

# 18655 Lab3

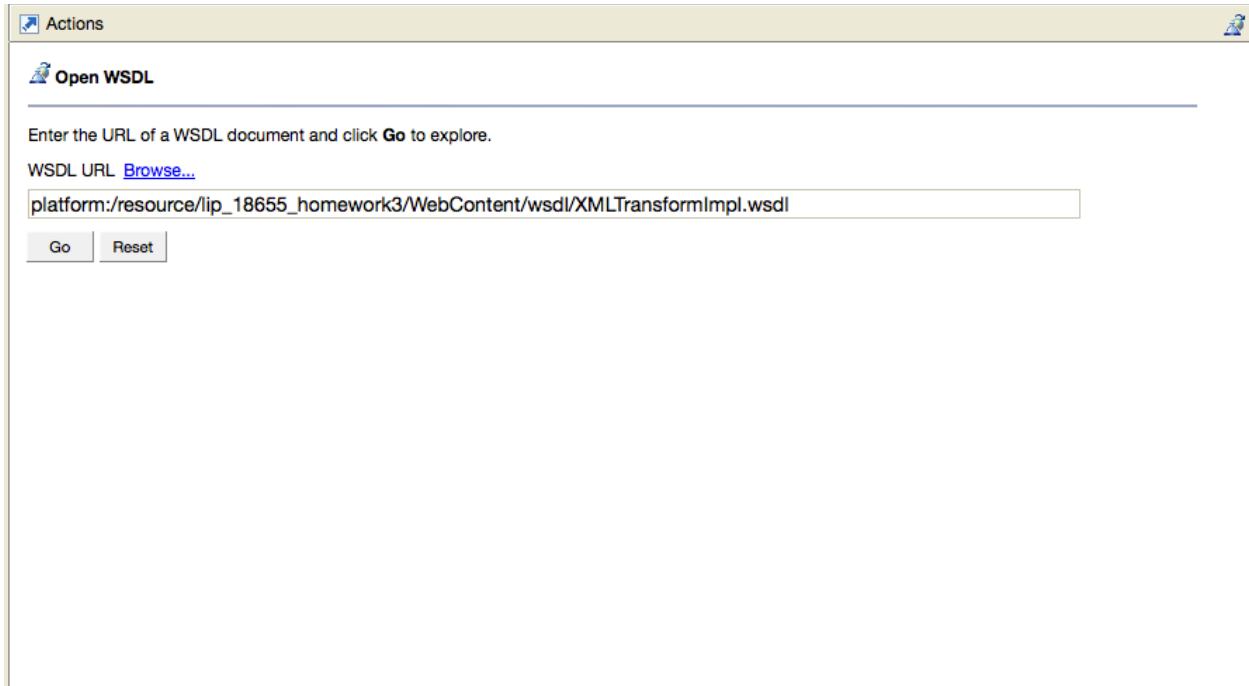
## ScreenShot and Some Result

Part A : Write XML parser to auto generate Java code


You can see this part results in input.xml, style.xsl and output.xml.

Part B : Develop Web Service Interface and implementation of XML transform.

1.0 Set the Web Service and use it



Actions

 Open WSDL

Enter the URL of a WSDL document and click **Go** to explore.

