ece448s25@iit:~/iot_ece448$ gradle grade_p4

> Task :grade_p4

2025-04-13 21:26:23,168 INFO MqttCtl grader/iot_hub: tcp://127.0.0.1 connected

2025-04-13 21:26:23,173 INFO JHTTP: accepting connections on port 8080

WARNING: An illegal reflective access operation has occurred

WARNING: Illegal reflective access by org.eclipse.paho.client.mqttv3.internal.FileLock (file:/home/ece448s25/.gradle/caches/modules-2/files-2.1/org.eclipse.paho/org.eclipse.paho.client.mqttv3/1.2.2/462e896b7dc5d123d1131241f6fe73d9d9ba5022/org.eclipse.paho.client.mqttv3-1.2.2.jar) to method sun.nio.ch.FileLockImpl.release()

WARNING: Please consider reporting this to the maintainers of org.eclipse.paho.client.mqttv3.internal.FileLock

WARNING: Use --illegal-access=warn to enable warnings of further illegal reflective access operations

WARNING: All illegal access operations will be denied in a future release

2025-04-13 21:26:23,485 INFO Delivery complete for token: org.eclipse.paho.client.mqttv3.MqttDeliveryToken@1a5a4e19

2025-04-13 21:26:23,488 INFO Delivery complete for token: org.eclipse.paho.client.mqttv3.MqttDeliveryToken@3e2055d6

2025-04-13 21:26:23,489 INFO Delivery complete for token: org.eclipse.paho.client.mqttv3.MqttDeliveryToken@50029372

2025-04-13 21:26:23,490 INFO Delivery complete for token: org.eclipse.paho.client.mqttv3.MqttDeliveryToken@e3b3b2f

2025-04-13 21:26:23,490 INFO Delivery complete for token: org.eclipse.paho.client.mqttv3.MqttDeliveryToken@50f6ac94

2025-04-13 21:26:23,490 INFO Delivery complete for token: org.eclipse.paho.client.mqttv3.MqttDeliveryToken@6cc4cdb9

2025-04-13 21:26:23,491 INFO JHTTP: accepting connections on port 8081

2025-04-13 21:26:23,802 INFO Connection Lost: Connection lost

2025-04-13 21:26:23,802 ERROR Failed to publish d state off

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

    at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

    at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

    at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

    at ece448.iot_sim.Main.lambdanew0(Main.java:82)

    at ece448.iot_sim.PlugSim.addObserver(PlugSim.java:38)

    at ece448.iot_sim.Main.<init>(Main.java:80)

    at ece448.grading.GradeP4.main(GradeP4.java:51)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-2.msg (No such file or directory)

    at java.base/java.io.FileOutputStream.open0(Native Method)

    at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

    ... 9 common frames omitted

2025-04-13 21:26:23,803 ERROR Failed to publish d power 0.000

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

    at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

    at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

    at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

    at ece448.iot_sim.Main.lambdanew0(Main.java:82)

    at ece448.iot_sim.PlugSim.addObserver(PlugSim.java:39)

    at ece448.iot_sim.Main.<init>(Main.java:80)

    at ece448.grading.GradeP4.main(GradeP4.java:51)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-3.msg (No such file or directory)

    at java.base/java.io.FileOutputStream.open0(Native Method)

    at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

    ... 9 common frames omitted

2025-04-13 21:26:23,803 ERROR Failed to publish e state off

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

        at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

        at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

        at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

        at ece448.iot_sim.Main.lambdanew0(Main.java:82)

        at ece448.iot_sim.PlugSim.addObserver(PlugSim.java:38)

        at ece448.iot_sim.Main.<init>(Main.java:80)

        at ece448.grading.GradeP4.main(GradeP4.java:51)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-4.msg (No such file or directory)

        at java.base/java.io.FileOutputStream.open0(Native Method)

        at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

        ... 9 common frames omitted

2025-04-13 21:26:23,803 ERROR Failed to publish e power 0.000

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

        at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

        at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

        at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

        at ece448.iot_sim.Main.lambdanew0(Main.java:82)

        at ece448.iot_sim.PlugSim.addObserver(PlugSim.java:39)

        at ece448.iot_sim.Main.<init>(Main.java:80)

        at ece448.grading.GradeP4.main(GradeP4.java:51)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-5.msg (No such file or directory)

        at java.base/java.io.FileOutputStream.open0(Native Method)

        at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

        ... 9 common frames omitted

2025-04-13 21:26:23,803 ERROR Failed to publish f state off

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

        at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

        at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

        at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

        at ece448.iot_sim.Main.lambdanew0(Main.java:82)

        at ece448.iot_sim.PlugSim.addObserver(PlugSim.java:38)

        at ece448.iot_sim.Main.<init>(Main.java:80)

        at ece448.grading.GradeP4.main(GradeP4.java:51)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-6.msg (No such file or directory)

        at java.base/java.io.FileOutputStream.open0(Native Method)

        at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

... 9 common frames omitted

2025-04-13 21:26:23,804 ERROR Failed to publish f power 0.000

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

    at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

    at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

    at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

    at ece448.iot_sim.Main.lambdanew0(Main.java:82)

    at ece448.iot_sim.PlugSim.addObserver(PlugSim.java:39)

    at ece448.iot_sim.Main.<init>(Main.java:80)

    at ece448.grading.GradeP4.main(GradeP4.java:51)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-7.msg (No such file or directory)

    at java.base/java.io.FileOutputStream.open0(Native Method)

