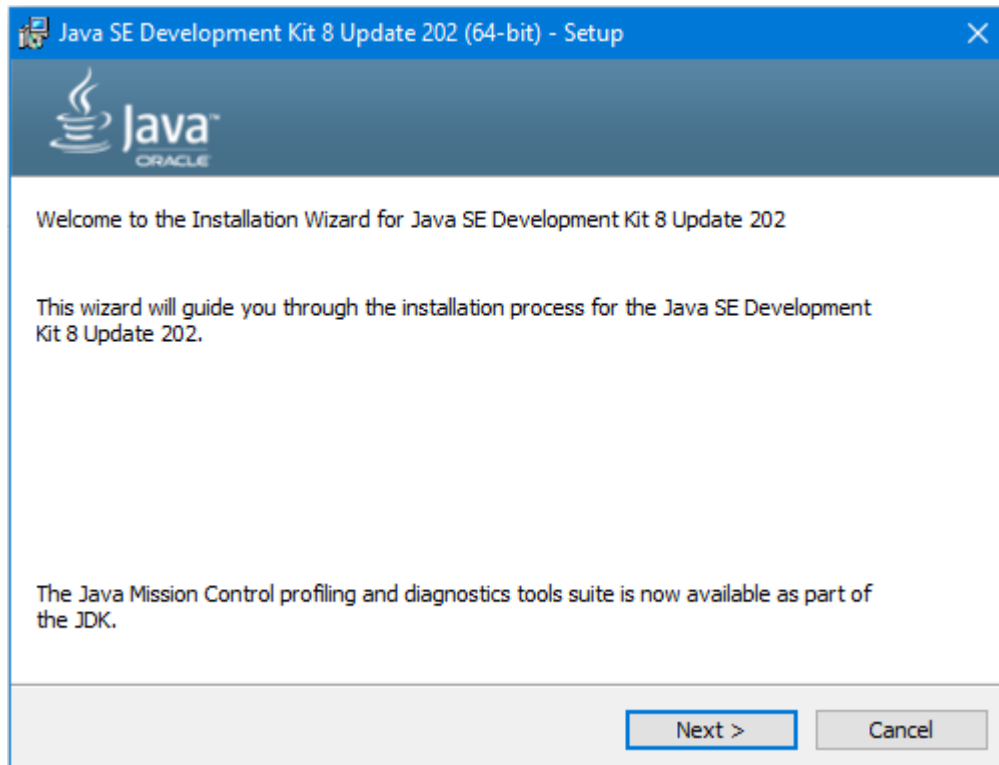
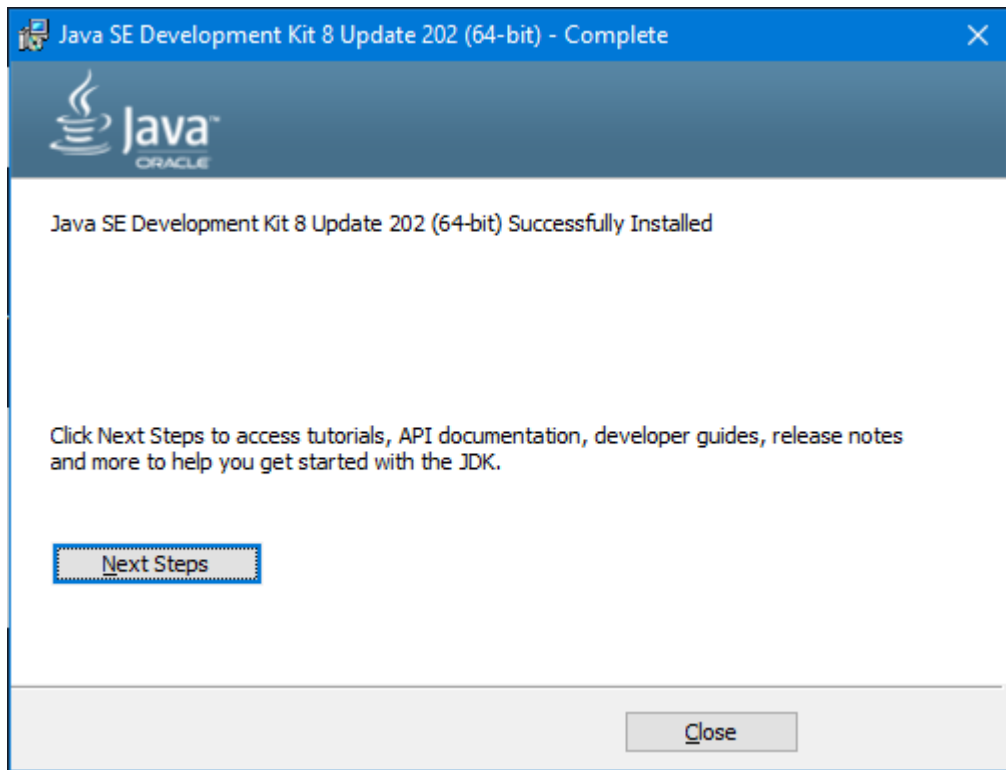


**TY B.Tech. (CSE) – II [ 2022-23 ]**  
**5CS372 : Advanced Database System Lab.**  
**Assignment No. 10**

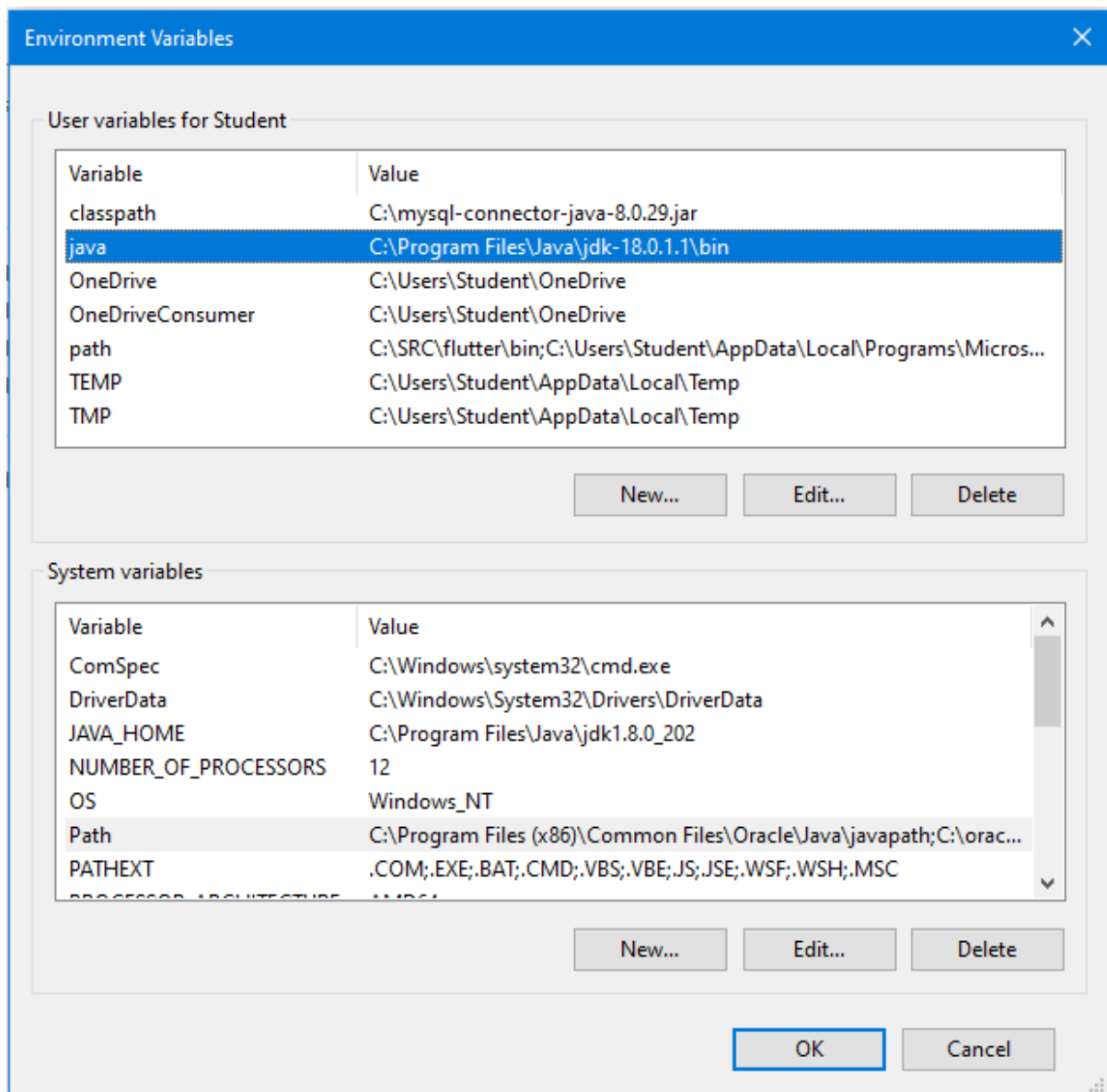
**PRN: 2020BTECS00033**  
**Name: Prathamesh Raje**

Install Java 8

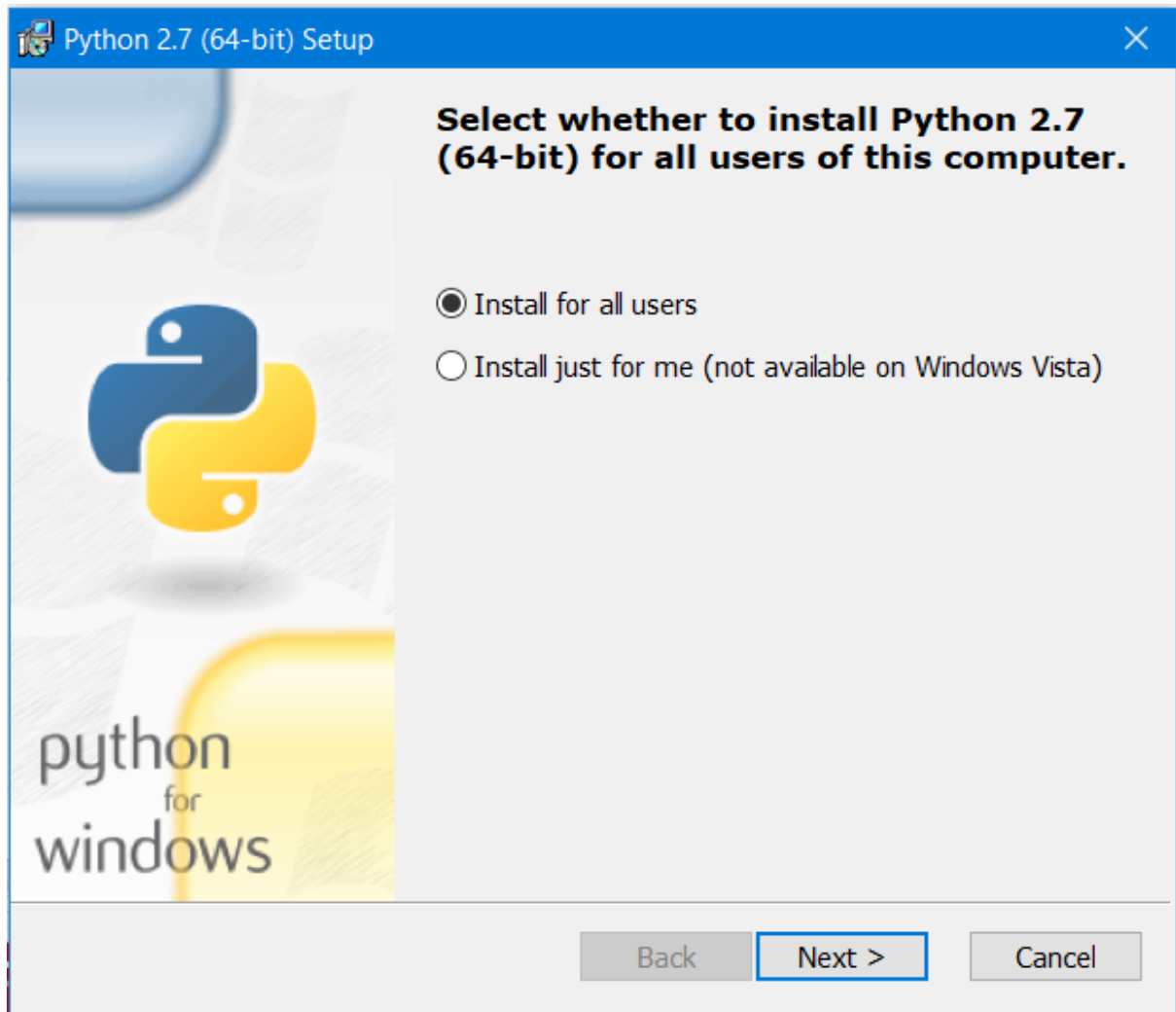




Add path to environment variables



Install Python 2.7



Install Cassandra

Name	Date modified	Type	Size
bin	4/17/2023 1:55 PM	File folder	
conf	4/17/2023 1:55 PM	File folder	
data	4/17/2023 2:10 PM	File folder	
doc	4/17/2023 1:55 PM	File folder	
interface	4/17/2023 1:55 PM	File folder	
javadoc	4/17/2023 1:55 PM	File folder	
lib	4/17/2023 1:55 PM	File folder	
logs	4/17/2023 2:10 PM	File folder	
pylib	4/17/2023 1:55 PM	File folder	
tools	4/17/2023 1:55 PM	File folder	
.toDelete	4/17/2023 2:10 PM	TODELETE File	0 KB
CASSANDRA-14092	2/11/2020 4:27 AM	Text Document	5 KB
CHANGES	2/11/2020 4:27 AM	Text Document	364 KB
LICENSE	2/11/2020 4:27 AM	Text Document	12 KB
NEWS	2/11/2020 4:27 AM	Text Document	113 KB
NOTICE	2/11/2020 4:27 AM	Text Document	3 KB

```
Microsoft Windows [Version 10.0.19045.234]
(c) Microsoft Corporation. All rights reserved.

C:\Users\Student>cd C:\Users\Student\Downloads\apache-cassandra-3.11.0\bin
C:\Users\Student\Downloads\apache-cassandra-3.11.0\bin>cassandra
WARNING! Powershell script execution unavailable.
Please use 'powershell Set-ExecutionPolicy Unrestricted'
on this user account to run cassandra with fully featured
functionality on this platform.
Starting Cassandra Server
INFO [main] 2023-04-17 14:10:22.026 YamlConfigurationLoader.java:89 - Configuration location: file:/C:/Users/Student/Downloads/apache-cassandra-3.11.0/conf/cassandra.yaml
INFO [main] 2023-04-17 14:10:22.030 Config.java:518 - Mode