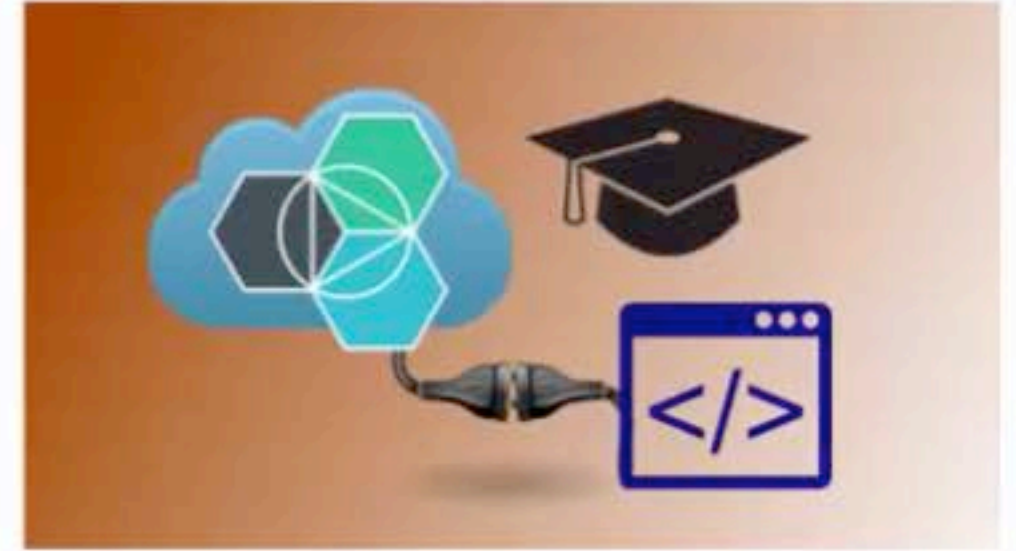


Worker Apps



Learning Objectives:

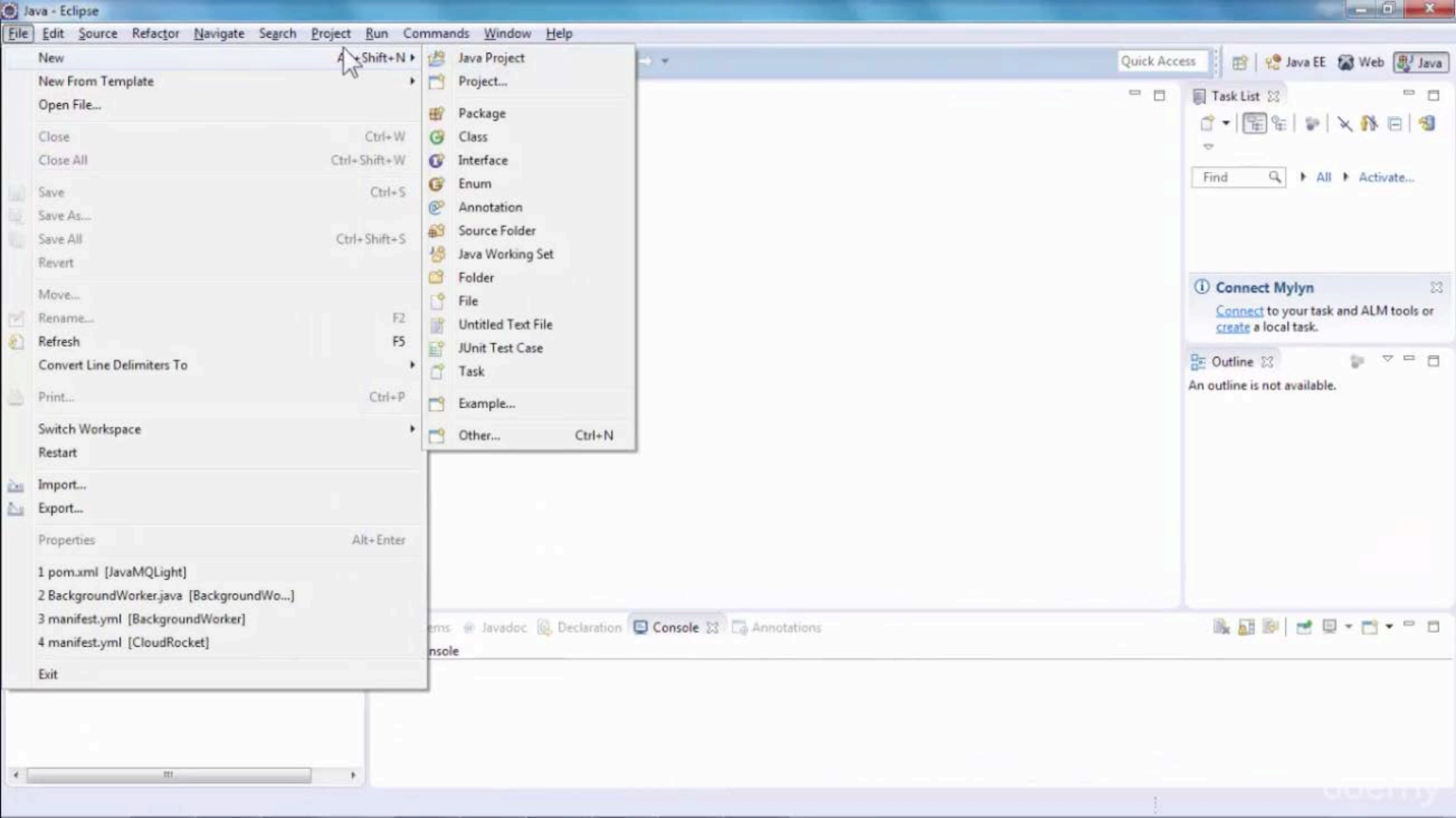
1. Concept of worker apps
2. Walkthrough of a JAVA worker app