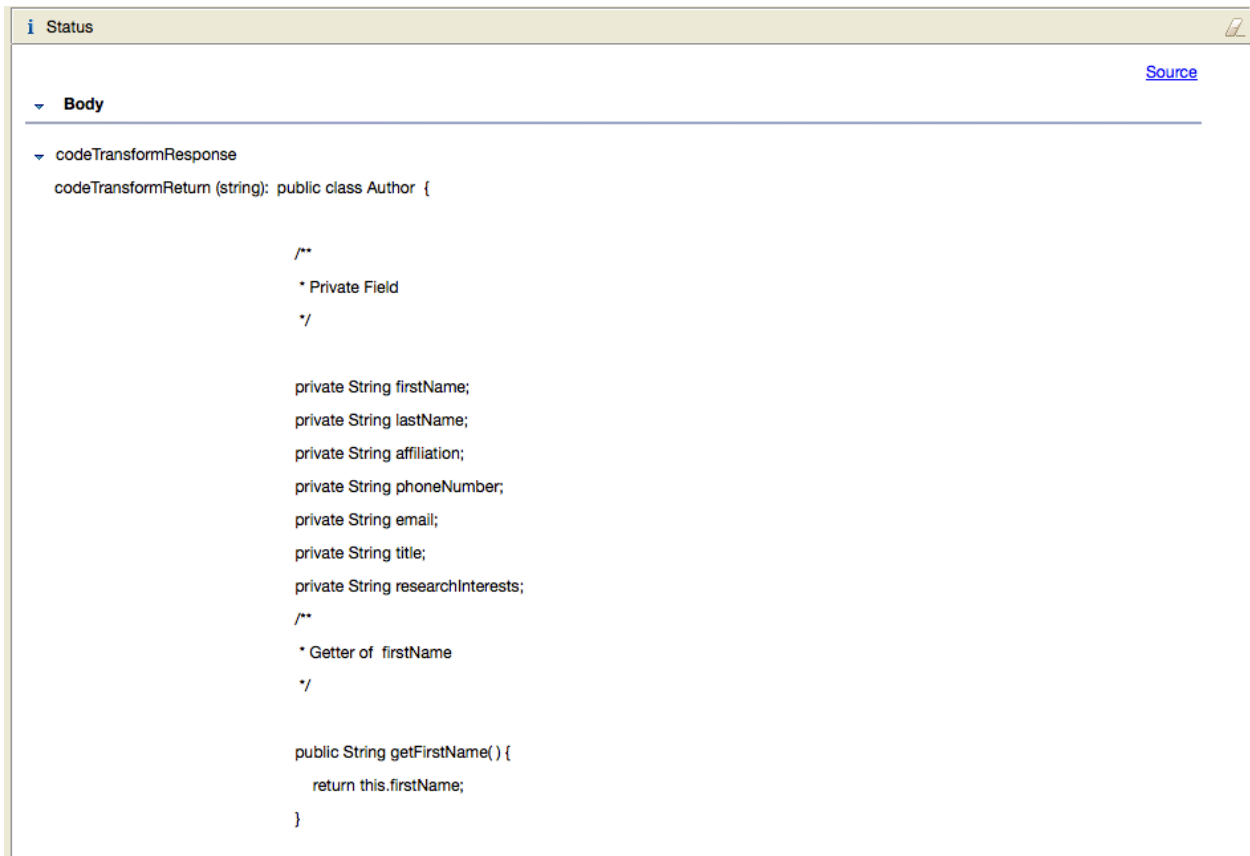
WSDL URL [Browse...](#)

platform:/resource/lip\_18655\_homework3/WebContent/wsdl/XMLTransformImpl.wsdl

Go Reset


## 1.1 input the file name.

Notice, if you use Mac OS and want to test service, please put “input.xml” and “style.xsl” in “Applications/Eclipse.app/Contents/MacOS”.



The screenshot shows a code editor window with a status bar at the top. The status bar has a small 'i' icon and the word 'Status'. On the right side of the status bar, there is a small icon of a notepad. Below the status bar, there is a tab labeled 'Body'. The main area of the editor displays a Java class definition for 'Author'. The code is as follows:

```
codeTransformReturn (string): public class Author {  
  
    /**  
     * Private Field  
     */  
  
    private String firstName;  
    private String lastName;  
    private String affiliation;  
    private String phoneNumber;  
    private String email;  
    private String title;  
    private String researchInterests;  
    /**  
     * Getter of firstName  
     */  
  
    public String getFirstName() {  
        return this.firstName;  
    }  
}
```

```
i Status 

/**
 * Getter of  lastName
 */


public String getLastName() {
    return this.lastName;
}

/**
 * Getter of  affiliation
 */

public String getAffiliation() {
    return this.affiliation;
}

/**
 * Getter of  phoneNumber
 */

public String getPhoneNumber() {
    return this.phoneNumber;
}
```

```
i Status 

/**
 * Getter of  email
 */

public String getEmail() {
    return this.email;
}

/**
 * Getter of  title
 */

public String getTitle() {
    return this.title;
}

/**
 * Getter of  researchInterests
 */

public String getResearchInterests() {
    return this.researchInterests;
}
```

