Interface Device API Guide Program

Outline

Mobile Interface Device API Guide Program provides the developers with the guidelines of how to implement RESTful in data communication with the web servers built under eGov Standard Framework, using the runtime environment of Mobile Device API. 7

Feature

The Guide Program features **Send Data to Server, Receive Data in Device and Request Data Removal to Server.**
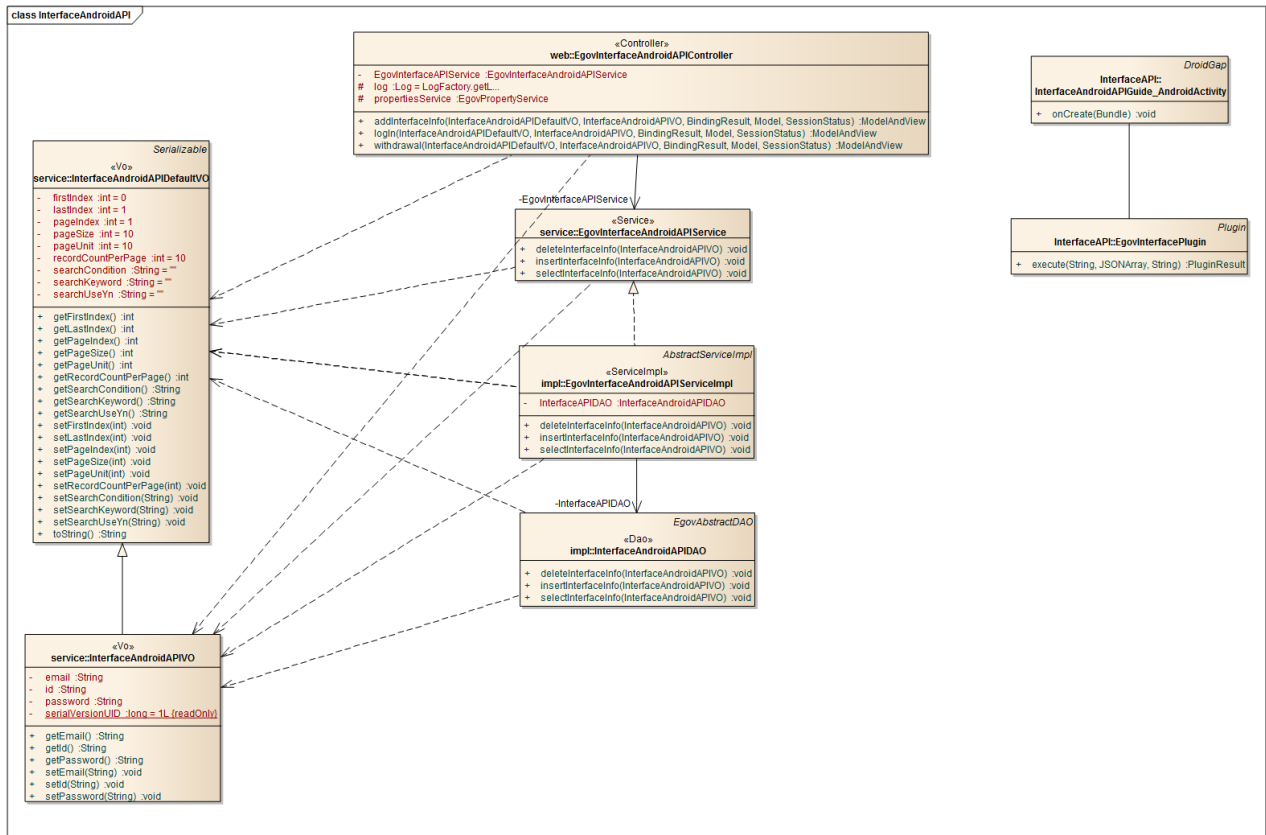
Preconditions

Category	Description
Local Device Environments	eGovFramework Runtime Environment 3.5, Android SDKAPI 22(version 5.0 Lollipop)
Server-side Developmental Environment	Runtime Environment for eGov Standard Framework 3.5
Works in sync with Mash up Open API	N/A
Test Device	Galaxy S2
Test Platform	Android 2.3
Libraries Added	N/A