Configuration[allocate_tokens_for_keyspace=null; authenticator=allowAllAuthenticator; authenticator_allow_all_authenticator=allowAllAuthenticator; auto_bootstrap=true; auto_snapshot=true; back_pressure_enabled=false; back_pressure_strategy=org.apache.cassandra.net.RateBasedBackPressure[high_ratio=0.9, factor=5, flow=FAST]; batch_size_warm_threshold_in_kb=50; batch_size_warm_threshold_in_kb=50; broadcast_address=null; broadcast_rpc_address=null; buffer_pool_use_heap_if_exhausted=true; cas_contention_timeout_in_ms=1000; cdc_enabled=false; cdc_free_space_check_interval_ms=250; cdc_raw_directory=null; cdc_total_space_in_mb=0; client_encrypt_options=REQUIRE; cluster_name=test_cluster; column_index_cache_size_in_kb=2; column_index_size_in_kb=64; commit_failure_policy=stop; committing_compression=null; committing_directory=null; committing_max_compression_buffers_in_pool=3; committing_periodic_queue_size=1; committing_segment_size_in_mb=32; commitlog_sync_period_in_ms=10000; commitlog_sync_strategy=commitlog_sync_strategy_default; compact_large_partition_warning_threshold_mb=100; compaction_throughput_mb_per_sec=16; concurrent_compactors=null; concurrent_counter_writers=32; concurrent_materialized_view_writers=32; concurrent_reads=32; concurrent_replicates=32; counter_cache_keys_to_live=2147483647; counter_cache_save_period=7200; counter_cache_size_in_mb=null; counter_write_request_timeout_in_ms=5000; credentials_cache_max_entries=1000; credentials_update_interval_in_ms=1; credentials_validity_in_ms=2000; cross_node_timeout=false; data_file_directories=[Ljava.lang.String;@78047b92; disk_access_mode=auto; disk_failure_policy=stop; disk_optimization_estimate_percentile=0.95; disk_optimization_page_cross_chance=0.1; disk_optimization_strategy=dynamic_switch=true; dynamic_switch_budget_threshold=0.1; dynamic_switch_reset_interval_in_ms=600000; dynamic_switch_update_interval_in_ms=1800; enable_materialized_views=true; enable_mdl_indexes=true; enable_md5_indexed_user_defined_functions=false; enable_user_defined_functions=false; enable_user_defined_functions_threads=true; encryption_options=null; endpoint_switch_strategy=org.apache.cassandra.endpoint.SimpleSwitch; file_cache_round_up=null; file_cache_size_in_mb=null; gc_log_threshold_in_ms=200; gc_warn_threshold_in_ms=1000; hinted_handoff_disabled_datacenters=[]; hinted_handoff_enabled=true