i Status



```
/**
 * Setter of affiliation
 */

public void setAffiliation(String affiliation) {
    this.affiliation = affiliation;
}

/**
 * Setter of phoneNumber
 */

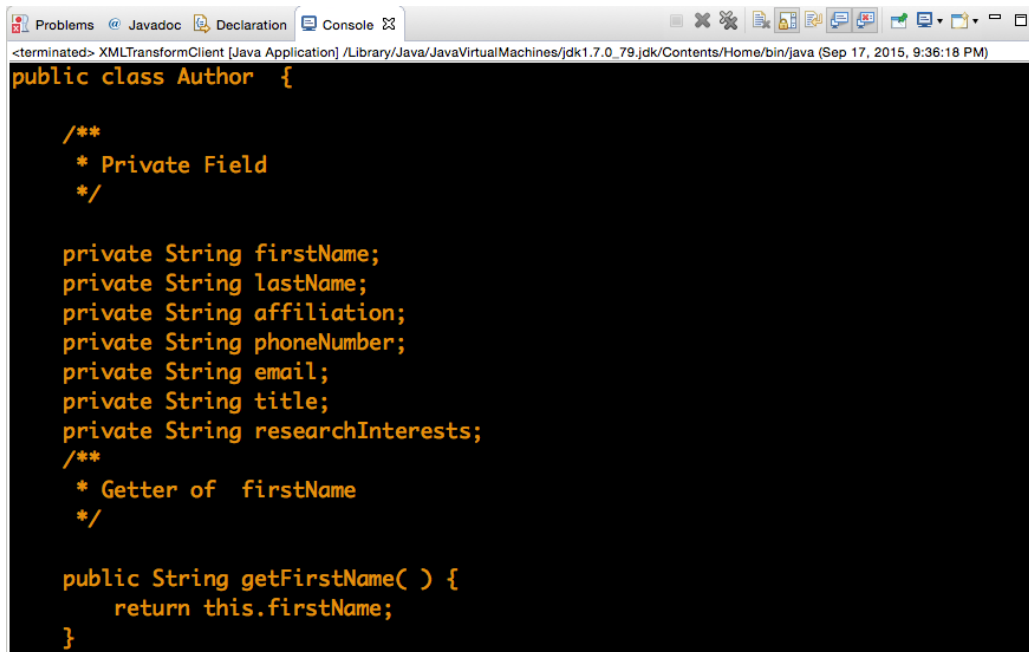
public void setPhoneNumber(String phoneNumber) {
    this.phoneNumber = phoneNumber;
}

/**
 * Setter of email
 */

public void setEmail(String email) {
    this.email = email;
}
```

