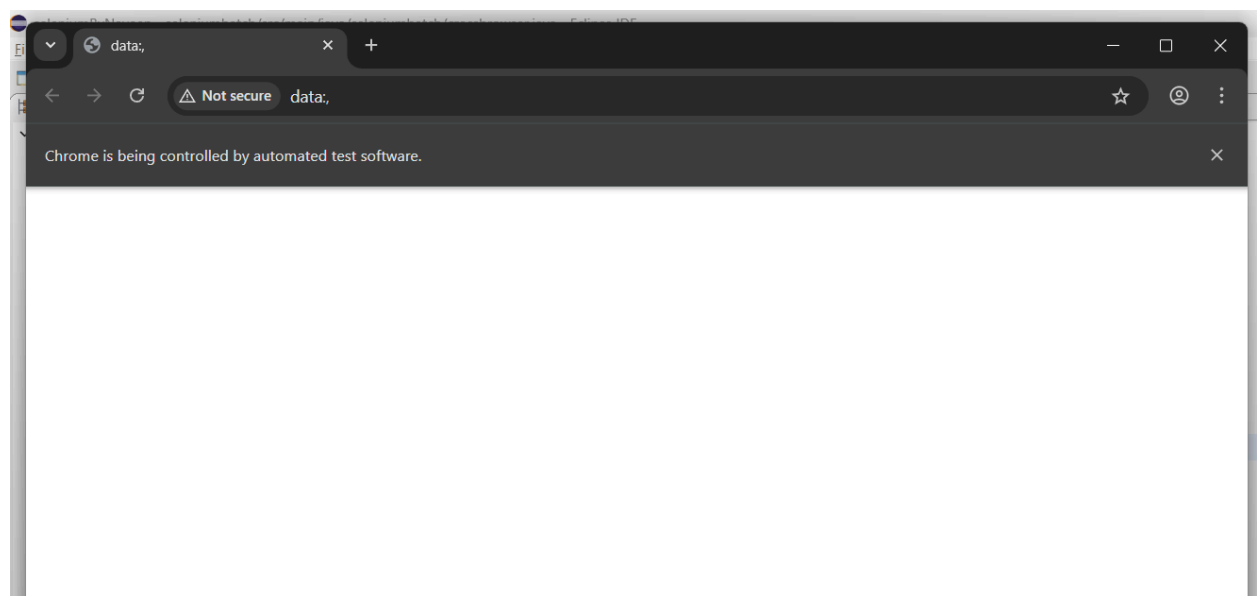


Launch browser using top casting-

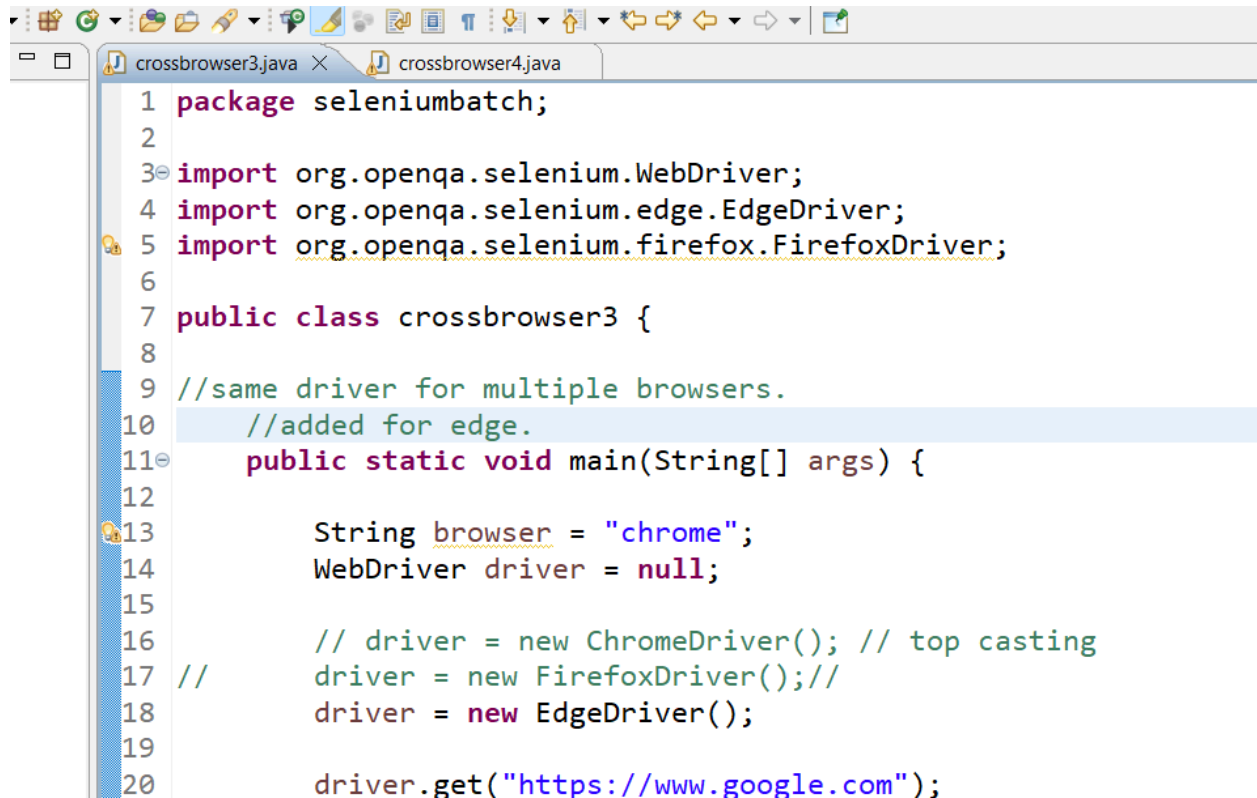
```
crossbrowser.java X
1 package seleniumbatch;
2
3 import org.openqa.selenium.WebDriver;
4 import org.openqa.selenium.chrome.ChromeDriver;
5
6 public class crossbrowser {
7
8     public static void main(String[] args) {
9
10         String browser="chrome";
11
12         //top casting-
13
14         WebDriver driver=new ChromeDriver();
15     }
16
17 }
18
```