    at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

    ... 9 common frames omitted

2025-04-13 21:26:23,804 ERROR Failed to publish g state off

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

    at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

    at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

    at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

    at ece448.iot_sim.Main.lambdanew0(Main.java:82)

    at ece448.iot_sim.PlugSim.addObserver(PlugSim.java:38)

    at ece448.iot_sim.Main.<init>(Main.java:80)

    at ece448.grading.GradeP4.main(GradeP4.java:51)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-8.msg (No such file or directory)

    at java.base/java.io.FileOutputStream.open0(Native Method)

    at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

    ... 9 common frames omitted

2025-04-13 21:26:23,805 ERROR Failed to publish g power 0.000

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

    at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

    at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

    at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

    at ece448.iot_sim.Main.lambdanew0(Main.java:82)

    at ece448.iot_sim.PlugSim.addObserver(PlugSim.java:39)

    at ece448.iot_sim.Main.<init>(Main.java:80)

    at ece448.grading.GradeP4.main(GradeP4.java:51)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-9.msg (No such file or directory)

    at java.base/java.io.FileOutputStream.open0(Native Method)

    at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

... 9 common frames omitted


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 \\/  ___)| |_)| | | | | || (_| |  ) ) ) )
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 =========|_|==============|___/=/_/_/_/
 :: Spring Boot ::        (v1.5.22.RELEASE)
```


2025-04-13 21:26:23,964 INFO Starting GradeP4 on iit with PID 136622 (/home/ece448s25/iot_ece448/build/classes/java/main started by ece448s25 in /home/ece448s25/iot_ece448)

2025-04-13 21:26:23,965 INFO No active profile set, falling back to default profiles: default

2025-04-13 21:26:23,985 INFO Refreshing org.springframework.boot.context.embedded.AnnotationConfigEmbeddedWebApplicationContext@a776e: startup date [Sun Apr 13 21:26:23 CDT 2025]; root of context hierarchy

2025-04-13 21:26:24,093 INFO HV000001: Hibernate Validator 5.3.6.Final

2025-04-13 21:26:24,308 INFO Tomcat initialized with port(s): 8088 (http)

2025-04-13 21:26:24,314 INFO Initializing ProtocolHandler ["http-nio-8088"]

2025-04-13 21:26:24,321 INFO Starting service [Tomcat]

2025-04-13 21:26:24,321 INFO Starting Servlet Engine: Apache Tomcat/8.5.43

2025-04-13 21:26:24,380 INFO Initializing Spring embedded WebApplicationContext

2025-04-13 21:26:24,380 INFO Root WebApplicationContext: initialization completed in 400 ms

2025-04-13 21:26:24,435 INFO Mapping servlet: 'dispatcherServlet' to [/]

2025-04-13 21:26:24,436 INFO Mapping filter: 'characterEncodingFilter' to: [/*]

2025-04-13 21:26:24,438 INFO Mapping filter: 'hiddenHttpMethodFilter' to: [/*]

2025-04-13 21:26:24,438 INFO Mapping filter: 'httpPutFormContentFilter' to: [/*]

2025-04-13 21:26:24,438 INFO Mapping filter: 'requestContextFilter' to: [/*]

2025-04-13 21:26:24,833 INFO Looking for @ControllerAdvice: org.springframework.boot.context.embedded.AnnotationConfigEmbeddedWebApplicationContext@a776e: startup date [Sun Apr 13 21:26:23 CDT 2025]; root of context hierarchy

2025-04-13 21:26:24,850 INFO Mapped "{[/api/plugs],methods=[GET]}" onto public java.util.List<ece448.iot_hub.Plug> ece448.iot_hub.PlugController.getPlugs()

2025-04-13 21:26:24,850 INFO Mapped "{[/api/plugs/{plugName}],methods=[GET]}" onto public ece448.iot_hub.Plug ece448.iot_hub.PlugController.getPlug(java.lang.String)

2025-04-13 21:26:24,850 INFO Mapped "{[/api/plugs/{plugName}/control],methods=[GET]}" onto public void ece448.iot_hub.PlugController.controlPlug(java.lang.String,java.lang.String)

2025-04-13 21:26:24,851 INFO Mapped "{[/error],produces=[text/html]}" onto public org.springframework.web.servlet.ModelAndView org.springframework.boot.autoconfigure.web.BasicErrorController.errorHtml(javax.servlet.http.HttpServletRequest,javax.servlet.http.HttpServletResponse)

2025-04-13 21:26:24,851 INFO Mapped "{[/error]}" onto public org.springframework.http.ResponseEntity<java.util.Map<java.lang.String, java.lang.Object>> org.springframework.boot.autoconfigure.web.BasicErrorController.error(javax.servlet.http.HttpServletRequest)

2025-04-13 21:26:24,858 INFO Mapped URL path [/webjars/**] onto handler of type [class org.springframework.web.servlet.resource.ResourceHttpRequestHandler]

2025-04-13 21:26:24,858 INFO Mapped URL path [/**] onto handler of type [class org.springframework.web.servlet.resource.ResourceHttpRequestHandler]

2025-04-13 21:26:24,865 INFO Mapped URL path [/**/favicon.ico] onto handler of type [class org.springframework.web.servlet.resource.ResourceHttpRequestHandler]

2025-04-13 21:26:24,870 INFO Adding welcome page: ServletContext resource [/index.html]

2025-04-13 21:26:24,896 INFO Registering beans for JMX exposure on startup

2025-04-13 21:26:24,900 INFO Starting ProtocolHandler ["http-nio-8088"]

2025-04-13 21:26:24,901 INFO Using a shared selector for servlet write/read

2025-04-13 21:26:24,905 INFO Tomcat started on port(s): 8088 (http)

2025-04-13 21:26:24,907 INFO Started GradeP4 in 1.067 seconds (JVM running for 2.305)

2025-04-13 21:26:25,070 INFO Initializing Spring FrameworkServlet 'dispatcherServlet'

2025-04-13 21:26:25,070 INFO FrameworkServlet 'dispatcherServlet': initialization started

2025-04-13 21:26:25,080 INFO FrameworkServlet 'dispatcherServlet': initialization completed in 10 ms

******** testCase00 of GradeP4: pass

2025-04-13 21:26:25,128 INFO testCase00 of GradeP4: success

****

******** testCase01 of GradeP4: fail

2025-04-13 21:26:26,165 INFO testCase01 of GradeP4: failed

****

******** testCase02 of GradeP4: fail

2025-04-13 21:26:27,197 INFO testCase02 of GradeP4: failed

****

******** testCase03 of GradeP4: exception occured java.lang.Exception: invalid plug update

2025-04-13 21:26:28,222 INFO testCase03 of GradeP4: exception java.lang.Exception: invalid plug update

****

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******** testCase04 of GradeP4: exception occured java.lang.Exception: invalid plug update

2025-04-13 21:26:29,241 INFO testCase04 of GradeP4: exception java.lang.Exception: invalid plug update

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2025-04-13 21:26:29,247 INFO JHTTP: /127.0.0.1:55910 GET /b?action=on HTTP/1.1

2025-04-13 21:26:29,248 INFO HTTPCmd /b: (action=on)

