

Reports Using Extent Reports

ExtentManager.java

```
package com.Listeners;

import java.io.File;

import com.aventstack.extentreports.ExtentReports;
import com.aventstack.extentreports.reporter.ExtentHtmlReporter;
import com.aventstack.extentreports.reporter.configuration.ChartLocation;
import com.aventstack.extentreports.reporter.configuration.Theme;

public class ExtentManager {

    private static ExtentReports extent;

    private static String reportFileName = "Test-Automation-Report"+" .html";
    private static String fileSeperator = System.getProperty("file.separator");
    private static String reportFilepath = System.getProperty("user.dir")
+fileSeperator+ "TestReport";
    private static String reportFileLocation = reportFilepath +fileSeperator+
reportFileName;

    public static ExtentReports getInstance() {
        if (extent == null)
            createInstance();
        return extent;
    }

    //Create an extent report instance
    public static ExtentReports createInstance() {
        String fileName = getReportPath(reportFilepath);
```

```

ExtentHtmlReporter htmlReporter = new ExtentHtmlReporter(fileName);
htmlReporter.config().setTestViewChartLocation(ChartLocation.TOP);
htmlReporter.config().setChartVisibilityOnOpen(true);
htmlReporter.config().setTheme(Theme.STANDARD);
htmlReporter.config().setDocumentTitle(reportFileName);
htmlReporter.config().setEncoding("utf-8");
htmlReporter.config().setReportName(reportFileName);
htmlReporter.config().setTimeStampFormat("EEEE, MMMM dd, yyyy, hh:mm a
('zzz')");

```

```

    extent = new ExtentReports();
    extent.attachReporter(htmlReporter);

    //Set environment details
        extent.setSystemInfo("OS", "Windows");
        extent.setSystemInfo("AUT", "QA");

    return extent;
}

//Create the report path
private static String getReportPath (String path) {
    File testDirectory = new File(path);
    if (!testDirectory.exists()) {
        if (testDirectory.mkdir()) {
            System.out.println("Directory: " + path + " is created!");
            return reportFileLocation;
        } else {
            System.out.println("Failed to create directory: " + path);
            return System.getProperty("user.dir");
        }
    }
} else {

```

```

        System.out.println("Directory already exists: " + path);
    }

    return reportFileLocation;
}

}

```

ExtentTestManager.java

```

package com.Listeners;

import java.util.HashMap;
import java.util.Map;
import com.aventstack.extentreports.ExtentReports;
import com.aventstack.extentreports.ExtentTest;

public class ExtentTestManager {

    static Map<Integer, ExtentTest> extentTestMap = new HashMap<Integer,
ExtentTest>();

    static ExtentReports extent = ExtentManager.getInstance();

    public static synchronized ExtentTest getTest() {

        return (ExtentTest) extentTestMap.get((int) (long)
(Thread.currentThread().getId()));
    }

    public static synchronized void endTest() {

        extent.flush();
    }
}

```

```

        public static synchronized ExtentTest startTest(String testName) {

            ExtentTest test = extent.createTest(testName);

            extentTestMap.put((int) (long) (Thread.currentThread().getId()), test);

            return test;

        }

    }

```

TestListener.java

```

package com.Listeners;

import java.io.File;
import java.io.FileNotFoundException;
import java.io.IOException;
import java.text.SimpleDateFormat;
import org.openqa.selenium.OutputType;
import org.openqa.selenium.TakesScreenshot;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.io.FileHandler;
import org.testng.ITestContext;
import org.testng.ITestListener;
import org.testng.ITestResult;
import com.aventstack.extentreports.MediaEntityBuilder;
import com.aventstack.extentreports.Status;
import com.aventstack.extentreports.model.Log;
import org.apache.log4j.Logger;

public class TestListener implements ITestListener {

    private static Logger log = Logger.getLogger(Log.class.getName());