; hinted_handoff_throttle_in_kb=1024; hints_compression=null; hints_directory=null; hints_flush_period_in_ms=10000; incremental_backups=false; index_interval=null; index_summary_capacity_in_mb=null; index_summary_resize_interval_in_minutes=60; initial_token=null; inter_dc_stream_throughput_outbound_megabits_per_sec=200; inter_dc_tcp_nodelay=false; internode_authentication=null; internode_compression=dc; internode_recv_buffer_size_in_bytes=0; internode_send_buffer_size_in_bytes=0; key_cache_keys_to_save=2147483647; key_cache_save_period=14400; key_cache_size_in_mb=null; listen_address=localhost; listen_interface=null; listen_interface_prefer_ipv6=false; listen_on_broadcast_address=false; max_hint_window_in_ms=10000000; max_hints_delivery_threads=2; max_hint_file_size_in_mb=128; max_mutation_size_in_kb=null; max_streaming_retries=3; max_value_size_in_mb=256; memtable_allocation_type=heap_buffers; memtable_cleanup_threshold=null; memtable_flush_writers=4; memtable_heap_space_in_mb=null; memtable_offheap_space_in_mb=null; min_free_space_per_drive_in_mb=50; native_transport_flush_in_batches_legacy=true; native_transport_max_concurrent_connections=1; native_transport_max_concurrent_connections_per_ip=1; native_transport_max_concurrent_requests_in_bytes=1; native_transport_max_concurrent_requests_in_bytes_per_ip=1; native_transport_max_frame_size_in_mb=256; native_transport_max_negotiable_protocol_version=2147483647; native_transport_max_threads=128; native_transport_port=9042; native_transport_port_ssl=null; num_tokens=256; otc_backlog_eviction_interval_ms=200; otc_coalescing_enough_coalesced_messages=8; otc_coalescing_strategy=org.apache.cassandra.dht.NumericPartitioner; permissions_cache_max_entries=1000; permissions_update_interval_in_ms=1; permissions_validity_in_ms=2000; pli_convict_threshold=0; prepared_statements_cache_size_mb=null; range_request_timeout_in_ms=10000; read_request_timeout_in_ms=5000; repair_session_max_tree_depth=18; request_scheduler=org.apache.cassandra.scheduler.NoScheduler; request_scheduler_id=null; request_scheduler_options