2025-04-13 21:26:29,249 ERROR Failed to publish b power 96.583

org.eclipse.paho.client.mqttv3.MqttException: Client is not connected

        at org.eclipse.paho.client.mqttv3.internal.ExceptionHelper.createMqttException(ExceptionHelper.java:31)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:203)

        at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

        at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

        at ece448.iot_sim.Main.lambda$new$0(Main.java:82)

        at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

        at ece448.iot_sim.PlugSim.measurePower(PlugSim.java:100)

        at ece448.iot_sim.PlugSim.switchOn(PlugSim.java:47)

        at ece448.iot_sim.HTTPCommands.handleGet(HTTPCommands.java:47)

        at ece448.iot_sim.http_server.RequestProcessor.run(RequestProcessor.java:59)

        at java.base/java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:515)

        at java.base/java.util.concurrent.FutureTask.run(FutureTask.java:264)

        at java.base/java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1128)

        at java.base/java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:628)

        at java.base/java.lang.Thread.run(Thread.java:829)

2025-04-13 21:26:29,249 ERROR Failed to publish b state on

org.eclipse.paho.client.mqttv3.MqttException: Client is not connected

        at org.eclipse.paho.client.mqttv3.internal.ExceptionHelper.createMqttException(ExceptionHelper.java:31)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:203)

        at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

        at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

        at ece448.iot_sim.Main.lambda$new$0(Main.java:82)

        at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

        at ece448.iot_sim.PlugSim.switchOn(PlugSim.java:48)

        at ece448.iot_sim.HTTPCommands.handleGet(HTTPCommands.java:47)

        at ece448.iot_sim.http_server.RequestProcessor.run(RequestProcessor.java:59)

        at java.base/java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:515)

        at java.base/java.util.concurrent.FutureTask.run(FutureTask.java:264)

        at java.base/java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1128)

        at java.base/java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:628)

        at java.base/java.lang.Thread.run(Thread.java:829)

2025-04-13 21:26:30,181 ERROR Failed to publish b power 151.444

org.eclipse.paho.client.mqttv3.MqttException: Client is not connected

        at org.eclipse.paho.client.mqttv3.internal.ExceptionHelper.createMqttException(ExceptionHelper.java:31)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:203)

        at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

        at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

        at ece448.iot_sim.Main.lambda$new$0(Main.java:82)

        at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

        at ece448.iot_sim.PlugSim.measurePower(PlugSim.java:100)

        at ece448.iot_sim.MeasurePower.measureOnce(MeasurePower.java:50)

        at ece448.iot_sim.MeasurePower.lambda$start$0(MeasurePower.java:25)

        at java.base/java.lang.Thread.run(Thread.java:829)

******** testCase05 of GradeP4: fail

2025-04-13 21:26:30,272 INFO testCase05 of GradeP4: failed

**********************************************************

2025-04-13 21:26:30,276 INFO JHTTP: /127.0.0.1:44640 GET /d?action=off HTTP/1.1

2025-04-13 21:26:30,276 INFO HTTPCmd /d: (action=off)

2025-04-13 21:26:30,277 ERROR Failed to publish d state off
```

```
org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

    at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

    at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

    at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

    at ece448.iot_sim.Main.lambda$new$0(Main.java:82)

    at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

    at ece448.iot_sim.PlugSim.switchOff(PlugSim.java:57)

    at ece448.iot_sim.HTTPCommands.handleGet(HTTPCommands.java:52)

    at ece448.iot_sim.http_server.RequestProcessor.run(RequestProcessor.java:59)

    at java.base/java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:515)

    at java.base/java.util.concurrent.FutureTask.run(FutureTask.java:264)

    at java.base/java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1128)

    at java.base/java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:628)

    at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-10.msg (No such file or directory)

    at java.base/java.io.FileOutputStream.open0(Native Method)

    at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

    ... 15 common frames omitted

2025-04-13 21:26:31,184 ERROR Failed to publish b power 135.408

org.eclipse.paho.client.mqttv3.MqttException: Client is not connected

    at org.eclipse.paho.client.mqttv3.internal.ExceptionHelper.createMqttException(ExceptionHelper.java:31)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:203)

    at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

    at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

    at ece448.iot_sim.Main.lambda$new$0(Main.java:82)

    at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

    at ece448.iot_sim.PlugSim.measurePower(PlugSim.java:100)

    at ece448.iot_sim.MeasurePower.measureOnce(MeasurePower.java:50)

    at ece448.iot_sim.MeasurePower.lambda$start$0(MeasurePower.java:25)

    at java.base/java.lang.Thread.run(Thread.java:829)

******** testCase06 of GradeP4: fail

2025-04-13 21:26:31,292 INFO testCase06 of GradeP4: failed

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2025-04-13 21:26:31,293 INFO Recieved MQTT Message on topic : 1744597582659/grade_p4/iot_ece448/action/c/on

2025-04-13 21:26:31,293 INFO Recieved MQTT Message on topic : 1744597582659/grade_p4/iot_ece448/action/e/off

2025-04-13 21:26:31,293 ERROR Failed to publish e state off

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

    at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

    at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

    at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

    at ece448.iot_sim.Main.lambda$new$0(Main.java:82)

    at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

    at ece448.iot_sim.PlugSim.switchOff(PlugSim.java:57)

    at ece448.iot_sim.MqttCommands.handleMessage(MqttCommands.java:46)

    at ece448.iot_sim.Main$1.messageArrived(Main.java:67)

    at org.eclipse.paho.client.mqttv3.internal.CommsCallback.deliverMessage(CommsCallback.java:514)

    at org.eclipse.paho.client.mqttv3.internal.CommsCallback.handleMessage(CommsCallback.java:417)