```

```

public void onStart(ITestContext context) {
    System.out.println("*** Test Suite " + context.getName() + " started ***");
}

public void onFinish(ITestContext context) {
    System.out.println(("*** Test Suite " + context.getName() + " ending ***"));
    ExtentTestManager.endTest();
    ExtentManager.getInstance().flush();
}

public void onTestStart(ITestResult result) {
    System.out.println(("*** Running test method " +
result.getMethod().getMethodName() + "..."));
    ExtentTestManager.startTest(result.getMethod().getMethodName());
}

public void onTestSuccess(ITestResult result) {
    System.out.println("*** Executed " + result.getMethod().getMethodName()
+ " test successfully...");
    ExtentTestManager.getTest().log(Status.PASS, "Test passed");
}

public void onTestFailure(ITestResult result) {
    log.info("*** Test execution " + result.getMethod().getMethodName() + "
failed...");
    log.info((result.getMethod().getMethodName() + " failed!"));

    //ITestContext context = result.getTestContext();

    WebDriver driver = (WebDriver)
result.getTestContext().getAttribute("driver");

    String targetLocation = null;

```

```

        String testClassName = result.getInstanceName().trim();

        String timeStamp = new
SimpleDateFormat("yyyy.MM.dd.HH.mm.ss").format(new java.util.Date()); // get timestamp

        String testMethodName = result.getName().toString().trim();

        String screenShotName = testMethodName + timeStamp + ".png";

        String fileSeperator = System.getProperty("file.separator");

        String reportsPath = System.getProperty("user.dir") + fileSeperator +
"TestReport" + fileSeperator
                                + "screenshots";

        log.info("Screen shots reports path - " + reportsPath);

        try {

            File file = new File(reportsPath + fileSeperator + testClassName); //
Set

                                                                    // screenshots

                                                                    // folder

            if (!file.exists()) {

                if (file.mkdirs()) {

                    log.info("Directory: " + file.getAbsolutePath() + " is
created!");

                } else {

                    log.info("Failed to create directory: " +
file.getAbsolutePath());

                }

            }

        }

        File screenshotFile = ((TakesScreenshot)
driver).getScreenshotAs(OutputType.FILE);

        targetLocation = reportsPath + fileSeperator + testClassName +
fileSeperator + screenShotName; // define

```

```

        // location
        File targetFile = new File(targetLocation);

        log.info("Screen shot file location - " +
screenshotFile.getAbsolutePath());

        log.info("Target File location - " + targetFile.getAbsolutePath());
        FileHandler.copy(screenshotFile, targetFile);

    } catch (FileNotFoundException e) {
        log.info("File not found exception occurred while taking screenshot "
+ e.getMessage());
    } catch (Exception e) {
        log.info("An exception occurred while taking screenshot " +
e.getCause());
    }

    // attach screenshots to report
    try {
        ExtentTestManager.getTest().fail("Screenshot",

MediaEntityBuilder.createScreenCaptureFromPath(targetLocation).build());
    } catch (IOException e) {
        log.info("An exception occured while taking screenshot " +
e.getCause());
    }

    ExtentTestManager.getTest().log(Status.FAIL, "Test Failed");
}

public void onTestSkipped(ITestResult result) {
    System.out.println("*** Test " + result.getMethod().getMethodName() + "
skipped...");

    ExtentTestManager.getTest().log(Status.SKIP, "Test Skipped");
}

```

```

        public void onTestFailedButWithinSuccessPercentage(ITestResult result) {

            System.out.println("*** Test failed but within percentage % " +
result.getMethod().getMethodName());

        }

    }
}

```

Testing.xml

```

<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE suite SYSTEM "https://testng.org/testng-1.0.dtd">

<suite name="Suite">
    <listeners>
        <listener class-
name="com.Listeners.TestListener"></listener>
    </listeners>

    <test thread-count="5" name="Test">
        <packages>
            <package name="com.Practice"/>
        </packages>
    </test> <!-- Test -->
</suite> <!-- Suite -->

```