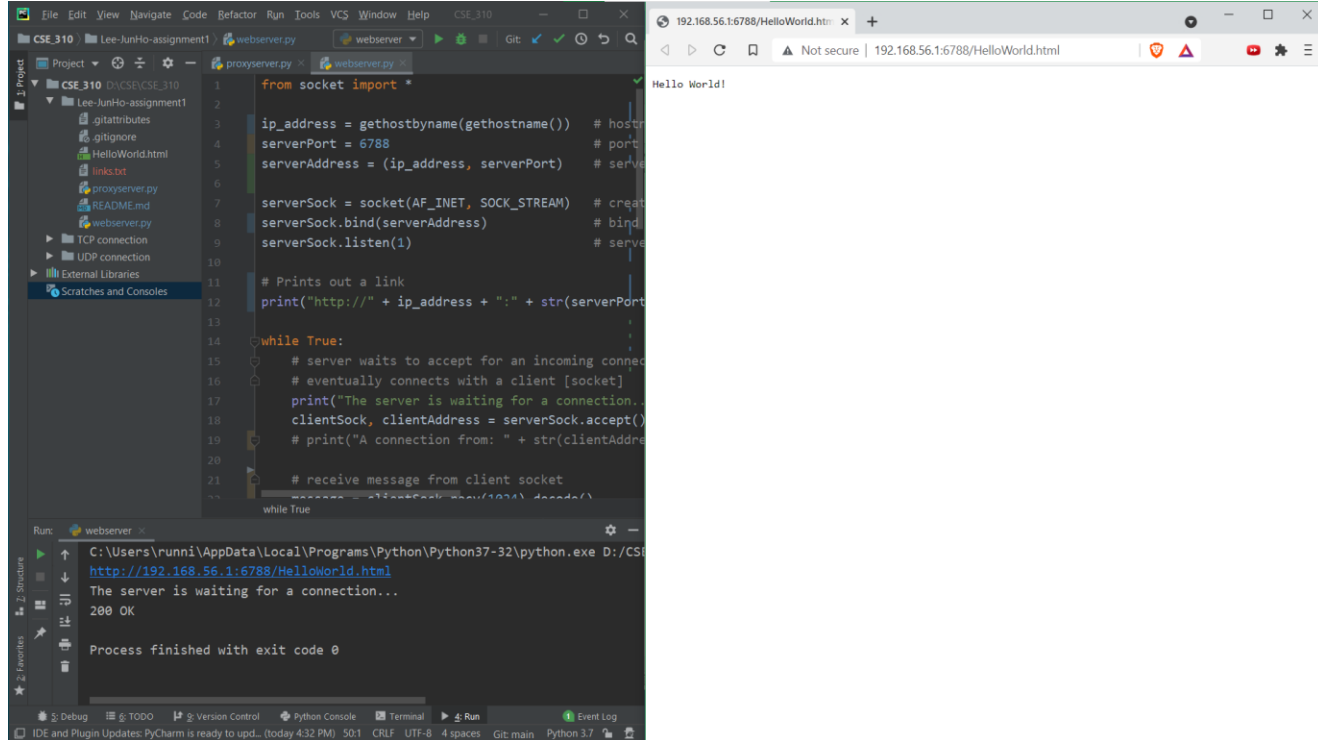