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at org.eclipse.paho.client.mqttv3.internal.CommsCallback.run(CommsCallback.java:214)

at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-11.msg (No such file or directory)

at java.base/java.io.FileOutputStream.open0(Native Method)

at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

... 14 common frames omitted

2025-04-13 21:26:32,187 ERROR Failed to publish b power 140.528

org.eclipse.paho.client.mqttv3.MqttException: Client is not connected

at org.eclipse.paho.client.mqttv3.internal.ExceptionHelper.createMqttException(ExceptionHelper.java:31)

at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:203)

at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

at ece448.iot_sim.Main.lambdanew0(Main.java:82)

at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

at ece448.iot_sim.PlugSim.measurePower(PlugSim.java:100)

at ece448.iot_sim.MeasurePower.measureOnce(MeasurePower.java:50)

at ece448.iot_sim.MeasurePower.lambda$start$0(MeasurePower.java:25)

at java.base/java.lang.Thread.run(Thread.java:829)

******** testCase07 of GradeP4: fail

2025-04-13 21:26:32,302 INFO testCase07 of GradeP4: failed

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2025-04-13 21:26:32,303 INFO JHTTP: /127.0.0.1:52702 GET /a?action=toggle HTTP/1.1

2025-04-13 21:26:32,303 INFO HTTPCmd /a: {action=toggle}

2025-04-13 21:26:32,304 ERROR Failed to publish a power 26.625

org.eclipse.paho.client.mqttv3.MqttException: Client is not connected

at org.eclipse.paho.client.mqttv3.internal.ExceptionHelper.createMqttException(ExceptionHelper.java:31)

at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:203)

at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

at ece448.iot_sim.Main.lambdanew0(Main.java:82)

at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

at ece448.iot_sim.PlugSim.measurePower(PlugSim.java:100)

at ece448.iot_sim.PlugSim.switchOn(PlugSim.java:47)

at ece448.iot_sim.HTTPCommands.handleGet(HTTPCommands.java:61)

at ece448.iot_sim.http_server.RequestProcessor.run(RequestProcessor.java:59)

at java.base/java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:515)

at java.base/java.util.concurrent.FutureTask.run(FutureTask.java:264)

at java.base/java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1128)

at java.base/java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:628)

at java.base/java.lang.Thread.run(Thread.java:829)

2025-04-13 21:26:32,304 ERROR Failed to publish a state on

org.eclipse.paho.client.mqttv3.MqttException: Client is not connected

at org.eclipse.paho.client.mqttv3.internal.ExceptionHelper.createMqttException(ExceptionHelper.java:31)

at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:203)

at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

at ece448.iot_sim.Main.lambdanew0(Main.java:82)

at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

at ece448.iot_sim.PlugSim.switchOn(PlugSim.java:48)

at ece448.iot_sim.HTTPCommands.handleGet(HTTPCommands.java:61)

at ece448.iot_sim.http_server.RequestProcessor.run(RequestProcessor.java:59)

at java.base/java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:515)

at java.base/java.util.concurrent.FutureTask.run(FutureTask.java:264)

at java.base/java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1128)

        at java.base/java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:628)

        at java.base/java.lang.Thread.run(Thread.java:829)

2025-04-13 21:26:32,305 INFO Recieved MQTT Message on topic : 1744597582659/grade_p4/iot_ece448/action/d/toggle

2025-04-13 21:26:32,305 ERROR Failed to publish d state on

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

        at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

        at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

        at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

        at ece448.iot_sim.Main.lambdanew0(Main.java:82)

        at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

        at ece448.iot_sim.PlugSim.toggle(PlugSim.java:66)

        at ece448.iot_sim.MqttCommands.handleMessage(MqttCommands.java:49)

        at ece448.iot_sim.Main$1.messageArrived(Main.java:67)

        at org.eclipse.paho.client.mqttv3.internal.CommsCallback.deliverMessage(CommsCallback.java:514)

        at org.eclipse.paho.client.mqttv3.internal.CommsCallback.handleMessage(CommsCallback.java:417)

        at org.eclipse.paho.client.mqttv3.internal.CommsCallback.run(CommsCallback.java:214)

        at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-12.msg (No such file or directory)

        at java.base/java.io.FileOutputStream.open0(Native Method)

        at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

        ... 14 common frames omitted

2025-04-13 21:26:32,305 ERROR Failed to publish d power 75.004

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

        at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

        at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

        at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

        at ece448.iot_sim.Main.lambdanew0(Main.java:82)

        at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

        at ece448.iot_sim.PlugSim.measurePower(PlugSim.java:100)

        at ece448.iot_sim.PlugSim.toggle(PlugSim.java:68)

        at ece448.iot_sim.MqttCommands.handleMessage(MqttCommands.java:49)

        at ece448.iot_sim.Main$1.messageArrived(Main.java:67)

        at org.eclipse.paho.client.mqttv3.internal.CommsCallback.deliverMessage(CommsCallback.java:514)

        at org.eclipse.paho.client.mqttv3.internal.CommsCallback.handleMessage(CommsCallback.java:417)

        at org.eclipse.paho.client.mqttv3.internal.CommsCallback.run(CommsCallback.java:214)

        at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-13.msg (No such file or directory)

        at java.base/java.io.FileOutputStream.open0(Native Method)

        at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

        ... 15 common frames omitted

2025-04-13 21:26:32,305 ERROR Failed to publish d power 75.004

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

        at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

        at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

        at ece448.iot_sim.Main.lambdanew0(Main.java:82)

        at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

        at ece448.iot_sim.PlugSim.toggle(PlugSim.java:69)

        at ece448.iot_sim.MqttCommands.handleMessage(MqttCommands.java:49)

        at ece448.iot_sim.Main$1.messageArrived(Main.java:67)

        at org.eclipse.paho.client.mqttv3.internal.CommsCallback.deliverMessage(CommsCallback.java:514)