=null; request_timeout_in_ms=10000; role_manager=cassandraRoleManager; roles_cache_max_entries=1000; roles_update_interval_in_ms=1; roles_validity_in_ms=2000; row_cache_class_name=org.apache.cassandra.cache.OHCProvider; row_cache_keys_to_save=2147483647; row_cache_save_period=60; row_cache_size_in_mb=0; rpc_address=localhost; rpc_interface=null; rpc_interface_prefer_ipv6=false; rpc_keepalive=true; rpc_listener_backlog=0; rpc_max_threads=2147483647; rpc_min_threads=16; rpc_port=9100; rpc_recv_buffer_size_in_bytes=null; rpc_send_buffer_size_in_bytes=null; rpc_server_type=sync; saved_caches_directory=null; seed_provider=org.apache.cassandra.locator.SimpleSeedProvider[seeds=[127.0.0.1]]; server_encryption_options=DISABLED; slow_query_log_timeout_in_ms=500; snapshot_before_compaction=false; ssl_storage_port=7001; ssl_store_preemptive_open_interval_in_ms=50; start_native_transport=true; start_rpc=false; storage_port=7000; stream_throughput_outbound_megabits_per_sec=200; streaming_keep_alive_period_in_secs=300; streaming_socket_timeout_in_ms=86400000; thrift_framed_transport_size_in_mb=15; thrift_max_message_length_in_mb=16; thrift_prepared_statements_cache_size_mb=null; tombstone_failure_threshold=10000; tombstone_warn_threshold=1000; trace_type_query=ALL; truncate_request_timeout_in_ms=60000; unlogged_batch_cross_partitions_warn_threshold=10; user_defined_function_fail_timeout=500; user_function_timeout_policy=die; windows_timer_interval=1; write_request_timeout_in_ms=2000]
INFO [main] 2023-04-17 14:10:22.038 DatabaseDescriptor.java:381 - Global memtable off-heap threshold is enabled at 4096M
INFO [main] 2023-04-17 14:10:22.040 DatabaseDescriptor.java:443 - Global memtable off-heap threshold is enabled at 4096M
INFO [main] 2023-04-17 14:10:22.043 DatabaseDescriptor.java:122 - Initialized back-pressure with high_ratio=0.9, factor=5, flow=FAST, window_size=2000.
INFO [main] 2023-04-17 14:10:22.045 DatabaseDescriptor.java:773 - Back-pressure is disabled with strategy org.apache.cassandra.net.RateBasedBackPressure[high_ratio=0.9, factor=5, flow=FAST].