## 1.2 Develop Java Web Service Client without tool to get the service.

Below is screen shot from Eclipse terminal

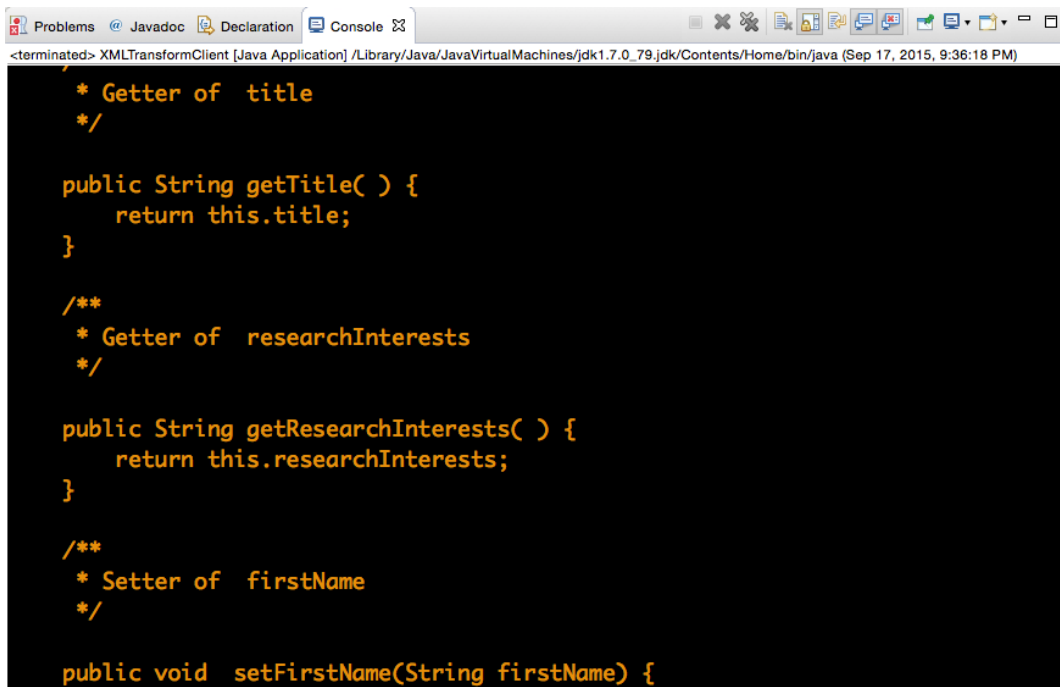


```
<terminated> XMLTransformClient [Java Application] /Library/Java/JavaVirtualMachines/jdk1.7.0_79.jdk/Contents/Home/bin/java (Sep 17, 2015, 9:36:18 PM)
public class Author {

    /**
     * Private Field
     */

    private String firstName;
    private String lastName;
    private String affiliation;
    private String phoneNumber;
    private String email;
    private String title;
    private String researchInterests;
    /**
     * Getter of firstName
     */

    public String getFirstName( ) {
        return this.firstName;
    }
}
```



```
        * Getter of title
        */

    public String getTitle( ) {
        return this.title;
    }

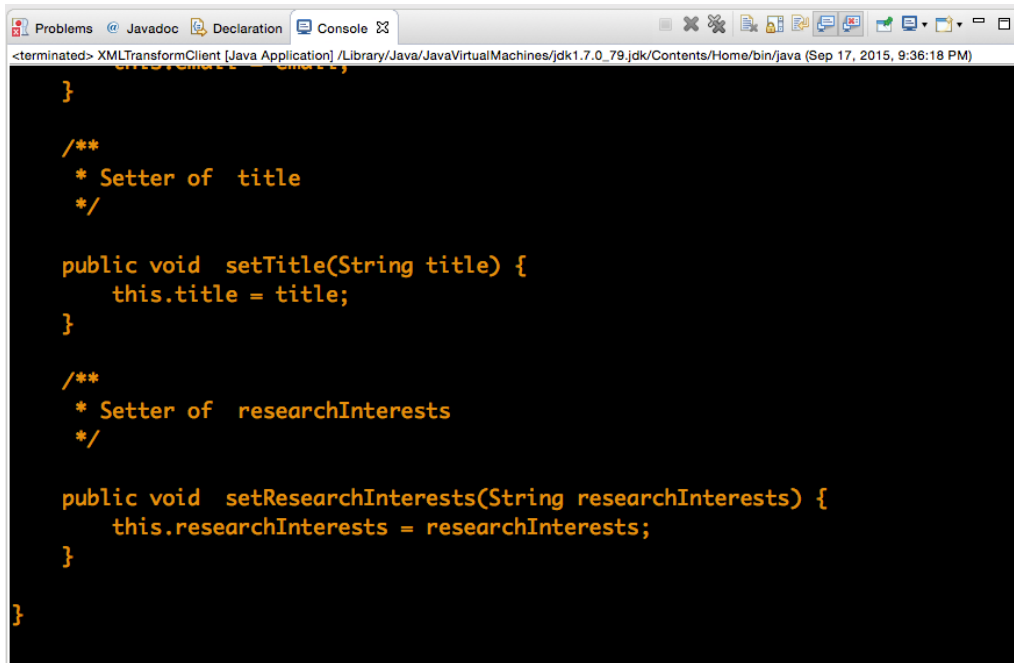
    /**
     * Getter of researchInterests
     */

    public String getResearchInterests( ) {
        return this.researchInterests;
    }

    /**
     * Setter of firstName
     */

    public void setFirstName(String firstName) {