Worker apps

- Worker apps are processes that do not have a URL/route to it
Used for background processing
E.g., a worker app for sending email reminders to customers
- Created by defining a standalone program e.g., Java class with main()
Pushed to cloud foundry with the *-no-route*

Worker application - creation

1. Create a new project **NoRouteApp**
2. Create the package and the **class** with **main** method
3. Run the code as Java application
4. Export the application as a **Runnable Jar**
5. Create the **manifest** file
6. **cf push** with no-route option
6. **cf logs NoRouteApp** should print the counter on screen every 5 secs



☒ Use default location

Location: C:\Users\rajeev\Desktop\Bluemix Course\workspace\NoRol

Browse...

JRE

☒ Use an execution environment JRE:

JavaSE-1.7

☐ Use a project specific JRE:

jdk1.7

☐ Use default JRE (currently 'jdk1.7')

[Configure JREs...](#)

Project layout

☐ Use project folder as root for sources and class files

☒ Create separate folders for sources and class files

[Configure default...](#)

Working sets

☐ Add project to working sets

Working sets:

Select...



< Back

Next >

Finish

Cancel




Package Explorer

- BackgroundWorker
- CloudRocket
- JavaMemcached
- JavaMQLight
- NoRouteApp
 - src
 - com.acloudfan.noroute
 - NorouteMain.java
 - NorouteMain
 - JRE System Library [JavaSE-1.7]

NorouteMain.java

```
1 package com.acloudfan.noroute
2
3 public class NorouteMain {
4
5 }
6
```



```
// Main method
// Simply print the counter
public static void main(String[] args){
```

```
    int counter = 0;
```

```
    while(true){
```

```
        //1. Print the value of counter to OUT
```

```
        System.out.println("Counter Value = "+counter);
```

```
        //2. Increment the counter
```

```
        counter++;
```

```
        //3. Sleep for 5 seconds
```

```
        try{Thread.sleep(5000);}catch(Exception e){}
```

```
    }
```

```
}
```

```
}
```


com.acloadf
Noroutel
Noro
JRE System Libra

- Copy Qualified Name
- Paste Ctrl+V
- Delete Delete
- Remove from Context Ctrl+Alt+Shift+Down
- Build Path
- Source Alt+Shift+S
- Refactor Alt+Shift+T
- Import...
- Export...
- References
- Declarations
- Refresh F5
- Assign Working Sets...
- Run As
- Debug As
- Profile As
- Validate
- Restore from Local History...
- Java EE Tools
- Web Services

```
= 0;  
{  
    print the value of counter to OUT  
    out.println("Counter Value = "+counter);  
    increment the counter  
    r++;  
    sleep for 5 seconds  
    read.sleep(5000);}catch(Exception e){}
```

- 1 Run on Server
- 2 Java Application Alt+Shift+X, J
- 3 PHP Script Alt+Shift+X, H
- 4 PHP Server
- 5 Run on Mobile Browser Simulator
- Run Configurations...