Same driver for multiple browsers-

```
1 package seleniumbatch;
2
3 import org.openqa.selenium.WebDriver;
4 import org.openqa.selenium.firefox.FirefoxDriver;
5
6 public class crossbrowser2 {
7
8 //same driver for multiple browsers.
9 //ff browser.
10 public static void main(String[] args) {
11
12     String browser = "chrome";
13     WebDriver driver = null;
14
15     // driver = new ChromeDriver(); // top casting
16     driver = new FirefoxDriver();
17
18     driver.get("https://www.google.com");
19
20     // get the title of the page:
21     String actTitle = driver.getTitle();
22     System.out.println("page title: " + actTitle);
23
24     // checkpoint/validation point/assertion: act vs exp result:
25     if (actTitle.equals("Google")) {
26         System.out.println("title is correct: PASS");
27     } else {
28         System.out.println("title is not correct: FAIL");
29     }
30
31     // Automation steps + Checkpoint ==> Automation Testing
32
33     // close the browser:
34     driver.quit();
35 }
36
37 }
38
```

Can connect to edge also-



```
1 package seleniumbatch;
2
3 import org.openqa.selenium.WebDriver;
4 import org.openqa.selenium.edge.EdgeDriver;
5 import org.openqa.selenium.firefox.FirefoxDriver;
6
7 public class crossbrowser3 {
8
9 //same driver for multiple browsers.
10 //added for edge.
11 public static void main(String[] args) {
12
13     String browser = "chrome";
14     WebDriver driver = null;
15
16     // driver = new ChromeDriver(); // top casting
17 // driver = new FirefoxDriver(); //
18     driver = new EdgeDriver();
19
20     driver.get("https://www.google.com");
```