        at org.eclipse.paho.client.mqttv3.internal.CommsCallback.handleMessage(CommsCallback.java:417)

        at org.eclipse.paho.client.mqttv3.internal.CommsCallback.run(CommsCallback.java:214)

        at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-14.msg (No such file or directory)

        at java.base/java.io.FileOutputStream.open0(Native Method)

        at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

        ... 14 common frames omitted

2025-04-13 21:26:32,305 INFO JHTTP: /127.0.0.1:54086 GET /e?action=toggle HTTP/1.1

2025-04-13 21:26:32,306 INFO HTTPCmd /e: (action=toggle)

2025-04-13 21:26:32,306 ERROR Failed to publish e power 61.356

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

        at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

        at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

        at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

        at ece448.iot_sim.Main.lambdanew0(Main.java:82)

        at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

        at ece448.iot_sim.PlugSim.measurePower(PlugSim.java:100)

        at ece448.iot_sim.PlugSim.switchOn(PlugSim.java:47)

        at ece448.iot_sim.HTTPCommands.handleGet(HTTPCommands.java:61)

        at ece448.iot_sim.http_server.RequestProcessor.run(RequestProcessor.java:59)

        at java.base/java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:515)

        at java.base/java.util.concurrent.FutureTask.run(FutureTask.java:264)

        at java.base/java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1128)

        at java.base/java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:628)

        at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-15.msg (No such file or directory)

        at java.base/java.io.FileOutputStream.open0(Native Method)

        at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

        ... 16 common frames omitted

2025-04-13 21:26:32,306 ERROR Failed to publish e state on

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

        at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

        at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

at ece448.iot_sim.Main.lambdanew0(Main.java:82)

at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

at ece448.iot_sim.PlugSim.switchOn(PlugSim.java:48)

at ece448.iot_sim.HTTPCommands.handleGet(HTTPCommands.java:61)

at ece448.iot_sim.http_server.RequestProcessor.run(RequestProcessor.java:59)

at java.base/java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:515)

at java.base/java.util.concurrent.FutureTask.run(FutureTask.java:264)

at java.base/java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1128)

at java.base/java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:628)

at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-16.msg (No such file or directory)

at java.base/java.io.FileOutputStream.open0(Native Method)

at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

... 15 common frames omitted

2025-04-13 21:26:32,307 INFO Recieved MQTT Message on topic : 1744597582659/grade_p4/iot_ece448/action/g/toggle

2025-04-13 21:26:32,307 ERROR Failed to publish g state on

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

at ece448.iot_sim.Main.lambdanew0(Main.java:82)

at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

at ece448.iot_sim.PlugSim.toggle(PlugSim.java:66)

at ece448.iot_sim.MqttCommands.handleMessage(MqttCommands.java:49)

at ece448.iot_sim.Main$1.messageArrived(Main.java:67)

at org.eclipse.paho.client.mqttv3.internal.CommsCallback.deliverMessage(CommsCallback.java:514)

at org.eclipse.paho.client.mqttv3.internal.CommsCallback.handleMessage(CommsCallback.java:417)

at org.eclipse.paho.client.mqttv3.internal.CommsCallback.run(CommsCallback.java:214)

at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-17.msg (No such file or directory)

at java.base/java.io.FileOutputStream.open0(Native Method)

at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

... 14 common frames omitted

2025-04-13 21:26:32,307 ERROR Failed to publish g power 10.796

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

at ece448.iot_sim.Main.lambdanew0(Main.java:82)

at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

at ece448.iot_sim.PlugSim.measurePower(PlugSim.java:100)

at ece448.iot_sim.PlugSim.toggle(PlugSim.java:68)

at ece448.iot_sim.MqttCommands.handleMessage(MqttCommands.java:49)

at ece448.iot_sim.Main$1.messageArrived(Main.java:67)

    at org.eclipse.paho.client.mqttv3.internal.CommsCallback.deliverMessage(CommsCallback.java:514)

    at org.eclipse.paho.client.mqttv3.internal.CommsCallback.handleMessage(CommsCallback.java:417)

    at org.eclipse.paho.client.mqttv3.internal.CommsCallback.run(CommsCallback.java:214)

    at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-18.msg (No such file or directory)

    at java.base/java.io.FileOutputStream.open0(Native Method)

    at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

    ... 15 common frames omitted

2025-04-13 21:26:32,307 ERROR Failed to publish g power 10.796

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

    at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

    at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

    at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

    at ece448.iot_sim.Main.lambdanew0(Main.java:82)

    at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

    at ece448.iot_sim.PlugSim.toggle(PlugSim.java:69)

    at ece448.iot_sim.MqttCommands.handleMessage(MqttCommands.java:49)

    at ece448.iot_sim.Main$1.messageArrived(Main.java:67)

    at org.eclipse.paho.client.mqttv3.internal.CommsCallback.deliverMessage(CommsCallback.java:514)

    at org.eclipse.paho.client.mqttv3.internal.CommsCallback.handleMessage(CommsCallback.java:417)

    at org.eclipse.paho.client.mqttv3.internal.CommsCallback.run(CommsCallback.java:214)

    at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-19.msg (No such file or directory)

    at java.base/java.io.FileOutputStream.open0(Native Method)

    at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

    ... 14 common frames omitted

2025-04-13 21:26:32,501 ERROR Failed to publish d power 155.560

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

    at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

    at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

    at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

    at ece448.iot_sim.Main.lambdanew0(Main.java:82)

    at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

    at ece448.iot_sim.PlugSim.measurePower(PlugSim.java:100)