2015, 10

com.acloudfan.noroute
NorouteMain.java
NorouteMain
JRE System Library [JavaSE-1.7]

```
8  
9      int counter = 0;  
10  
11      while(true){  
12          //1. Print the value of counter to OUT  
13          System.out.println("Counter Value = "+counter);  
14  
15          //2. Increment the counter  
16          counter++;  
17  
18          //3. Sleep for 5 seconds  
19          try{Thread.sleep(5000);}catch(Exception e){}  
20      }  
21  
22  }  
23 }  
24
```

2 Java Application

Alt+Shift+X, J

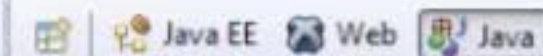
Problems @ Javadoc Declaration Console Annotations

No consoles to display at this time.

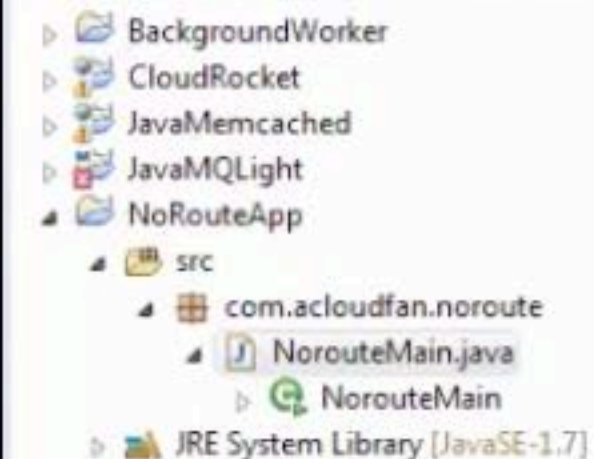
Counter Value = 0



Quick Access



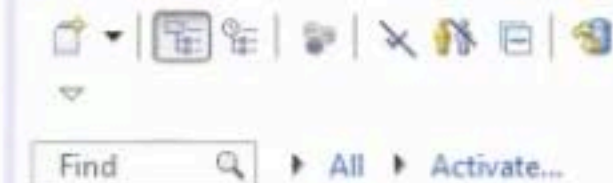
Package Explorer



NorouteMain.java

```
1 package com.acloudfan.noroute;
2
3 public class NorouteMain {
4
5     // Main method
6     // Simply print the counter
7     public static void main(String[] args){
8
9         int counter = 0;
10
11         while(true){
12             //1. Print the value of counter to OUT
13             System.out.println("Counter Value = "+counter);
14
15             //2. Increment the counter
16             counter++;
17
18             //3. Sleep for 5 seconds
19             try{Thread.sleep(5000);}catch(Exception e){}
20         }
21     }
22 }
23 }
24 }
```

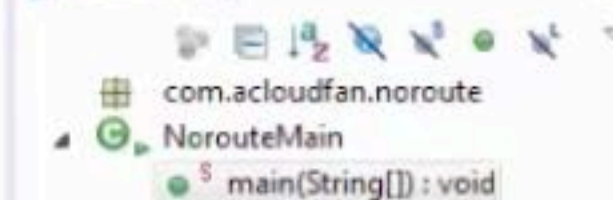
Task List



Connect Mylyn

[Connect](#) to your task and ALM tools or
[create](#) a local task.

Outline

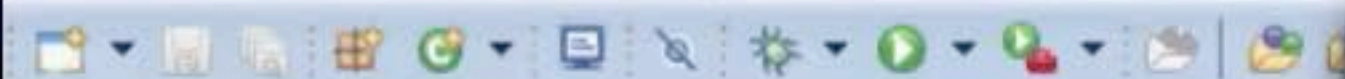


Problems Javadoc Declaration Console Annotations

<terminated> NorouteMain [Java Application] C:\Program Files\Java\jre7\bin\javaw.exe (Nov 27, 2015, 10:12:32 PM)

Counter Value = 0

Counter Value = 1



Package Explorer


- BackgroundWorker
- CloudRocket
- JavaMemcached
- JavaMQLight
- NoRouteApp
 - src
 - com.acloudfan.noroute
 - NorouteMain.java
 - NorouteMain
 - JRE System Library [JavaSE-1.7]

NorouteMain.java

```
1 pa
2
3 pu
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23 }
24
```

Runnable JAR File Export

Runnable JAR File Specification

 The export destination will be relative to your workspace.