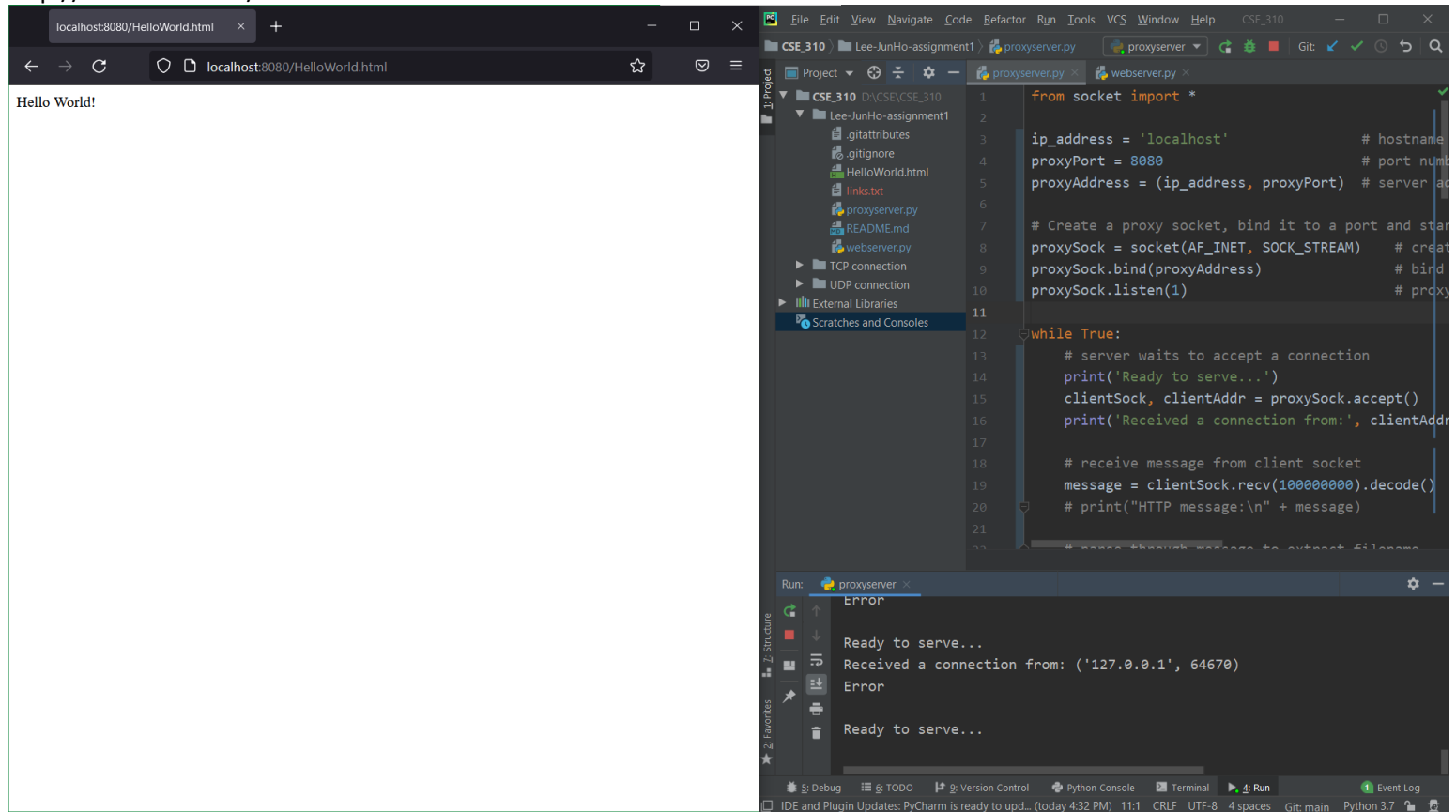