    at ece448.iot_sim.MeasurePower.measureOnce(MeasurePower.java:50)

    at ece448.iot_sim.MeasurePower.lambda$start$0(MeasurePower.java:25)

    at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-20.msg (No such file or directory)

    at java.base/java.io.FileOutputStream.open0(Native Method)

    at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

... 11 common frames omitted

2025-04-13 21:26:32,502 ERROR Failed to publish e power 120.928

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

    at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

    at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

    at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

    at ece448.iot_sim.Main.lambdanew0(Main.java:82)

    at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

    at ece448.iot_sim.PlugSim.measurePower(PlugSim.java:100)

    at ece448.iot_sim.MeasurePower.measureOnce(MeasurePower.java:50)

    at ece448.iot_sim.MeasurePower.lambda$start$0(MeasurePower.java:25)

    at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-21.msg (No such file or directory)

    at java.base/java.io.FileOutputStream.open0(Native Method)

    at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

    ... 11 common frames omitted

2025-04-13 21:26:32,502 ERROR Failed to publish g power 14.205

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

    at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

    at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

    at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

    at ece448.iot_sim.Main.lambdanew0(Main.java:82)

    at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

    at ece448.iot_sim.PlugSim.measurePower(PlugSim.java:100)

    at ece448.iot_sim.MeasurePower.measureOnce(MeasurePower.java:50)

    at ece448.iot_sim.MeasurePower.lambda$start$0(MeasurePower.java:25)

    at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-22.msg (No such file or directory)

    at java.base/java.io.FileOutputStream.open0(Native Method)

    at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

    at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

    ... 11 common frames omitted

2025-04-13 21:26:33,190 ERROR Failed to publish a power 64.590

org.eclipse.paho.client.mqttv3.MqttException: Client is not connected

    at org.eclipse.paho.client.mqttv3.internal.ExceptionHelper.createMqttException(ExceptionHelper.java:31)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:203)

    at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

    at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

    at ece448.iot_sim.Main.lambdanew0(Main.java:82)

    at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

    at ece448.iot_sim.PlugSim.measurePower(PlugSim.java:100)

    at ece448.iot_sim.MeasurePower.measureOnce(MeasurePower.java:50)

    at ece448.iot_sim.MeasurePower.lambda$start$0(MeasurePower.java:25)

    at java.base/java.lang.Thread.run(Thread.java:829)

2025-04-13 21:26:33,191 ERROR Failed to publish b power 138.082

org.eclipse.paho.client.mqttv3.MqttException: Client is not connected

    at org.eclipse.paho.client.mqttv3.internal.ExceptionHelper.createMqttException(ExceptionHelper.java:31)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:203)

    at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

    at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

    at ece448.iot_sim.Main.lambdanew0(Main.java:82)

    at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

    at ece448.iot_sim.PlugSim.measurePower(PlugSim.java:100)

    at ece448.iot_sim.MeasurePower.measureOnce(MeasurePower.java:50)

    at ece448.iot_sim.MeasurePower.lambda$start$0(MeasurePower.java:25)

    at java.base/java.lang.Thread.run(Thread.java:829)

******** testCase08 of GradeP4: fail

2025-04-13 21:26:33,316 INFO testCase08 of GradeP4: failed

****

2025-04-13 21:26:33,318 INFO Recieved MQTT Message on topic : 1744597582659/grade_p4/iot_ece448/action/b/toggle

2025-04-13 21:26:33,318 INFO JHTTP: /127.0.0.1:52714 GET /c?action=off HTTP/1.1

2025-04-13 21:26:33,318 INFO HTTPCmd /c: {action=off}

2025-04-13 21:26:33,319 ERROR Failed to publish c state off

org.eclipse.paho.client.mqttv3.MqttException: Client is not connected

    at org.eclipse.paho.client.mqttv3.internal.ExceptionHelper.createMqttException(ExceptionHelper.java:31)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:203)

    at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

    at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

    at ece448.iot_sim.Main.lambdanew0(Main.java:82)

    at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

    at ece448.iot_sim.PlugSim.switchOff(PlugSim.java:57)

    at ece448.iot_sim.HTTPCommands.handleGet(HTTPCommands.java:52)

    at ece448.iot_sim.http_server.RequestProcessor.run(RequestProcessor.java:59)

    at java.base/java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:515)

    at java.base/java.util.concurrent.FutureTask.run(FutureTask.java:264)

    at java.base/java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1128)

    at java.base/java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:628)

    at java.base/java.lang.Thread.run(Thread.java:829)

2025-04-13 21:26:33,319 INFO JHTTP: /127.0.0.1:54096 GET /d?action=toggle HTTP/1.1

2025-04-13 21:26:33,319 INFO HTTPCmd /d: {action=toggle}

2025-04-13 21:26:33,320 ERROR Failed to publish d state off

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

    at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

    at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

    at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

    at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

    at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

    at ece448.iot_sim.Main.lambdanew0(Main.java:82)

    at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

    at ece448.iot_sim.PlugSim.switchOff(PlugSim.java:57)

    at ece448.iot_sim.HTTPCommands.handleGet(HTTPCommands.java:58)

    at ece448.iot_sim.http_server.RequestProcessor.run(RequestProcessor.java:59)

    at java.base/java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:515)

    at java.base/java.util.concurrent.FutureTask.run(FutureTask.java:264)

    at java.base/java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1128)

    at java.base/java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:628)

    at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-23.msg (No such file or directory)

    at java.base/java.io.FileOutputStream.open0(Native Method)

    at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