INFO [main] 2023-04-17 14:10:22.050 JMXServerUtils.java:246 - Configured JMX server at: service:jmx:rmi:///127.0.0.1/jmxrmi/;/127.0.0.1:7199/jmxrmi
INFO [main] 2023-04-17 14:10:22.071 CassandraDaemon.java:489 - Hostname: CSC-MINICCF-2655
INFO [main] 2023-04-17 14:10:22.172 CassandraDaemon.java:496 - JVM vendor/version: Java HotSpot(TM) 64-Bit Server VM/1.8.0_202
INFO [main] 2023-04-17 14:10:22.173 CassandraDaemon.java:497 - Heap size: 1.023GiB/1.932GiB
INFO [main] 2023-04-17 14:10:22.180 CassandraDaemon.java:502 - Code Cache Non-Heap memory: Init = 2555904(240K) used = 4046688(483K) committed = 4980736(4864K) max = 251658240(245760K)
INFO [main] 2023-04-17 14:10:22.181 CassandraDaemon.java:502 - Metaspace Non-Heap memory: Init = 0(0K) used = 19725408(1923K) committed = 20447232(19568K) max = -1(-1K)
INFO [main] 2023-04-17 14:10:22.181 CassandraDaemon.java:502 - Compressed Class Space Non-Heap memory: Init = 0(0K) used = 2441502(238K) committed = 2621440(2560K) max = 1073741824(1048576K)
INFO [main] 2023-04-17 14:10:22.182 CassandraDaemon.java:502 - Par Eden Space Heap memory: Init = 572653568(559232K) used = 137493368(134278K) committed = 572653568(559232K) max = 572653568(559232K)
INFO [main] 2023-04-17 14:10:22.182 CassandraDaemon.java:502 - Par Survivor Space Heap memory: Init = 71555312(6880K) used = 0(0K) committed = 71555312(6880K) max = 71555312(6880K)