```



```
<terminated> XMLTransformClient [Java Application] /Library/Java/JavaVirtualMachines/jdk1.7.0_79.jdk/Contents/Home/bin/java (Sep 17, 2015, 9:36:18 PM)

}

/**
 * Setter of title
 */

public void setTitle(String title) {
    this.title = title;
}

/**
 * Setter of researchInterests
 */

public void setResearchInterests(String researchInterests) {
    this.researchInterests = researchInterests;
}

}
```

### 1.3 Develop Java Web Service Client via wsimport tool

run XMLTransformPublisher.java and in terminal, input “wsimport -keep http://localhost:9999/ws/xmltransformImpl?wsdl” you can generate code for deploy your client

Below is screen shot from Eclipse console terminal

```
Problems Javadoc Declaration Console
<terminated> XMLTransformClient (1) [Java Application] /Library/Java/JavaVirtualMachines/jdk1.7.0_79.jdk/Contents/Home/bin/java (Sep 17, 2015, 9:44:14 PM)
Client Using wsimport tool
public class Author {

    /**
     * Private Field
     */

    private String firstName;
    private String lastName;
    private String affiliation;
    private String phoneNumber;
    private String email;
    private String title;
    private String researchInterests;
    /**
     * Getter of firstName
     */

    public String getFirstName( ) {
        return this.firstName;
    }
}
```

```
Problems Javadoc Declaration Console
<terminated> XMLTransformClient (1) [Java Application] /Library/Java/JavaVirtualMachines/jdk1.7.0_79.jdk/Contents/Home/bin/java (Sep 17, 2015, 9:44:14 PM)

    public String getAffiliation( ) {
        return this.affiliation;
    }

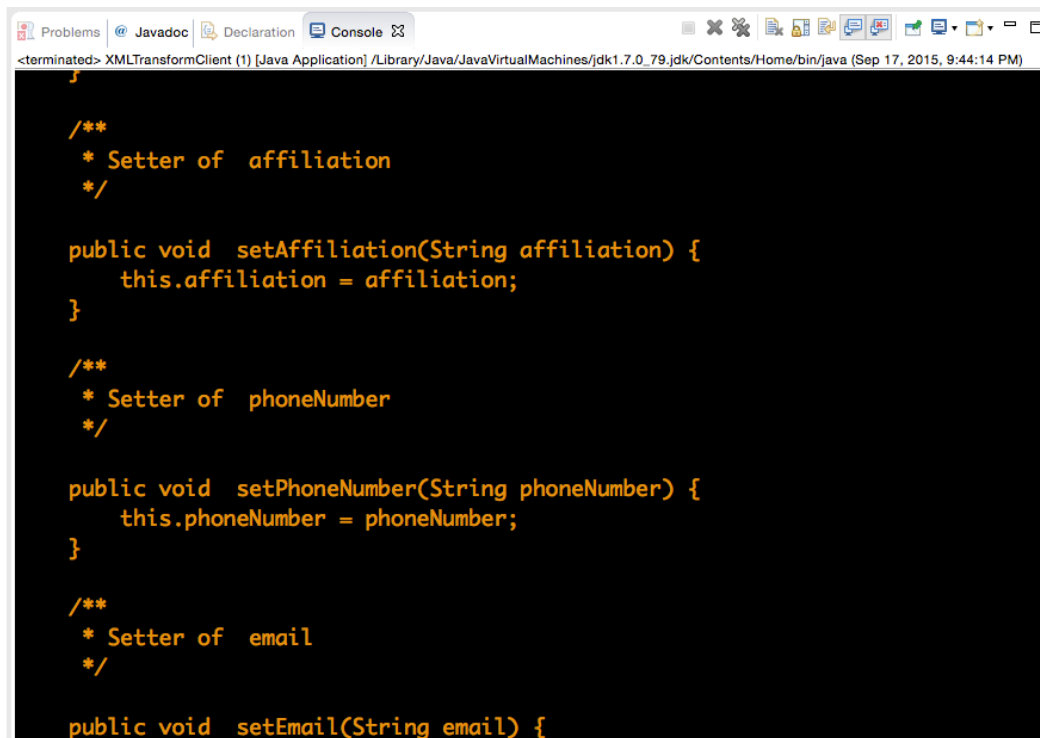
    /**
     * Getter of phoneNumber
     */

    public String getPhoneNumber( ) {
        return this.phoneNumber;
    }

    /**
     * Getter of email
     */

    public String getEmail( ) {
        return this.email;
    }

    /**
```



