LOG4J2 LOGGING IN SELENIUM

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Log4j2 Setup with Log4j2.properties & Log4j2.xml

Step 1: Add Maven Log4j2 Dependencies

```
<dependency>
    <groupId>org.apache.logging.log4j</groupId>
    <artifactId>log4j-api</artifactId>
    <version>2.23.1</version>
</dependency>


<dependency>
    <groupId>org.apache.logging.log4j</groupId>
    <artifactId>log4j-core</artifactId>
    <version>2.23.1</version>
</dependency>
```

Step 2: Creating Logger instance in Class

To start logging messages using this basic configuration, all you need to just obtain a Logger instance using the LogManager class:

private static Logger logger = LogManager.getLogger(YourClass.class);

==**YourClass = Give name of your respective class**==

Then you can use the logger object with methods corresponding to the log level you want:

logger.error("This is an error message");
logger.info("This is an info message");
logger.debug("This is an debugging message");

For log level info :
https://logging.apache.org/log4j/2.x/manual/customloglevels.html

Standard log levels built-in to Log4J

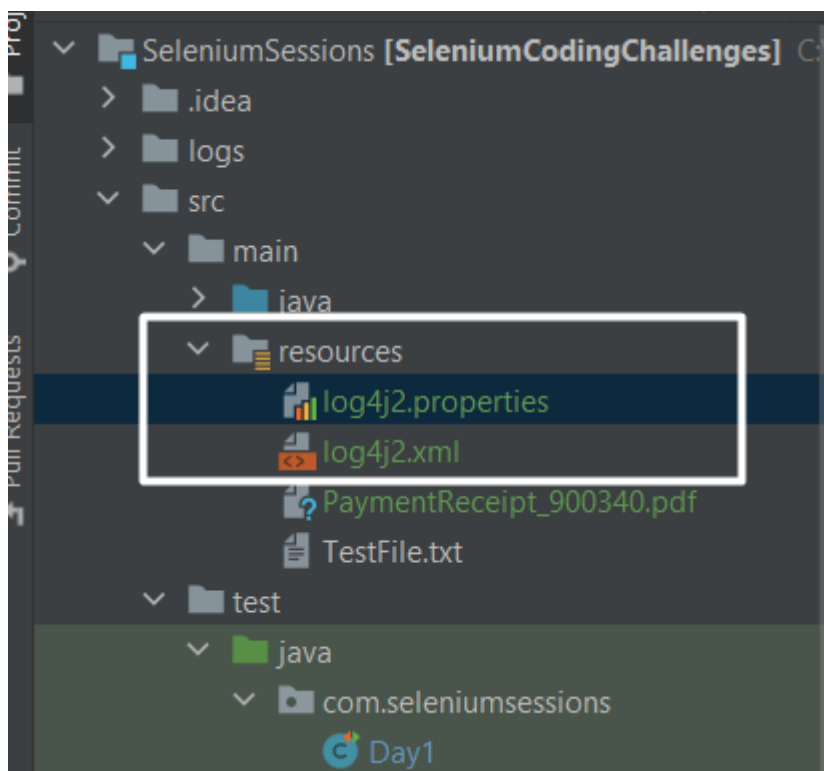| Standard Level	intLevel
OFF	0
FATAL	100
ERROR	200
WARN	300
INFO	400
DEBUG	500
TRACE	600
ALL	Integer.MAX_VALUE

==**Note: Use this in the class you want to add log like base.class, extentManager.class etc .**==

Step 3: Customizing logging by adding Log4j2.properties or Log4j2.xml

Create a **log4j2.properties** or **log4j2.xml** file in the **resources** folder as shown (recommended).

Note: You can create it anywhere you want, but **src/resources** is recommended.

Folder structure:

Using Log4j2.properties

```
status = warn
name=PropertiesConfig
property.filename = logs

#Set up apprenders for file & console
appenders = console, file ,htmlFile

# Set up for Console log output
appender.console.type = Console
appender.console.name = STDOUT
appender.console.layout.type = PatternLayout
appender.console.layout.pattern = [%-5level] %d{yyyy-MM-dd HH:mm:ss} [%t] %c{1} - %msg%n

# Set up for LOGFILE log output
appender.file.type = File
appender.file.name = LOGFILE
appender.file.fileName=${filename}/automationLogs_${date:yyyy-MM-dd_HH-mm-ss}.log
appender.file.layout.type=PatternLayout
appender.file.layout.pattern=[%-5level] %d{yyyy-MM-dd HH:mm:ss} [%t] %c{1} - %msg%n

# Set up for HTML log output
appender.htmlFile.type = File
appender.htmlFile.name = HTMLFILE
appender.htmlFile.fileName=${filename}/automationLogs_${date:yyyy-MM-dd_HH-mm-ss}.html
appender.htmlFile.layout.type=HTMLLayout
appender.htmlFile.layout.datepattern=yyyy-MM-dd'T'HH:mm:ss
appender.htmlFile.layout.timezone=GMT+0
appender.htmlFile.layout.LocationInfo=true

# Level of Logs
rootLogger.level = info
rootLogger.appenderRefs = file
rootLogger.appenderRef.stdout.ref = STDOUT
rootLogger.appenderRef.logfile.ref = LOGFILE
rootLogger.appenderRef.htmlfile.ref = HTMLFILE
```
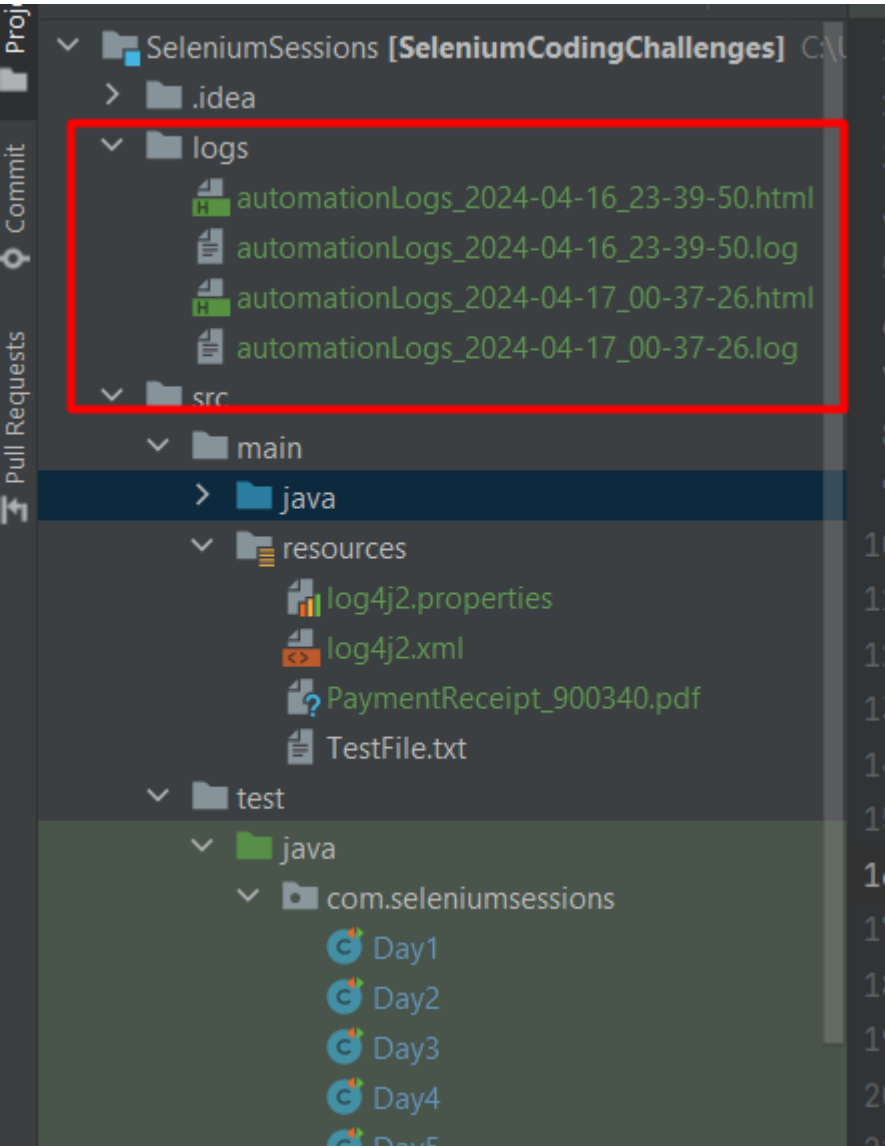
Using Log4j2.xml

```
<?xml version="1.0" encoding="UTF-8"?>
<Configuration status="WARN">
    <Appenders>
```

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```xml
    <Console name="Console" target="SYSTEM_OUT">
      <PatternLayout pattern="%d{HH:mm:ss.SSS} %-5level - %msg%n"/>
    </Console>
    <File name="File" fileName="logs\\automationLogs_${date:yyyy-MM-dd_HH-mm-ss}.log" append="true">
      <PatternLayout>
        <Pattern>%d{HH:mm:ss.SSS} [%t] %-5level - %msg%n</Pattern>
      </PatternLayout>
    </File>
    <!-- Add HTML File Appender -->
    <File name="htmlFile" fileName="logs\\automationLogs_${date:yyyy-MM-dd_HH-mm-ss}.html">
      <HtmlLayout title="HTML Layout Demo" datePattern="ISO8601" timezone="GMT+0"/>
    </File>
  </Appenders>
  <Loggers>
    <Logger name="com.seleniumsessions" level="info" additivity="true">
      <appender-ref level="info" ref="File"/>
      <!-- Add HTML File Appender to the logger -->
      <appender-ref level="info" ref="htmlFile"/>
    </Logger>
    <Root additivity="true" level="info">
      <appender-ref ref="Console"/>
    </Root>
  </Loggers>
</Configuration>
```

Logfile Log output:

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HTML Log output:

Log session start time Tue Apr 16 23:13:49 IST 2024

Time	Thread	Level	Logger	File:Line	Message
2024-04-16T17:43:55,562	main	INFO	Day2	Day2.java:41	Url is launched