## Part A – webserver.py



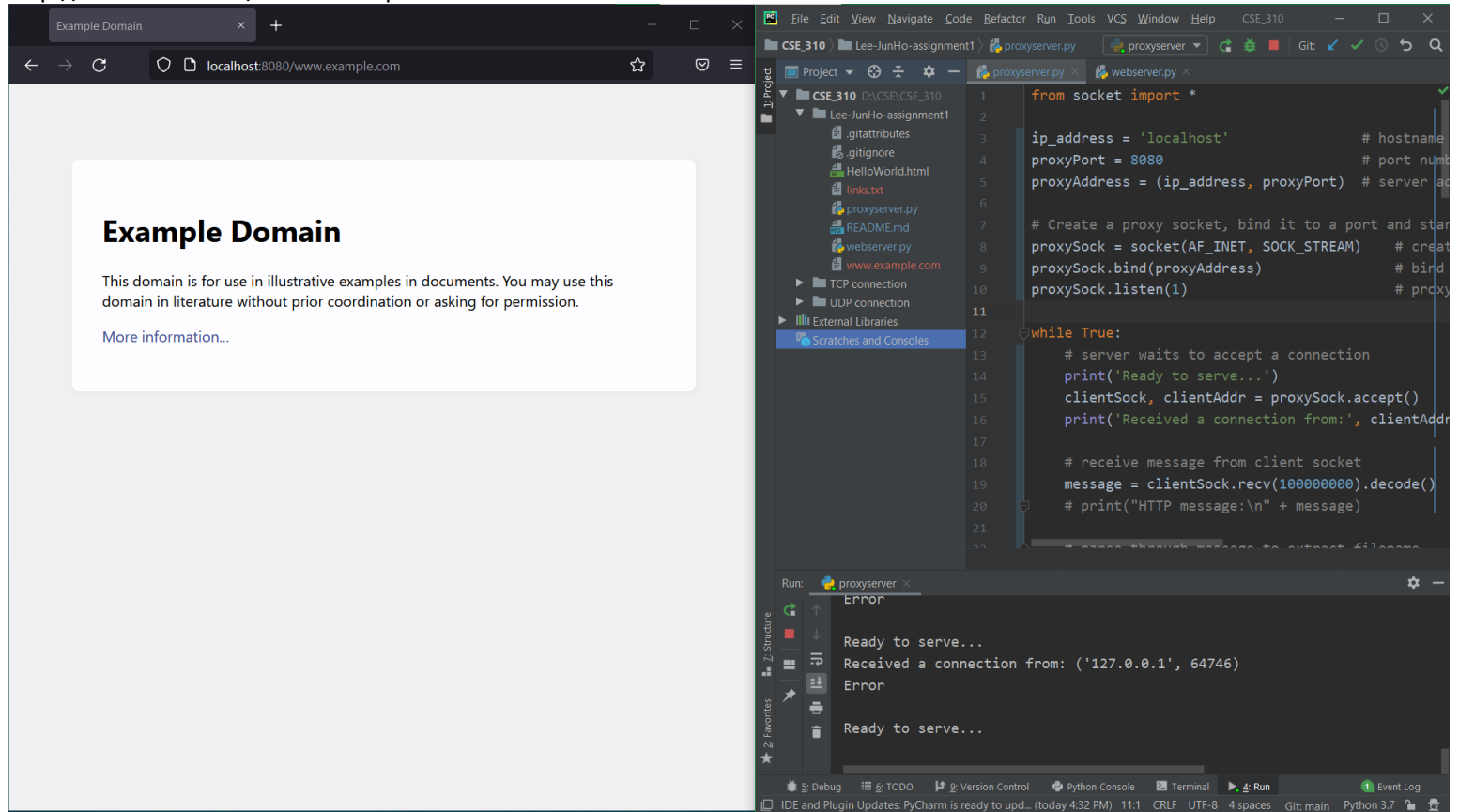
File was read and content is displayed to the web browser