```
        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

        ... 15 common frames omitted

2025-04-13 21:26:33,321 INFO Recieved MQTT Message on topic : 1744597582659/grade_p4/iot_ece448/action/f/off

2025-04-13 21:26:33,321 ERROR Failed to publish f state off

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

        at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

        at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

        at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

        at ece448.iot_sim.Main.lambda$new$0(Main.java:82)

        at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

        at ece448.iot_sim.PlugSim.switchOff(PlugSim.java:57)

        at ece448.iot_sim.MqttCommands.handleMessage(MqttCommands.java:46)

        at ece448.iot_sim.Main$1.messageArrived(Main.java:67)

        at org.eclipse.paho.client.mqttv3.internal.CommsCallback.deliverMessage(CommsCallback.java:514)

        at org.eclipse.paho.client.mqttv3.internal.CommsCallback.handleMessage(CommsCallback.java:417)

        at org.eclipse.paho.client.mqttv3.internal.CommsCallback.run(CommsCallback.java:214)

        at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-24.msg (No such file or directory)

        at java.base/java.io.FileOutputStream.open0(Native Method)

        at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

        ... 14 common frames omitted

2025-04-13 21:26:33,322 INFO JHTTP: /127.0.0.1:54110 GET /g?action=off HTTP/1.1

2025-04-13 21:26:33,322 INFO HTTPCmd /g: {action=off}

2025-04-13 21:26:33,322 ERROR Failed to publish g state off

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

        at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

        at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

        at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

        at ece448.iot_sim.Main.lambda$new$0(Main.java:82)

        at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

        at ece448.iot_sim.PlugSim.switchOff(PlugSim.java:57)

        at ece448.iot_sim.HTTPCommands.handleGet(HTTPCommands.java:52)

        at ece448.iot_sim.http_server.RequestProcessor.run(RequestProcessor.java:59)

        at java.base/java.util.concurrent.Executors$RunnableAdapter.call(Executors.java:515)

        at java.base/java.util.concurrent.FutureTask.run(FutureTask.java:264)

        at java.base/java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1128)

        at java.base/java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:628)

        at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-25.msg (No such file or directory)

        at java.base/java.io.FileOutputStream.open0(Native Method)