The screenshot shows an IDE window with tabs for Problems, Javadoc, Declaration, and Console. The Console tab is active, displaying the output of a Java application. The code shown is a partial view of a class with three setter methods: setAffiliation, setPhoneNumber, and setEmail. Each method is preceded by a Javadoc comment indicating its purpose. The code is as follows:

```
<terminated> XMLTransformClient (1) [Java Application] /Library/Java/JavaVirtualMachines/jdk1.7.0_79.jdk/Contents/Home/bin/java (Sep 17, 2015, 9:44:14 PM)

}

/**
 * Setter of affiliation
 */

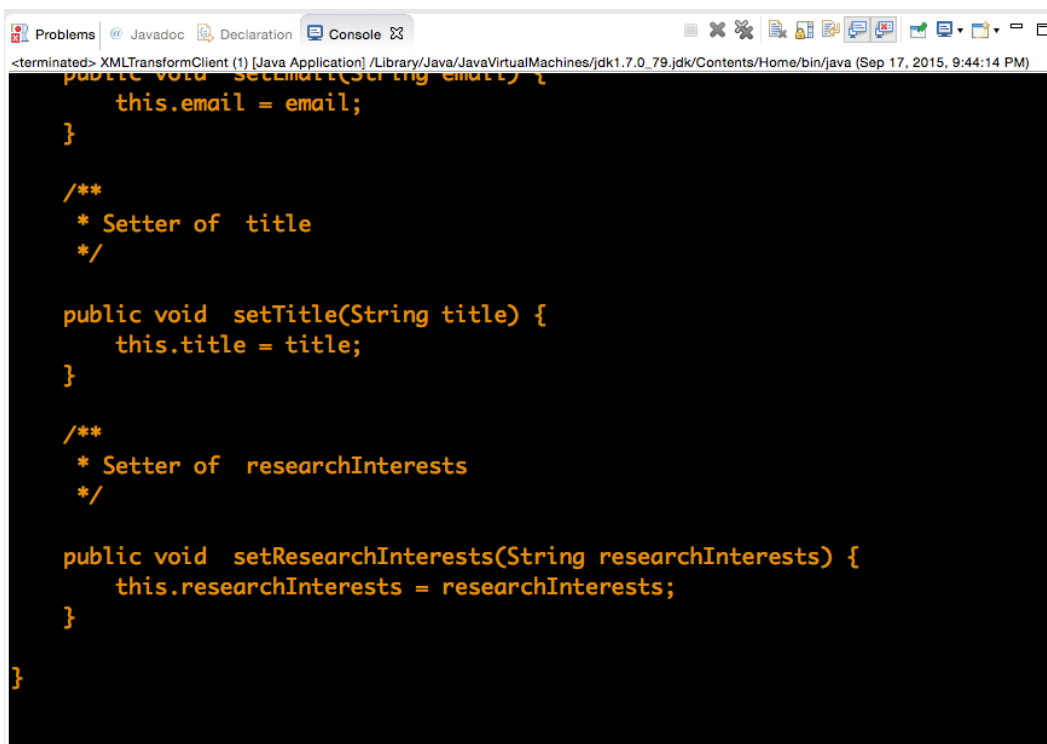
public void setAffiliation(String affiliation) {
    this.affiliation = affiliation;
}

/**
 * Setter of phoneNumber
 */

public void setPhoneNumber(String phoneNumber) {
    this.phoneNumber = phoneNumber;
}

/**
 * Setter of email
 */

public void setEmail(String email) {
```



