Assignment 1_ProblemStatement2 (YARN COMMANDS)

1. Run MapReduce Program and capture the application Id of the job.

```
127 login: march8lab23
march8lab23@127.0.0.1's password:
Last login: Wed Jul 26 12:20:30 2023 from localhost
[march8lab23@ip-10-1-1-204 ~]$ yarn application --list
WARNING: YARN_OPTS has been replaced by HADOOP_OPTS. Using value of YARN_OPTS.
23/07/26 12:46:46 INFO client.RMProxy: Connecting to ResourceManager at ip-10-1-1-204.ap-south-1.compute.internal/10.1.1.204:8032
Total number of applications (application-types: [], states: [SUBMITTED, ACCEPTED, RUNNING] and tags: []):1
                Application-Id     Application-Name     Application-Type     User          Queue              State
     Final-State         Progress                      Tracking-URL
application_1685754149182_7570                Spark shell               SPARK    dhinkumart58edu root.default         RUNNING
     UNDEFINED            10% http://ip-10-1-1-204.ap-south-1.compute.internal:18088/history/application_1685754149182_7570/1
[march8lab23@ip-10-1-1-204 ~]$ yarn application --list
WARNING: YARN_OPTS has been replaced by HADOOP_OPTS. Using value of YARN_OPTS.
23/07/26 12:47:29 INFO client.RMProxy: Connecting to ResourceManager at ip-10-1-1-204.ap-south-1.compute.internal/10.1.1.204:8032
Total number of applications (application-types: [], states: [SUBMITTED, ACCEPTED, RUNNING] and tags: []):2
                Application-Id     Application-Name     Application-Type     User          Queue              State
     Final-State         Progress                      Tracking-URL
application_1685754149182_7606                word count               MAPREDUCE   march8lab23    root.default       ACCEPTED
     UNDEFINED            0%                              N/A
application_1685754149182_7570                Spark shell               SPARK    dhinkumart58edu root.default         RUNNING
     UNDEFINED            10% http://ip-10-1-1-204.ap-south-1.compute.internal:18088/history/application_1685754149182_7570/1
[march8lab23@ip-10-1-1-204 ~]$
```

2. Re-run the MapReduce program and kill the application using the yarn command.

```
        at java.security.AccessController.doPrivileged(Native Method)
        at javax.security.auth.Subject.doAs(Subject.java:422)
        at org.apache.hadoop.security.UserGroupInformation.doAs(UserGroupInformation.java:1875)
        at org.apache.hadoop.ipc.Server$Handler.run(Server.java:2680)

        at org.apache.hadoop.ipc.Client.getRpcResponse(Client.java:1499)
        at org.apache.hadoop.ipc.Client.call(Client.java:1445)
        at org.apache.hadoop.ipc.Client.call(Client.java:1355)
        at org.apache.hadoop.ipc.ProtobufRpcEngine$Invoker.invoke(ProtobufRpcEngine.java:228)
        at org.apache.hadoop.ipc.ProtobufRpcEngine$Invoker.invoke(ProtobufRpcEngine.java:116)
        at com.sun.proxy.$Proxy13.getBlockLocations(Unknown Source)
        at org.apache.hadoop.hdfs.protocolPB.ClientNamenodeProtocolTranslatorPB.getBlockLocations(ClientNamenodeProtocolTranslatorPB.java:30
)
        at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)
        at sun.reflect.NativeMethodAccessorImpl.invoke(NativeMethodAccessorImpl.java:62)
        at sun.reflect.DelegatingMethodAccessorImpl.invoke(DelegatingMethodAccessorImpl.java:43)
        at java.lang.reflect.Method.invoke(Method.java:498)
        at org.apache.hadoop.io.retry.RetryInvocationHandler.invokeMethod(RetryInvocationHandler.java:422)
        at org.apache.hadoop.io.retry.RetryInvocationHandler$Call.invokeMethod(RetryInvocationHandler.java:165)
        at org.apache.hadoop.io.retry.RetryInvocationHandler$Call.invoke(RetryInvocationHandler.java:157)
        at org.apache.hadoop.io.retry.RetryInvocationHandler$Call.invokeOnce(RetryInvocationHandler.java:95)
        at org.apache.hadoop.io.retry.RetryInvocationHandler.invoke(RetryInvocationHandler.java:359)
        at com.sun.proxy.$Proxy14.getBlockLocations(Unknown Source)
        at org.apache.hadoop.hdfs.DFSClient.callGetBlockLocations(DFSClient.java:853)
        ... 17 more

23/07/26 12:52:18 INFO mapreduce.Job:  map 0% reduce 0%
23/07/26 12:52:18 INFO mapreduce.Job: Job job_1685754149182_7609 failed with state KILLED due to: Application application_1685754149182_7609
 was killed by user march8lab23 at 10.1.1.204
23/07/26 12:52:18 INFO mapreduce.Job: Counters: 0
[march8lab23@ip-10-1-1-204 jars]$
```