Restrictions

N/A

Description

Related Class Diagram

class InterfaceAndroidAPI

«Controller»
web::EgovInterfaceAndroidAPIController

- EgovInterfaceAPIService :EgovInterfaceAndroidAPIService
\# log :Log = LogFactory.getL....
\# propertiesService :EgovPropertyService

+ addInterfaceInfo(InterfaceAndroidAPIDefaultVO, InterfaceAndroidAPIVO, BindingResult, Model, SessionStatus) :ModelAndView
+ login(InterfaceAndroidAPIDefaultVO, InterfaceAndroidAPIVO, BindingResult, Model, SessionStatus) :ModelAndView
+ withdrawal(InterfaceAndroidAPIDefaultVO, InterfaceAndroidAPIVO, BindingResult, Model, SessionStatus) :ModelAndView

Serializable
«Vo»
service::InterfaceAndroidAPIDefaultVO

- firstIndex :int = 0
- lastIndex :int = 1
- pageIndex :int = 1
- pageSize :int = 10
- pageUnit :int = 10
- recordCountPerPage :int = 10
- searchCondition :String = ""
- searchKeyword :String = ""
- searchUseYn :String = ""

+ getFirstIndex() :int
+ getLastIndex() :int
+ getPageIndex() :int
+ getPageSize() :int
+ getPageUnit() :int
+ getRecordCountPerPage() :int
+ getSearchCondition() :String
+ getSearchKeyword() :String
+ getSearchUseYn() :String
+ setFirstIndex(int) :void
+ setLastIndex(int) :void
+ setPageIndex(int) :void
+ setPageSize(int) :void
+ setPageUnit(int) :void
+ setRecordCountPerPage(int) :void
+ setSearchCondition(String) :void
+ setSearchKeyword(String) :void
+ setSearchUseYn(String) :void
+ toString() :String

-EgovInterfaceAPIService
«Service»
service::EgovInterfaceAndroidAPIService

+ deleteInterfaceInfo(InterfaceAndroidAPIVO) :void
+ insertInterfaceInfo(InterfaceAndroidAPIVO) :void
+ selectInterfaceInfo(InterfaceAndroidAPIVO) :void

AbstractServiceImpl
«ServiceImpl»
impl::EgovInterfaceAndroidAPIServiceImpl

- InterfaceAPIDAO :InterfaceAndroidAPIDAO

+ deleteInterfaceInfo(InterfaceAndroidAPIVO) :void
+ insertInterfaceInfo(InterfaceAndroidAPIVO) :void
+ selectInterfaceInfo(InterfaceAndroidAPIVO) :void

-InterfaceAPIDAO
EgovAbstractDAO
«Dao»
impl::InterfaceAndroidAPIDAO

+ deleteInterfaceInfo(InterfaceAndroidAPIVO) :void
+ insertInterfaceInfo(InterfaceAndroidAPIVO) :void
+ selectInterfaceInfo(InterfaceAndroidAPIVO) :void

«Vo»
service::InterfaceAndroidAPIVO

- email :String
- id :String
- password :String
- serialVersionUID :long = 1L {readOnly}

+ getEmail() :String
+ getId() :String
+ getPassword() :String
+ setEmail(String) :void
+ setId(String) :void
+ setPassword(String) :void

DroidGap
**InterfaceAPI::
InterfaceAndroidAPIGuide_AndroidActivity**

+ onCreate(Bundle) :void

Plugin
InterfaceAPI::EgovInterfacePlugin

+ execute(String, JSONArray, String) :PluginResult

Device Application

Source

Type	Target Source	Remark
Activity	kr.go.egovframework.hyb.interface.InterfaceAPIGuide_AndroidActivity	Activity Class for InterfaceAPI Guide Program
CSS	assets/www/css/egovframwork/mbl/hyb/InterfaceAPI.css	Notable Cascading Style Sheets for InterfaceAPI Guide Program
IMAGE	assets/www/images/egovframwork/mbl/hyb/	Notable Images for InterfaceAPI Guide Program
JS	assets/www/js/egovframwork/mbl/hyb/InterfaceAPI.js	Notable JavaScripts for InterfaceAPI Guide Program
JS	assets/www/js/egovframwork/mbl/hyb/messages_ko.js	JavaScript for Validate Message Processing
RES	assets/www/res/	Notable Resources for InterfaceAPI Guide Program
XML	AndroidManiFest.xml	Configuration XML for Android
HTML	assets/www/InterfaceAPI.html	InterfaceAPI Main Page
HTML	assets/www/Intro.html	InterfaceAPI Intro Page