## Part B – proxyserver.py `http://localhost:8080/HelloWorld.html`



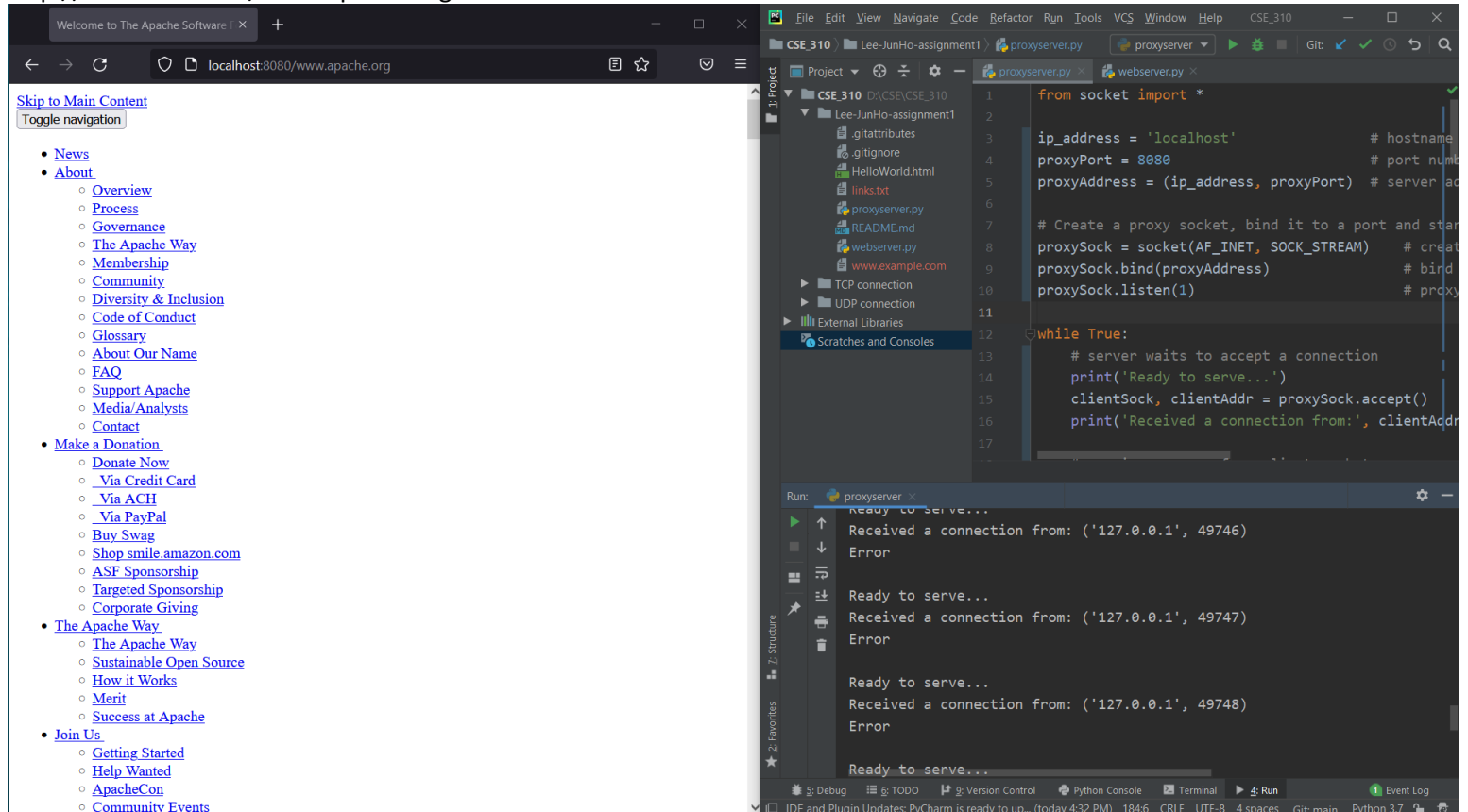
File was read and content is displayed to the web browser

http://localhost:8080/www.example.com



Content is displayed to the web browser and file was saved to cache  
On second attempt, file was read from the cache.

http://localhost:8080/www.apache.org



Content is displayed to the web browser [slowly] and file was [eventually] saved to cache

http://localhost:8080/www.google.com

The screenshot shows a web browser window on the left and a PyCharm IDE on the right. The browser displays a "Secure Connection Failed" error message for the URL `localhost:8080/www.google.com`. The error message states: "The connection to the server was reset while the page was loading." and lists two bullet points: "The page you are trying to view cannot be shown because the authenticity of the received data could not be verified." and "Please contact the website owners to inform them of this problem." A "Try Again" button is visible at the bottom right of the error message.

The PyCharm IDE on the right shows a project named "CSE\_310" with a file named `proxyserver.py` open. The code in `proxyserver.py` is as follows:

```
1 from socket import *
2
3 ip_address = 'localhost' # hostname
4 proxyPort = 8080 # port number
5 proxyAddress = (ip_address, proxyPort) # server address
6
7 # Create a proxy socket, bind it to a port and start listening
8 proxySock = socket(AF_INET, SOCK_STREAM) # create socket
9 proxySock.bind(proxyAddress) # bind to address
10 proxySock.listen(1) # listen for connections
11
12 while True:
13     # server waits to accept a connection
14     print('Ready to serve...')
15     clientSock, clientAddr = proxySock.accept()
16     print('Received a connection from:', clientAddr)
```

The Run window at the bottom of the IDE shows the output of the `proxyserver.py` script:

```
C:\Users\runni\AppData\Local\Programs\Python\Python37-32\python.exe D:/CSE310/proxyserver.py
Ready to serve...
Received a connection from: ('127.0.0.1', 50357)
200 OK
Read www.google.com from cache
Ready to serve...
```

Content was not displayed to the web browser and file was saved to cache.  
Even on the second try, file was read, but connection was not a success.