        at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

        at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

        at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

        ... 15 common frames omitted
```

2025-04-13 21:26:33,504 ERROR Failed to publish e power 139.637

org.eclipse.paho.client.mqttv3.MqttPersistenceException: MqttException

      at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:192)

      at org.eclipse.paho.client.mqttv3.internal.ClientState.send(ClientState.java:539)

      at org.eclipse.paho.client.mqttv3.internal.ClientComms.internalSend(ClientComms.java:161)

      at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:191)

      at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

      at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

      at ece448.iot_sim.Main.lambdanew0(Main.java:82)

      at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

      at ece448.iot_sim.PlugSim.measurePower(PlugSim.java:100)

      at ece448.iot_sim.MeasurePower.measureOnce(MeasurePower.java:50)

      at ece448.iot_sim.MeasurePower.lambda$start$0(MeasurePower.java:25)

      at java.base/java.lang.Thread.run(Thread.java:829)

Caused by: java.io.FileNotFoundException: /home/ece448s25/iot_ece448/iot_sim-tcp127001/s-26.msg (No such file or directory)

      at java.base/java.io.FileOutputStream.open0(Native Method)

      at java.base/java.io.FileOutputStream.open(FileOutputStream.java:298)

      at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:237)

      at java.base/java.io.FileOutputStream.<init>(FileOutputStream.java:187)

      at org.eclipse.paho.client.mqttv3.persist.MqttDefaultFilePersistence.put(MqttDefaultFilePersistence.java:179)

      ... 11 common frames omitted

2025-04-13 21:26:34,194 ERROR Failed to publish a power 154.702

org.eclipse.paho.client.mqttv3.MqttException: Client is not connected

      at org.eclipse.paho.client.mqttv3.internal.ExceptionHelper.createMqttException(ExceptionHelper.java:31)

      at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:203)

      at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

      at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

      at ece448.iot_sim.Main.lambdanew0(Main.java:82)

      at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

      at ece448.iot_sim.PlugSim.measurePower(PlugSim.java:100)

      at ece448.iot_sim.MeasurePower.measureOnce(MeasurePower.java:50)

      at ece448.iot_sim.MeasurePower.lambda$start$0(MeasurePower.java:25)

      at java.base/java.lang.Thread.run(Thread.java:829)

2025-04-13 21:26:34,195 ERROR Failed to publish b power 133.596

org.eclipse.paho.client.mqttv3.MqttException: Client is not connected

      at org.eclipse.paho.client.mqttv3.internal.ExceptionHelper.createMqttException(ExceptionHelper.java:31)

      at org.eclipse.paho.client.mqttv3.internal.ClientComms.sendNoWait(ClientComms.java:203)

      at org.eclipse.paho.client.mqttv3.MqttAsyncClient.publish(MqttAsyncClient.java:1251)

      at org.eclipse.paho.client.mqttv3.MqttClient.publish(MqttClient.java:570)

      at ece448.iot_sim.Main.lambdanew0(Main.java:82)

      at ece448.iot_sim.PlugSim.notifyObservers(PlugSim.java:105)

      at ece448.iot_sim.PlugSim.measurePower(PlugSim.java:100)

      at ece448.iot_sim.MeasurePower.measureOnce(MeasurePower.java:50)

      at ece448.iot_sim.MeasurePower.lambda$start$0(MeasurePower.java:25)

      at java.base/java.lang.Thread.run(Thread.java:829)

******** testCase09 of GradeP4: exception occured java.lang.Exception: invalid plug update

2025-04-13 21:26:34,333 INFO testCase09 of GradeP4: exception java.lang.Exception: invalid plug update

****

Local Grading Test Result: 1/10 cases passed

****

* Make sure you "git add ." and "git commit -am "your comments" and "git push" *

* to fully upload all of your codes to the Endeavour Git Repo.   *

* Otherwise, your grading result may differ from your local result vs. server *

****

2025-04-13 21:26:34,333 INFO Closing org.springframework.boot.context.embedded.AnnotationConfigEmbeddedWebApplicationContext@a776e: startup date [Sun Apr 13 21:26:23 CDT 2025]; root of context hierarchy

2025-04-13 21:26:34,334 INFO Unregistering JMX-exposed beans on shutdown

2025-04-13 21:26:34,349 INFO JHTTP: disconnnected Socket closed

2025-04-13 21:26:34,350 INFO JHTTP: disconnnected Socket closed

2025-04-13 21:26:34,351 INFO MqttCtl grader/iot_hub: disconnected

Exception in thread "main" Client is disconnected (32101)

        at org.eclipse.paho.client.mqttv3.internal.ExceptionHelper.createMqttException(ExceptionHelper.java:31)

        at org.eclipse.paho.client.mqttv3.internal.ClientComms.disconnect(ClientComms.java:505)

        at org.eclipse.paho.client.mqttv3.MqttAsyncClient.disconnect(MqttAsyncClient.java:694)

        at org.eclipse.paho.client.mqttv3.MqttAsyncClient.disconnect(MqttAsyncClient.java:655)

        at org.eclipse.paho.client.mqttv3.MqttAsyncClient.disconnect(MqttAsyncClient.java:664)

        at org.eclipse.paho.client.mqttv3.MqttClient.disconnect(MqttClient.java:347)

        at ece448.iot_sim.Main.close(Main.java:93)

        at ece448.grading.GradeP4.main(GradeP4.java:55)

> Task :grade_p4 FAILED

FAILURE: Build failed with an exception.

* What went wrong:

Execution failed for task ':grade_p4'.

> Process 'command '/usr/lib/jvm/java-11-openjdk-arm64/bin/java'' finished with non-zero exit value 1

* Try:

Run with --stacktrace option to get the stack trace. Run with --info or --debug option to get more log output. Run with --scan to get full insights.

* Get more help at https://help.gradle.org

Deprecated Gradle features were used in this build, making it incompatible with Gradle 7.0.

Use '--warning-mode all' to show the individual deprecation warnings.

See https://docs.gradle.org/6.9.3/userguide/command_line_interface.html#sec:command_line_warnings

BUILD FAILED in 12s

6 actionable tasks: 1 executed, 5 up-to-date