This screenshot is a continuation of the previous one, showing the rest of the Java code in the IDE console. It includes the completion of the setEmail method and the start of two more setter methods: setTitle and setResearchInterests. The code is as follows:

```
    this.email = email;
}

/**
 * Setter of title
 */

public void setTitle(String title) {
    this.title = title;
}

/**
 * Setter of researchInterests
 */

public void setResearchInterests(String researchInterests) {
    this.researchInterests = researchInterests;
}

}
```



## Part Bonus:

## Deploy the Publication Query into published web-service

### 2.0 Get access to wsdl

The screenshot shows the 'Open WSDL' action in a web service client. It has a title bar 'Actions' and a sub-header 'Open WSDL'. Below the sub-header, it says 'Enter the URL of a WSDL document and click Go to explore.' There is a text input field labeled 'WSDL URL' with a 'Browse...' link next to it. The input field contains the URL 'platform:/resource/lip\_18655\_homework3\_bonus/WebContent/wsdl/PubSearchImpl.wsdl'. At the bottom, there are 'Go' and 'Reset' buttons.

## Use web browser in localhost for web service

### 2.1 Get all publication from one author

The screenshot shows the 'Invoke a WSDL Operation' action in a web service client. It has a title bar 'Actions' and a sub-header 'Invoke a WSDL Operation'. Below the sub-header, it says 'Enter the parameters for the WSDL operation "getAllPublication" and click Go to invoke.' There is a text input field labeled 'Endpoints' with a dropdown menu showing 'http://localhost:8080/lip\_18655\_homework3\_bonus/services/PubSearchImpl'. Below this, there is a section labeled 'Body' with a dropdown menu showing 'getAllPublication'. Under 'getAllPublication', there is a text input field labeled 'AuthorName string' with the value 'Frank Wm. Tompa'. At the bottom, there are 'Go' and 'Reset' buttons.

The screenshot also shows the 'Status' section at the bottom. It has a title bar 'Status' and a sub-header 'Status'. Below the sub-header, it says 'getAllPublicationResponse'. Under 'getAllPublicationResponse', there is a text area showing the response body: 'getAllPublicationReturn (string): key: journals/acta/RamirezTM82 mdate: 2011-01-11 author: Raúl J. Ramírez author: Frank Wm. Tompa author: J. Ian Munro title: Optimum Reorganization Points for / key: journals/acta/Tompa80 mdate: 2011-01-11 author: Frank Wm. Tompa title: A Practical Example of the Specification of Abstract Data Types. pages: 205-224 year: key: journals/acta/GottliebT74 mdate: 2011-01-11 author: C. C. Gottlieb author: Frank Wm. Tompa title: Choosing a Storage Schema. pages: 297-319 year: 3 volume: /'.

## 2.2 Get publication detail

Actions

Invoke a WSDL Operation [Source](#)

Enter the parameters for the WSDL operation "getPublicationDetail" and click **Go** to invoke.

Endpoints

http://localhost:8080/lip\_18655\_homework3\_bonus/services/PubSearchImpl

Body

getPublicationDetail

Title string

Optimum Reorganization Points for Arbitrary Database Costs.

Go

Reset

Status

[Source](#)

Body

getPublicationDetailResponse

getPublicationDetailReturn (string): key: journals/acta/RamirezTM82

mdate: 2011-01-11

author: Raúl J. Ramirez

author: Frank Wm. Tompa

author: J. Ian Munro

title: Optimum Reorganization Points for Arbitrary Database Costs.

pages: 17-30

year: 18

volume: Acta Inf.

## 2.3 Get co-author

Actions

Invoke a WSDL Operation

Source

Enter the parameters for the WSDL operation "getAllCoauthor" and click **Go** to invoke.