HTML	assets/www/license.html	InterfaceAPI License Page
HTML	assets/www/overview.html	InterfaceAPI Functional Description Page

APIs Used

window.plugins.EgovInterface.get

- Request HTTP GET Method to the eGovFramework Web Server Application.

```
window.plugins.EgovInterface.get(URI, acceptType, params, successCallback);
var param = {pid:'egovmobile'};
window.plugins.EgovInterface.get("/mylist.do", "xml", params, function(xmldata){
    alert(xmldata);
});
```

Option	Description	Remark
URI	URL requested	See **Properties** for more information.
acceptType	Configure Accept-Type of HTTP Header	json,xml
params	Input Parameter	Input Json Object

successCallback Function returned when GET Method is successful. JSON or XML data processing by acceptType.

window.plugins.EgovInterface.post

- Request HTTP POST Method to the eGovFramework Web Server Application.

```
window.plugins.EgovInterface.post(URI, acceptType, params, successCallback);
var param = {pid:'egovmobile'};
window.plugins.EgovInterface.post("/mylist.do", "xml", params, function(xmldata){
    alert(xmldata);
});
```

Option	Description	Remark
URI	URL requested	See **Properties** for more information.
acceptType	Configure Accept-Type of HTTP Header	json,xml
params	Input Parameter	Input Json Object

successCallback Function returned when GET Method is successful. JSON or XML data processing by acceptType.

window.plugins.EgovInterface.geturl

- Get SERVER_URL configured in the properties.

```
window.plugins.EgovInterface.geturl(successCallback);
window.plugins.EgovInterface.geturl(function(url){
    alert(url);
});
```

Option	Description	Remark

successCallback Function returned upon success String Type

Server Application

Source

Type	Target Source	Remark
Controller	egovframework.hyb.add.itf.web.EgovInterfaceAndroidAPIController.java	Classes for member information administration.
Service	egovframework.hyb.add.itf.service.EgovInterfaceAndroidAPIService.java	Service interface for member information administration.
VO	egovframework.hyb.add.itf.service.InterfaceAndroidAPIDefaultVO.java	VO Class for member administration.
VO	egovframework.hyb.add.itf.service.InterfaceAndroidAPIVO.java	VO Class for member administration.
DAO	egovframework.hyb.add.itf.service.impl.InterfaceAndroidAPIDAO.java	Data processing class for member administration.
DAO	egovframework.hyb.add.itf.service.impl.EgovInterfaceAndroidAPIServiceImpl.java	Class for processing services requested.
Query XML	resources/egovframework/sqlmap/hyb/add/itf/EgovInterfaceAndroidAPIGuide_SQL_mysql.xml	Query file for member information administration.

Related Tables

Title	Table	Remark
Interface(eGov)	INTERFACE_EGOV	Administration of Interface(eGov) Information

Tables Breakdown

- Interface(eGov)

No.	Column	Title of Column	Type	Length	Null	KEY
1	SN	Serial No.	NUMERIC	6	NotNull	pk
2	UUID	UUID	VARCHAR	50	NotNull	pk
3	EMAILS	Email	VARCHAR	50	Null	
4	USER_ID	User ID	VARCHAR	20	Null	
5	USER_PW	User Password	VARCHAR	2000	Null	

ERD

Properties

Interface Device properties required for use of Interface-related functions of Accelerator Device API Guide Program are as follows:

Device   Application

res/xml/config.xml

```
<!-- PhoneGap Plugin for eGov Interface Device API Class -->
<pluginname="EgovInterfacePlugin"value="kr.go.egovframework.hyb.plugin.EgovInterfacePlugin"/>
```

res/values/serverinfo.xml

```
<!-- Server Directory for eGov Interface Device API Class -->
<?xmlversion="1.0"encoding="utf-8"?>
<resources>
        <stringname="SERVER_URL">http://192.168.100.222:8080/DeviceAPIGuideTotal_Web
_V1.7</string>
</resources>
```