INFO [main] 2023-04-17 14:10:22.182 CassandraDaemon.java:502 - CMS Old Gen Heap memory: Init = 1431699456(1398144K) used = 0(0K) committed = 1431699456(1398144K) max = 1431699456(1398144K)
INFO [main] 2023-04-17 14:10:22.183 CassandraDaemon.java:504 - Classpath: C:\Users\Student\Downloads\apache-cassandra-3.11.0\conf\C:\Users\Student\Downloads\apache-cassandra-3.11.0\lib\airline-0.6.jar;C:\Users\Student\Downloads\apache-c
```

```
hosts - Notepad
File Edit Format View Help
# Copyright (c) 1993-2009 Microsoft Corp.
#
# This is a sample HOSTS file used by Microsoft TCP/IP for Windows.
#
# This file contains the mappings of IP addresses to host names. Each
# entry should be kept on an individual line. The IP address should
# be placed in the first column followed by the corresponding host name.
# The IP address and the host name should be separated by at least one
# space.
#
# Additionally, comments (such as these) may be inserted on individual
# lines or following the machine name denoted by a '#' symbol.
#
# For example:
#
#       102.54.94.97       rhino.acme.com      # source server
#       38.25.63.10       x.acme.com         # x client host

# localhost name resolution is handled within DNS itself.
#       127.0.0.1         localhost
#       ::1               localhost

127.0.0.1 127.0.0.2
127.0.0.1 127.0.0.3 |
127.0.0.1 127.0.0.4
```