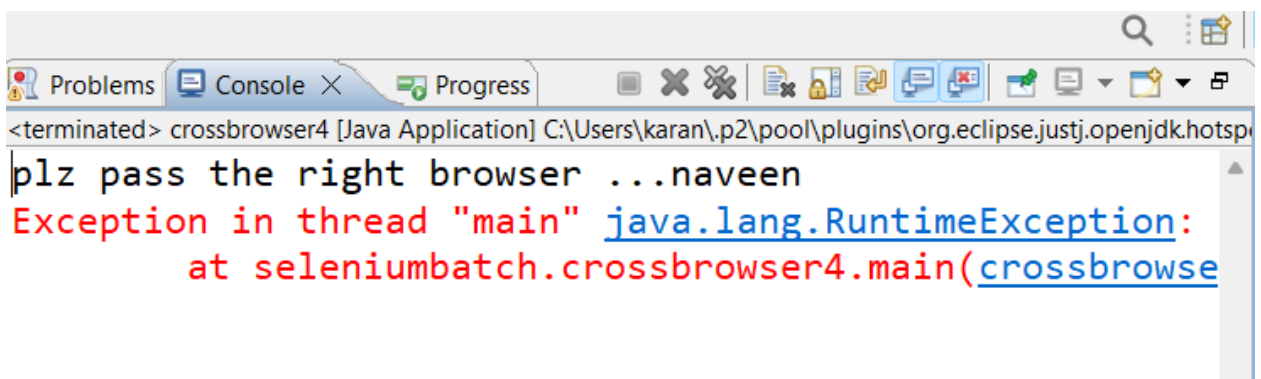
Throw error when we pass wrong browser-

```
crossbrowser4.java X
1 package seleniumbatch;
2
3 import org.openqa.selenium.WebDriver;
4 import org.openqa.selenium.chrome.ChromeDriver;
5 import org.openqa.selenium.edge.EdgeDriver;
6 import org.openqa.selenium.firefox.FirefoxDriver;
7 import org.openqa.selenium.safari.SafariDriver;
8
9 public class crossbrowser4 {
10
11     //best code for cross browser.
12     //just change browser name in one line and we are done.
13
14     static WebDriver driver; // null
15
16     public static void main(String[] args) {
17
18         String browser = "naveen";
19
20         switch (browser.trim().toLowerCase()) {
21             case "chrome":
22                 driver = new ChromeDriver();
23                 break;
24             case "firefox":
25                 driver = new FirefoxDriver();
26                 break;
27             case "edge":
28                 driver = new EdgeDriver();
29                 break;
```

```

28         driver = new EdgeDriver();
29         break;
30     case "safari":
31         driver = new SafariDriver();
32         break;
33     default:
34         System.out.println("plz pass the right browser ..." + browser);
35         throw new RuntimeException("Invalid Browser");
36     }
37
38     driver.get("https://www.google.com");
39
40     // get the title of the page:
41     String actTitle = driver.getTitle();
42     System.out.println("page title: " + actTitle);
43
44     // checkpoint/validation point/assertion: act vs exp result:
45     if (actTitle.equals("Google")) {
46         System.out.println("title is correct: PASS");
47     } else {
48         System.out.println("title is not correct: FAIL");
49     }
50
51     // Automation steps + Checkpoint ==> Automation Testing
52
53     // Automation steps + Checkpoint ==> Automation Testing
54
55     // close the browser:
56     driver.quit();
57 }
58

```



The screenshot shows the Eclipse IDE interface. The top toolbar includes icons for search, run, and other IDE functions. Below the toolbar, there are tabs for 'Problems', 'Console', and 'Progress'. The 'Console' tab is active, displaying the following output:

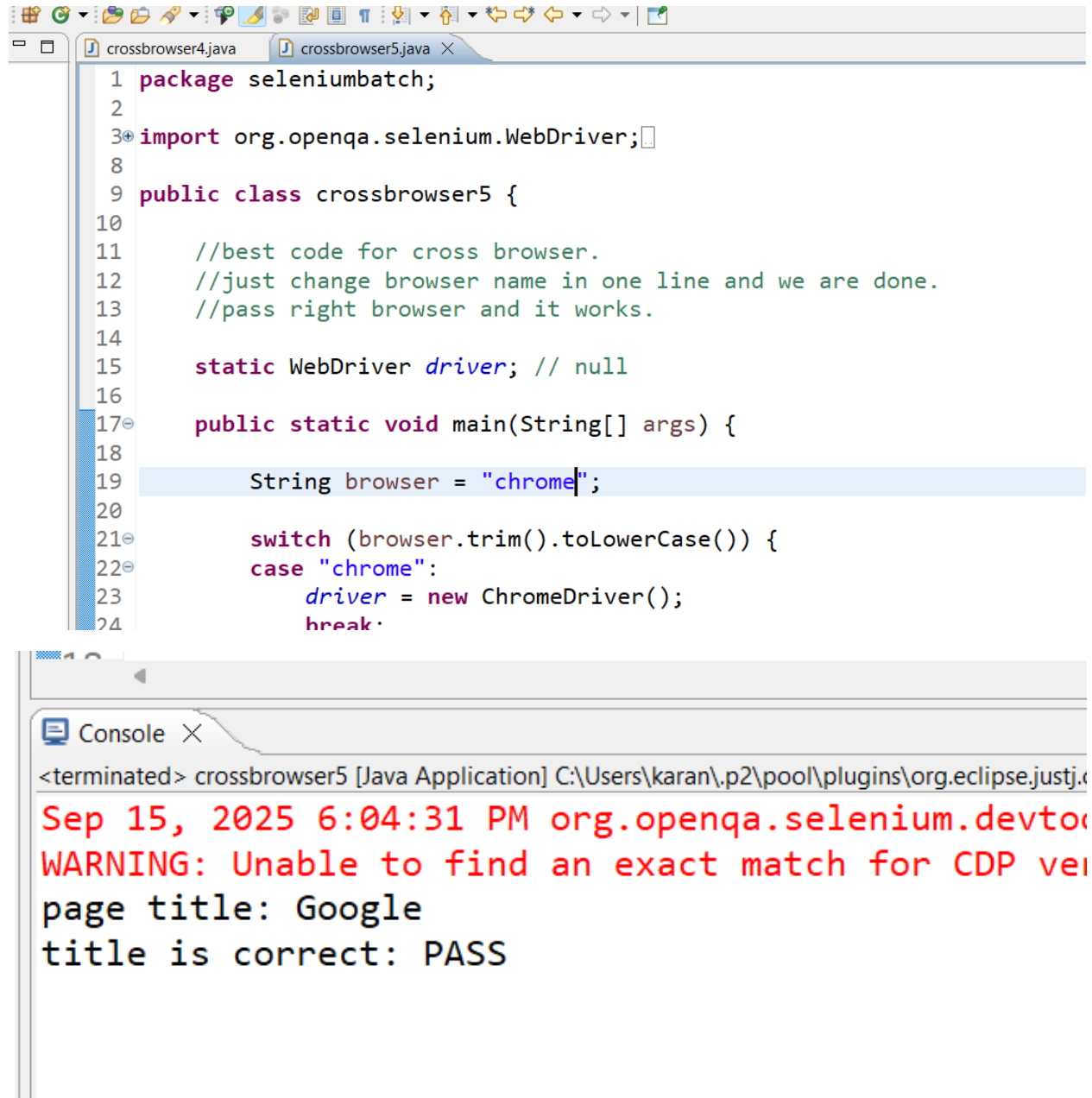
```

<terminated> crossbrowser4 [Java Application] C:\Users\karan\.p2\pool\plugins\org.eclipse.justj.openjdk.hotsp
plz pass the right browser ...naveen
Exception in thread "main" java.lang.RuntimeException:
    at seleniumbatch.crossbrowser4.main(crossbrowse