Endpoints

http://localhost:8080/lip\_18655\_homework3\_bonus/services/PubSearchImpl

Body

getAllCoauthor

AuthorName string

Frank Wm. Tompa

GoReset

Status

Source

Body

getAllCoauthorResponse

getAllCoauthorReturn (string): Raúl J. Ramírez

C. C. Gottlieb

J. Ian Munro

## 2.4 Keyword Search

Actions

Invoke a WSDL Operation

Source

Enter the parameters for the WSDL operation "keywordSearch" and click **Go** to invoke.

Endpoints

http://localhost:8080/lip\_18655\_homework3\_bonus/services/PubSearchImpl

Body

keywordSearch

keyword1 string

Optimum

keyword2 string

for

Status

Source

Body

keywordSearchResponse

keywordSearchReturn (string): On the Relationship of Minimum and Optimum Covers for a Set of Functional Dependencies.

Optimum Reorganization Points for Arbitrary Database Costs.

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## 2.5 Get all co-work

The screenshot displays two panels from the Eclipse IDE. The top panel, titled 'Actions', contains a section 'Invoke a WSDL Operation' with a 'Source' link. It instructs the user to enter parameters for the 'getAllCowork' operation and click 'Go'. The 'Endpoints' dropdown is set to 'http://localhost:8080/lip\_18655\_homework3\_bonus/services/PubSearchImpl'. The 'Body' section is expanded, showing the 'getAllCowork' operation with two parameters: 'author1' (string) with the value 'Frank Wm. Tompa', and 'author2' (string) with the value 'J. Ian Munro'. The bottom panel, titled 'Status', also has a 'Source' link and shows the 'Body' section expanded. It displays the 'getAllCoworkResponse' with a detailed XML string: 'getAllCoworkReturn (string): key: journals/acta/RamirezTM82 mdate: 2011-01-11 author: Raúl J. Ramírez author: Frank Wm. Tompa author: J. Ian Munro title: Optimum Reorganization Points for Arbi'.

For publish service and use RPC style client to use service, I develop a client without tool, and below is screen shot from Eclipse console terminal.

```
Problems Javadoc Declaration Console
<terminated> PubSearchClient [Java Application] /Library/Java/JavaVirtualMachines/jdk1.7.0_79.jdk/Contents/Home/bin/java (Sep 17, 2015, 11:10:18 PM)
Access Publication Query Using Publied Service
-----Query 1 : List All Coauthor of "Karel Culik II"-----
Jarkko Kari
Jozef Gruska
Peter Rajcáni
Juhani Karhumäki
Simant Dube
Christian Choffrut
Arto Salomaa
-----
-----Query 2 :Search "The Derivation of Systolic Implementations of Programs." -----
key: journals/acta/HuangL87
mdate: 2011-01-11
author: Chua-Huang Huang
author: Christian Lengauer
title: The Derivation of Systolic Implementations of Programs.
pages: 595-632
year: 24
volume: Acta Inf.
journal:
numbers: 6
url: db/journals/acta/acta24.html#HuangL87
ee: http://dx.doi.org/10.1007/BF00282618
-----
```

```
Problems Javadoc Declaration Console
<terminated> PubSearchClient [Java Application] /Library/Java/JavaVirtualMachines/jdk1.7.0_79.jdk/Contents/Home/bin/java (Sep 17, 2015, 11:10:18 PM)
url: db/journals/acta/acta24.html#HuangL87
ee: http://dx.doi.org/10.1007/BF00282618
-----
-----Query 3 : List All Work of "Karel Culik II"-----
Cannot Find This Author
-----
-----Query 4 : Search Keyword "Parallel" and "Assertion"-----
Recursive Assertions and Parallel Programs.
-----
-----Query 5 : Search All cowork of "Nathan Goodman" and "Oded Shmueli"-----
key: journals/acta/GoodmanS83
mdate: 2011-01-11
author: Nathan Goodman
author: Oded Shmueli
title: NP-complete Problems Simplified on Tree Schemas.
pages: 171-178
year: 20
volume: Acta Inf.
journal:
numbers:
url: db/journals/acta/acta20.html#GoodmanS83
ee: http://dx.doi.org/10.1007/BF00289414
-----
```