p>Here is your cached file:</p><p>This is definitely the 3rd file.</p></body></html>  GET /favicon.ico HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  sec-ch-ua-platform: "Windows"  Accept: image/avif,image/webp,image/apng,image/svg+xml,image/\*,\*/\*;q=0.8  Sec-Fetch-Site: same-origin  Sec-Fetch-Mode: no-cors  Sec-Fetch-Dest: image  Referer: http://localhost:12345/localhost:23456/f3?auth=password  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  HTTP/1.1 400 Bad Request  Content-Type: text/html  <html><body><h1>400 Bad Request</h1></body></html>  GET /favicon.ico HTTP/1.1  Host: localhost:12345  Connection: keep-alive  sec-ch-ua: "Google Chrome";v="107", "Chromium";v="107", "Not=A?Brand";v="24"  sec-ch-ua-mobile: ?0  User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/107.0.0.0 Safari/537.36  sec-ch-ua-platform: "Windows"  Accept: image/avif,image/webp,image/apng,image/svg+xml,image/\*,\*/\*;q=0.8  Sec-Fetch-Site: same-origin  Sec-Fetch-Mode: no-cors  Sec-Fetch-Dest: image  Referer: http://localhost:12345/localhost:23456/f3?auth=password  Accept-Encoding: gzip, deflate, br  Accept-Language: en-US,en;q=0.9  HTTP/1.1 400 Bad Request  Content-Type: text/html  <html><body><h1>400 Bad Request</h1></body></html>  Server.py  PS C:\Users\Xavie\CS4390\_HW4\Proxy> python server.py  GET /localhost:23456/?auth=password HTTP/1.1  HTTP/1.1 404 Not Found  Content-Type: text/html  <html><body><h1>404 Not Found</h1></body></html>  GET /localhost:23456/f1?auth=password HTTP/1.1  HTTP/1.1 200 OK  Content-Type: text/html  This is file 1!  GET /localhost:23456/f1?auth=password HTTP/1.1  HTTP/1.1 200 OK  Content-Type: text/html  This is file 1!  GET /localhost:23456/f1?auth=password HTTP/1.1  HTTP/1.1 200 OK  Content-Type: text/html  This is file 1!  GET /localhost:23456/f2?auth=password HTTP/1.1  HTTP/1.1 404 Not Found  Content-Type: text/html  <html><body><h1>404 Not Found</h1></body></html>  GET /localhost:23456/f3?auth=password HTTP/1.1  HTTP/1.1 200 OK  Content-Type: text/html  This is definitely the 3rd file. |
| Browser screenshots before/after |
|  |
|  |
| Compile/run instructions for smtp w command line arguments, if any  python smtp.py <smtp server> <port> <From Email> <To Email> <Message> <Path to file>  Example: python smtp.py smtp.bgsu.edu 25 xgschwi@bgsu.edu xgschwi@bgsu.edu "Hi there attachment HW4" "../Homework 4.docx" |
| smtp client window  //shows the client window of the run |
| Screen shot of received email read in a browser |