

Saturday, Sunday(9.00AM to 2.00PM IST)

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SpringDataJPA
SpringBootMongoDB

Tuesday, wednesday, Thursday(6.30AM to 9.30AM)

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SpringAOP
SpringSecurity
SpringMail

SpringBoot using Log4j

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Logger levels of SL4J are
=> debug<info<trace<warn<error

=> By default SpringBoot uses SL4J with log4j to generate the log messages

```
=> <dependency>  
    <groupId>org.springframework.boot</groupId>  
    <artifactId>spring-boot-starter</artifactId>  
</dependency>
```

DotNetCourseMaterial.java

=====

```
@Component(value = "dotNet")  
public final class DotNetCourseMaterial implements ICourseMaterial {  
  
}
```

JavaCourseMaterial.java

=====

```
@Component(value="java")  
public final class JavaCourseMaterial implements ICourseMaterial {  
  
}
```

Student.java

=====

```
@Component(value = "student")  
public class Student {  
  
    private Logger logger = LoggerFactory.getLogger(Student.class);  
  
    @Autowired  
    @Qualifier("courseId")  
    private ICourseMaterial material;  
  
}
```

Using file as the appenders to record the log messages

=====

application.properties

=====

```
course.choose=dotNet  
logging.level.in.ineuron.beans=TRACE  
logging.file.name=log.txt
```

```
logging.pattern.file=%c %r %t %p %m %d %n
logging.pattern.console=%30c %r [%t] %p %m %d %L %F %n
```

BootLoggingUsingLog4jApplication.java

```
=====
@SpringBootApplication
@ImportResource(locations = "applicationContext.xml")
public class BootLoggingUsingLog4jApplication {

    public static void main(String[] args) {
        ApplicationContext context =
SpringApplication.run(BootLoggingUsingLog4jApplication.class, args);

        Student student = context.getBean(Student.class);
        System.out.println(student);

        student.preparation("java");

        ((ConfigurableApplicationContext) context).close();
    }
}
```

output

```
=====
in.ineuron.BootLoggingUsingLog4jApplication 561 main INFO Starting
BootLoggingUsingLog4jApplication using Java 1.8.0_202 on DESKTOP-1N5U4UJ with PID
23548 (D:\EclipseMavenPrograms\Boot-logging-using-Log4j\target\classes started by
nitin in
D:\EclipseMavenPrograms\Boot-logging-using-Log4j) 2023-04-14 22:27:33,033
in.ineuron.BootLoggingUsingLog4jApplication 564 main INFO No active profile set,
falling back to 1 default profile:
"default" 2023-04-14 22:27:33,036
in.ineuron.BootLoggingUsingLog4jApplication 1636 main INFO Started
BootLoggingUsingLog4jApplication in 1.481 seconds (JVM running for 2.272) 2023-04-
14 22:27:34,108
in.ineuron.beans.Student 1643 main DEBUG control entering inside Student ::
preparation(,) 2023-04-14 22:27:34,115
in.ineuron.beans.UICourseMaterial 1657 main DEBUG control entering inside
UICourseMaterial :: courseContent 2023-04-14 22:27:34,129
in.ineuron.beans.Student 1658 main INFO Course content is choosen :: 1.HTML 2.CSS
3.JavaScript 2023-04-14 22:27:34,130
in.ineuron.beans.Student 1659 main INFO Course price is ready :: 500.0 2023-04-14
22:27:34,131
in.ineuron.beans.Student 1659 main DEBUG control exiting from Student ::
preparation(,) 2023-04-14 22:27:34,131
```

Integrating SpringBoot SL4J using Log4j2

```
=====
=> Keep old project ready with the following setup
=> remove spring-boot-starter-logging from spring-boot-starter
```

pom.xml

```
=====
<dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter-log4j2</artifactId>
```

```

</dependency>
<dependency>
    <groupId>org.springframework.boot</groupId>
    <artifactId>spring-boot-starter</artifactId>
    <exclusions>
        <exclusion>
            <groupId>org.springframework.boot</groupId>
            <artifactId>spring-boot-starter-logging</artifactId>
        </exclusion>
    </exclusions>
</dependency>

```

Working with console appender Keep log4j2-spring.xml file in src/main/resources

```

<?xml version="1.0" encoding="UTF-8"?>
<Configuration>
    <Appenders>
        <Console name="cons" target="SYSTEM_OUT">
            <PatternLayout>
                pattern="%d{MM:dd HH:mm:ss.SSS} [%p] [%c] - %m %F %L %n"/>
            </Console>
        </Appenders>
        <Loggers>
            <Root level="trace">
                <AppenderRef ref="cons"/>
            </Root>
        </Loggers>
    </Configuration>

```

Working with RollingFileAppender and PatternLayout Keep log4j2-spring.xml file in src/main/resources

```

<Configuration>
    <Appenders>
        <RollingFile>
            name="rollingFile"
            fileName="D:/application_msg.log"
            filePattern="D:/application_msg.%i.log.zip"
            ignoreExceptions="false"
            <PatternLayout>
                <Pattern>%d{yyyy-MM-dd HH:mm:ss} %-5p %m %F %L %n</Pattern>
            </PatternLayout>
            <Policies>
                <SizeBasedTriggeringPolicy size="5kb" />
            </Policies>
            <DefaultRolloverStrategy max="3" />
        </RollingFile>
    </Appenders>
    <Loggers>
        <Root level="DEBUG">
            <AppenderRef ref="rollingFile" />
        </Root>
    </Loggers>
</Configuration>

```

Working with DailyRollingFileAppender and PatternLayout Keep log4j2-spring.xml file

in src/main/resources

```
=====
=====
<Configuration >
  <Appenders>
    <RollingFile
      name="rollingFile"
      fileName="E:/app_msg.log"
      filePattern="D:/app_msg.%d{yyyy-MM-dd-hh-mm}.log.gz"
      ignoreExceptions="false">
        <PatternLayout>
          <Pattern>%d{yyyy-MM-dd HH:mm:ss} %-5p %m%n</Pattern>
        </PatternLayout>
        <Policies>
          <TimeBasedTriggeringPolicy filePattern="D:/app_msg.%d{yyyy-MM-dd-hh-
mm}.log.gz" />
        </Policies>
        <DefaultRolloverStrategy max="5" />
      </RollingFile>
    </Appenders>
    <Loggers>
      <Root level="trace">
        <AppenderRef ref="rollingFile"/>
      </Root>
    </Loggers>
  </Configuration>
```