The screenshot shows a Windows File Explorer window with the address bar set to 'This PC > Local Disk (C:) > opt > cassandra > 1 > conf'. The left sidebar shows the 'conf' folder selected. The main pane displays a list of files and folders. A Notepad window titled 'cassandra - Notepad' is open, showing the contents of the 'cassandra' file. The file is a Yaml Source File and contains the following configuration:

```
cluster_name: 'cse2024t5'

data_file_directories:
  - /opt/cassandra/1/data

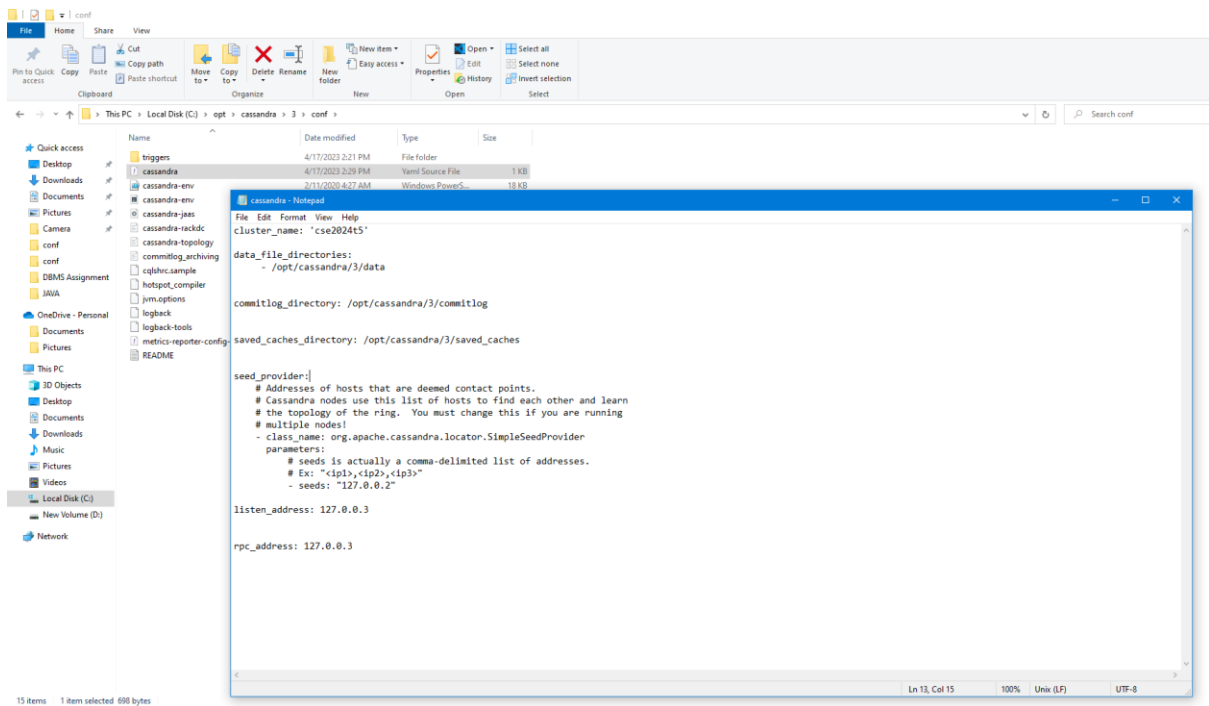
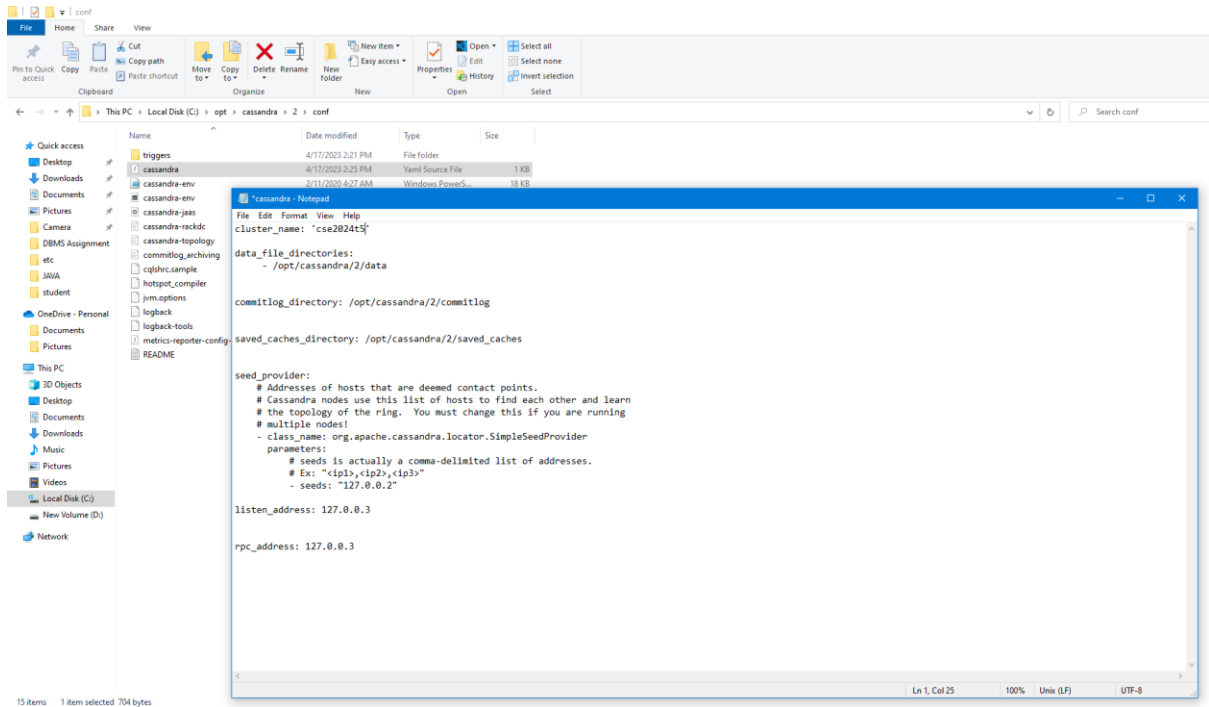
commitlog_directory: /opt/cassandra/1/commitlog

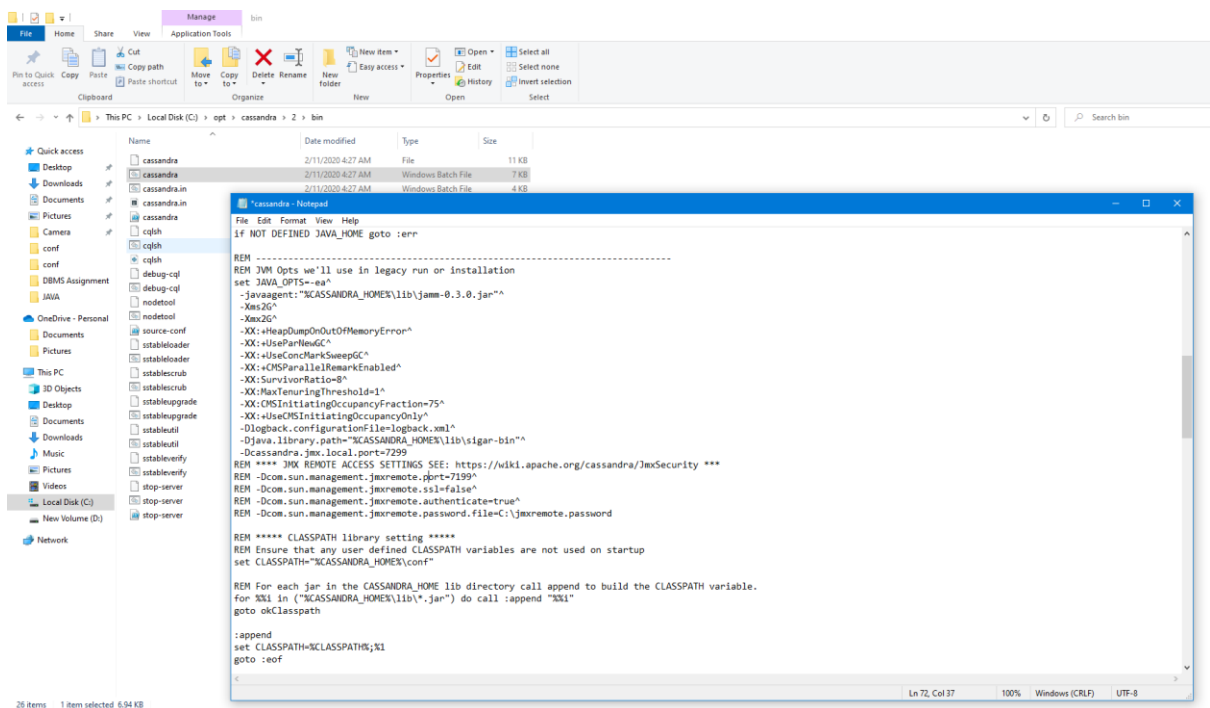
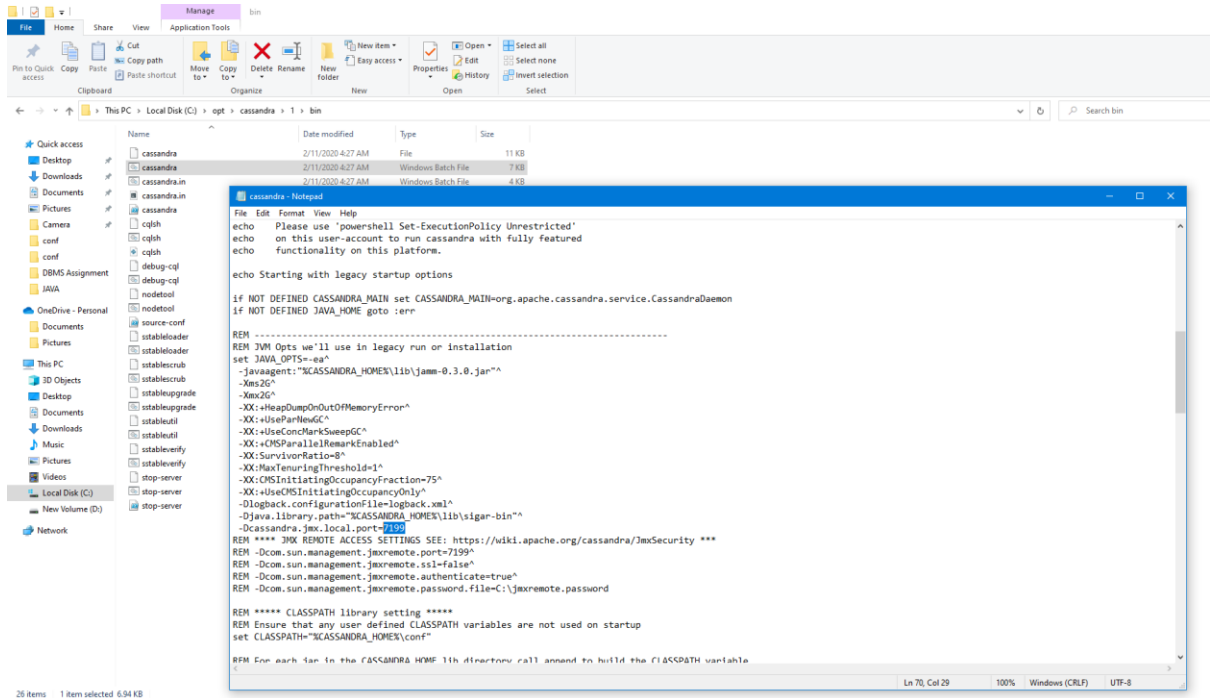
saved_caches_directory: /opt/cassandra/1/saved_caches

seed_provider:
  # Addresses of hosts that are deemed contact points.
  # Cassandra nodes use this list of hosts to find each other and learn
  # the topology of the ring. You must change this if you are running
  # multiple nodes!
  - class_name: org.apache.cassandra.locator.SimpleSeedProvider
    parameters:
      # seeds is actually a comma-delimited list of addresses.
      # Ex: "<ip1>,<ip2>,<ip3>"
      - seeds: "127.0.0.2"

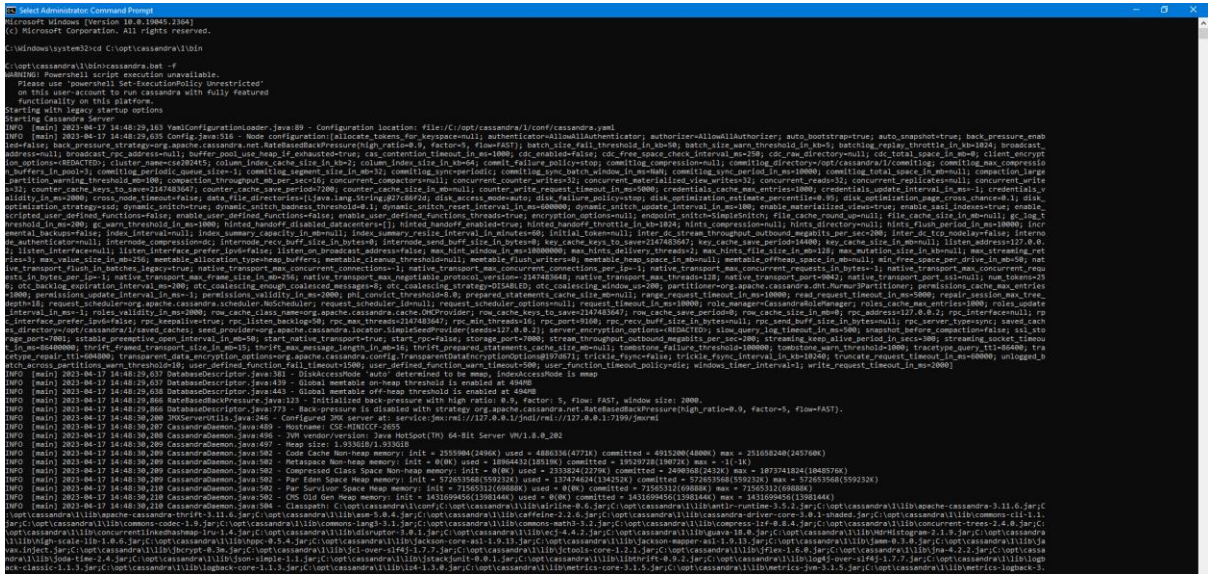
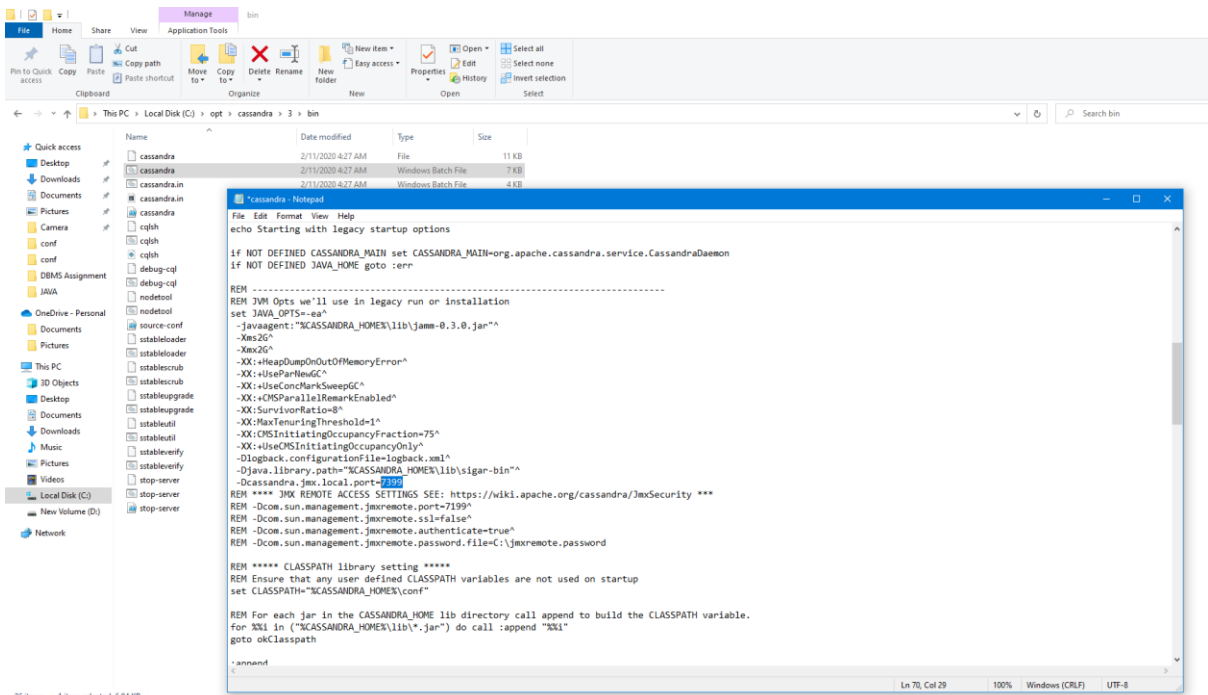
listen_address: 127.0.0.2

rpc_address: 127.0.0.2
```











Y

```
Administrator: Command Prompt
C:\opt\cassandra\2\bin>cd C:\opt\cassandra\1\bin
C:\opt\cassandra\1\bin>nodetool.bat status
Datacenter: datacenter1
=====
Status=Up/Down
// State=Normal/Leaving/Joining/Moving
-- Address      Load      Tokens     Oms (effective)  Host ID                               Rack