```

Pass right browser and it works-

Change line 19 rest same-



The screenshot shows the Eclipse IDE with two tabs: `crossbrowser4.java` and `crossbrowser5.java`. The `crossbrowser5.java` tab is active, displaying the following Java code:

```
1 package seleniumbatch;
2
3 import org.openqa.selenium.WebDriver;
4
5
6
7
8
9 public class crossbrowser5 {
10
11     //best code for cross browser.
12     //just change browser name in one line and we are done.
13     //pass right browser and it works.
14
15     static WebDriver driver; // null
16
17     public static void main(String[] args) {
18
19         String browser = "chrome";
20
21         switch (browser.trim().toLowerCase()) {
22             case "chrome":
23                 driver = new ChromeDriver();
24                 break;
```

The console output at the bottom shows the following messages:

```
<terminated> crossbrowser5 [Java Application] C:\Users\karan\.p2\pool\plugins\org.eclipse.justj.c
Sep 15, 2025 6:04:31 PM org.openqa.selenium.devtools
WARNING: Unable to find an exact match for CDP ver
page title: Google
title is correct: PASS
```

Top cast options-

```
1 package seleniumbatch;
2
3 public class topcastoptions1 {
4
5     public static void main(String[] args) {
6
7         //1. CD = CD only chrome
8         //ChromeDriver driver = new ChromeDriver();
9
10        //2. WD d = new CD
11        //valid and recommended
12        //only for local execution
13        //WebDriver driver = new ChromeDriver();
14
15
16        //3. SC d = new CD();
17        //valid but not recommended
18        //SearchContext driver = new ChromeDriver();
19
20        //4. WD d = new RWD();
21        //valid and recommended: remote execution
22        //used when we want to run test cases in remote machine, cloud, AWS, grid, VM
23        //WebDriver driver = new RemoteWebDriver(remoteAddress, capabilities);//os/browser
24
25        //5. SC d = new RWD();
26        //valid but not recommended
27        //SearchContext driver = new RemoteWebDriver(remoteAddress, capabilities);
28
29
30        //6. RWD d = new CD();
31        //local
32        //valid and recommended
33        //RemoteWebDriver driver = new ChromeDriver();
34
35        //7. Chromium d = new CD();
36        //local
37        //valid and not recommended: works only for chromium based browser: chrome/edge
38        //ChromiumDriver driver = new ChromeDriver();
39        //driver = new EdgeDriver();
40
41        //8. RWD d = RWD
42        //valid but only for remote execution
43        //RemoteWebDriver driver = new RemoteWebDriver(new URL("192.178.11.2:4444/wd/hub"),
44        //capabilities);//os/browser
45
46
47    }
48 }
49
50
```