Launch configuration:

NorouteMain - NoRouteApp

Export destination:

NoRouteApp\NoRouteApp.jar

Browse...

Library handling:

- ☒ Extract required libraries into generated JAR
- ☐ Package required libraries into generated JAR
- ☐ Copy required libraries into a sub-folder next to the generated JAR

☒ Save as ANT script

ANT script location: <top\Bluemix Course\workspace\NoRouteApp\build.xml

Browse...

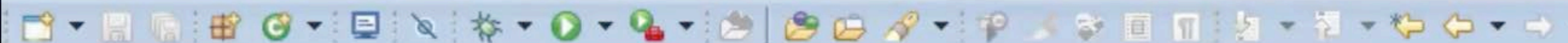


< Back

Next >

Finish

Cancel



Package Explorer

- BackgroundWorker
- CloudRocket
- JavaMemcached
- JavaMQLight
- NoRouteApp
 - src
 - com.acloudfan.noroute
 - NorouteMain.java
 - NorouteMain
 - JRE System Library [JavaSE-1.7]
 - build.xml
 - NoRouteApp.jar

NorouteMain.java

```
1 package com.acloudfan.noroute;
2
3 public class NorouteMain {
4
5     // Main method
6     // Simply print the counter
7     public static void main(String[] args){
8
9         int counter = 0;
10
11         while(true){
12             //1. Print the value of counter to OUT
13             System.out.println("Counter Value = "+counter);
14
15             //2. Increment the counter
16             counter++;
17
18             //3. Sleep for 5 seconds
19             try{Thread.sleep(5000);}catch(Exception e){}
20         }
21     }
```



```
1 <?xml version="1.0" encoding="UTF-8" standalone="no"?>
2 <project default="create_run_jar" name="Create Runnable Jar for Project NoRouteApp">
3     <!--this file was created by Eclipse Runnable JAR Export Wizard-->
4     <!--ANT 1.7 is required -->
5     <!--define folder properties-->
6     <property name="dir.buildfile" value="."/>
7     <property name="dir.workspace" value="${dir.buildfile}/../"/>
8     <property name="dir.jarfile" value="${dir.buildfile}"/>
9     <target name="create_run_jar">
10         <jar destfile="${dir.jarfile}/NoRouteApp.jar" filesetmanifest="mergewithoutmain">
11             <manifest>
12                 <attribute name="Main-Class" value="com.acloudfan.noroute.NorouteMain"/>
13                 <attribute name="Class-Path" value="."/>
14             </manifest>
15             <fileset dir="${dir.jarfile}/bin"/>
16         </jar>
17     </target>
18 </project>
19
```



manifest.yml ✕

```
1 applications:
2   - path: NoRouteApp.jar
3     memory: 256M
4     disk_quota: 1024M
5     instances: 1
6     name: NoRouteApp
```



```
$ cf push --no-route
Using manifest file C:\Users\rajeev\Desktop\Bluemix Course\workspace\NoRouteApp\manifest.yml
Updating app NoRouteApp in org Cloud Rocket / space Development as sakhuja4@gmail.com...
OK

App NoRouteApp is a worker, skipping route creation
Uploading NoRouteApp...
Uploading app files from: C:\Users\rajeev\Desktop\Bluemix Course\workspace\NoRouteApp\NoRouteApp.jar
Uploading 1.7K, 6 files
Done uploading
```

```
$ cf logs NoRouteApp
```

```
$ cf logs NoRouteApp
```

```
Connected, tailing logs for app NoRouteApp in org Cloud Rocket / space Development as sa
```

```
2015-11-27T22:30:57.19-0500 [App/0]          OUT Counter Value = 10
```

```
2015-11-27T22:31:02.19-0500 [App/0]          OUT Counter Value = 11
```


Summary

- Workers apps are background processes that do not have a URL/route to it
- Worker apps are created by pushing the app with cf push command with `–no-route` option