3. List all the applications which are RUNNING state

```
WARNING: YARN_OPTS has been replaced by HADOOP_OPTS. Using value of YARN_OPTS.
23/07/26 12:50:29 INFO client.RMProxy: Connecting to ResourceManager at ip-10-1-1-204.ap-south-1.compute.internal/10.1.1.204:8032
Exception in thread "main" java.lang.IllegalArgumentException: Invalid ApplicationId prefix: _. The valid ApplicationId should start with pr
efix application
        at org.apache.hadoop.yarn.api.records.ApplicationId.fromString(ApplicationId.java:112)
        at org.apache.hadoop.yarn.client.cli.ApplicationCLI.killApplication(ApplicationCLI.java:605)
        at org.apache.hadoop.yarn.client.cli.ApplicationCLI.killApplication(ApplicationCLI.java:585)
        at org.apache.hadoop.yarn.client.cli.ApplicationCLI.run(ApplicationCLI.java:293)
        at org.apache.hadoop.util.ToolRunner.run(ToolRunner.java:76)
        at org.apache.hadoop.util.ToolRunner.run(ToolRunner.java:90)
        at org.apache.hadoop.yarn.client.cli.ApplicationCLI.main(ApplicationCLI.java:102)
[march8lab23@ip-10-1-1-204 ~]$ yarn application --kill application_1685754149182_7608
WARNING: YARN_OPTS has been replaced by HADOOP_OPTS. Using value of YARN_OPTS.
23/07/26 12:50:41 INFO client.RMProxy: Connecting to ResourceManager at ip-10-1-1-204.ap-south-1.compute.internal/10.1.1.204:8032
Application application_1685754149182_7608 has already finished
[march8lab23@ip-10-1-1-204 ~]$ yarn application --kill application_1685754149182_7609
WARNING: YARN_OPTS has been replaced by HADOOP_OPTS. Using value of YARN_OPTS.
23/07/26 12:52:17 INFO client.RMProxy: Connecting to ResourceManager at ip-10-1-1-204.ap-south-1.compute.internal/10.1.1.204:8032
Killing application application_1685754149182_7609
23/07/26 12:52:17 INFO impl.YarnClientImpl: Killed application application_1685754149182_7609
[march8lab23@ip-10-1-1-204 ~]$ yarn application --list --appStates RUNNING
WARNING: YARN_OPTS has been replaced by HADOOP_OPTS. Using value of YARN_OPTS.
23/07/26 12:55:14 INFO client.RMProxy: Connecting to ResourceManager at ip-10-1-1-204.ap-south-1.compute.internal/10.1.1.204:8032
Total number of applications (application-types: [], states: [RUNNING] and tags: []):2
                Application-Id     Application-Name     Application-Type     User          Queue              State
     Final-State         Progress                      Tracking-URL
application_1685754149182_7612                word count               MAPREDUCE   march8lab23    root.default       RUNNING
     UNDEFINED            5% http://ip-10-1-2-175.ap-south-1.compute.internal:38253
application_1685754149182_7570                Spark shell               SPARK    dhinkumart58edu root.default         RUNNING
     UNDEFINED            10% http://ip-10-1-1-204.ap-south-1.compute.internal:18088/history/application_1685754149182_7570/1
[march8lab23@ip-10-1-1-204 ~]$
```

4. View the logs of any of the jobs which are already completed.

```
End of LogType:stdout
***********************************************************************

End of LogType:prelaunch.err
************************************************************************

Container: container_1685754149182_7612_01_000022 on ip-10-1-2-40.ap-south-1.compute.internal_8041
LogAggregationType: AGGREGATED
================================================================================================
LogType:prelaunch.out
LogLastModifiedTime:Wed Jul 26 12:56:03 +0000 2023
LogLength:70
LogContents:
Setting up env variables
Setting up job resources
Launching container

End of LogType:prelaunch.out
************************************************************************

End of LogType:stderr
**********************************************************************

End of LogType:stdout
**********************************************************************

[march8lab23@ip-10-1-1-204 ~]$
```