UN 127.0.0.2     85.94 KiB 256        68.5%            4935b439-7ee9-4b42-adc1-ecafa5ac5d62 rack1
UN 127.0.0.3     161.95 KiB 256        64.4%            c4e5e484-b49b-4cf7-afb3-678a2c84228c rack1
UN 127.0.0.4     182.96 KiB 256        67.1%            2f58104e-48c7-463e-a222-4637f67630e2 rack1

C:\opt\cassandra\1\bin>cd C:\opt\cassandra\2\bin
C:\opt\cassandra\2\bin>nodetool.bat status
Datacenter: datacenter1
=====
Status=Up/Down
// State=Normal/Leaving/Joining/Moving
-- Address      Load      Tokens     Oms (effective)  Host ID                               Rack
UN 127.0.0.2     85.94 KiB 256        68.5%            4935b439-7ee9-4b42-adc1-ecafa5ac5d62 rack1
UN 127.0.0.3     161.95 KiB 256        64.4%            c4e5e484-b49b-4cf7-afb3-678a2c84228c rack1
UN 127.0.0.4     182.96 KiB 256        67.1%            2f58104e-48c7-463e-a222-4637f67630e2 rack1

C:\opt\cassandra\2\bin>cd C:\opt\cassandra\3\bin
C:\opt\cassandra\3\bin>nodetool.bat status
Datacenter: datacenter1
=====
Status=Up/Down
// State=Normal/Leaving/Joining/Moving
-- Address      Load      Tokens     Oms (effective)  Host ID                               Rack
UN 127.0.0.2     85.94 KiB 256        68.5%            4935b439-7ee9-4b42-adc1-ecafa5ac5d62 rack1
UN 127.0.0.3     161.95 KiB 256        64.4%            c4e5e484-b49b-4cf7-afb3-678a2c84228c rack1
UN 127.0.0.4     182.96 KiB 256        67.1%            2f58104e-48c7-463e-a222-4637f67630e2 rack1

C:\opt\cassandra\3\bin>
```