AndroidManifest.xml

```
<uses-permissionandroid:name="android.permission.INTERNET"/>
<uses-permissionandroid:name="android.permission.ACCESS_NETWORK_STATE"/>
```

Server Aplication

resource/egovframework/sqlmap/sql-map-config_[DB NAME].xml

<sqlMapresource="egovframework/sqlmap/hyb/add/dvc/EgovInterfaceAndroidAPIGuide_SQL_[DB NAME].xml"/>

Related Features

The Guide Program features **Send Information Data to Server, Receive Information Data in Device and Request Information Data Removal to Server.**

Sending Information Data to Server

Business Logic

The membership information is sent out to the server to verify the response.

Code

```
var url = "/itf/xml/addInterfaceInfo.do";
var acceptType = "xml";
var userid = $("#signUpId").val();
var userpw = $("#signUpPasswd").val();
var emails = $("#signUpEmail").val();
var params = {uuid :    device.uuid,
                          userId: userid,
                          userPw: userpw,
                          emails: emails};
$.mobile.showPageLoadingMsg('a');
alert('Send Method:RESTful\n Send Type:POST('+ acceptType + ')\nparam:' +
JSON.stringify(params));

// get the data from server
window.plugins.EgovInterface.post(url, acceptType, params, function(xmldata) {
        console.log('DeviceAPIGuide fn_egov_subscribe_member request Complete');
        alert('Response Method:RESTful\n Response Type:POST('+ acceptType + ')\nparam:' +
xmldata);
        $.mobile.hidePageLoadingMsg('a');
        if($(xmldata).find("resultState").text() == "OK"){
                window.history.back();
        }else{
                jAlert($(xmldata).find("resultMessage").text(), 'Error', 'c');
        }
});
```

Related Screen and Implementation Manual

Function	URL	Controller	method	Display (HTML)
Sending Information Data to Server	/itf/xml/addInterfaceInfo.do	EgovInterfaceAndroidAPIController	addInterfaceInfoXml	InterfaceAPI.html#signUp

ID, PASSWD and E-Mail are used for input.

Click on Sign In to send the information data to the server.
Note, however, that you need to validate the input data. Error messages are out in the event of insufficient condition.

Signing-in: Provide ID, PASSWD and E-Mail to send the information data to the server and click on Sign in.
Back : Moves back to **Interface DeviceAPI Guide Program Menu**.

Receiving Information Data in Server

Business Logic

You can check the log-in is successful or not sending the log-in information to the server.

Code

```
var url = "/itf/xml/logIn.do";
var acceptType = "xml";
var userid = $("#loginId").val();
var userpw = $("#loginPasswd").val();
$.mobile.showPageLoadingMsg('a');
var params = {uuid :   device.uuid,
                           userId: userid,
                           userPw: userpw};
alert('Send Method:RESTful\n Send Type:GET('+ acceptType + ')\nparam:' +
JSON.stringify(params));

// get the data from server
window.plugins.EgovInterface.get(url,acceptType, params, function(xmldata) {
        console.log('DeviceAPIGuide fn_egov_login_member request Complete');
        alert('Response Method:RESTful\n Response Type:GET('+ acceptType + ')\nparam:' +
xmldata);
        $.mobile.hidePageLoadingMsg('a');
        if($(xmldata).find("resultState").text() == "OK"){
                window.history.back();
        }else{
                jAlert($(xmldata).find("resultMessage").text(), 'Error', 'c');
        }

});
```

Related Screen and Implementation Manual

Function	URL	Controller	method	Display (HTML)
Receiving Information Data in Server	/itf/xml/logIn.do	EgovInterfaceAndroidAPIController	logInXml	InterfaceAPI.html#login

Click on "Log In" to send the information data to the server.
Note, however, that you need to validate the input data. Error messages are out in the event of insufficient condition.

Logging-in: Provide ID and PASSWD to send the information data to the server and click on "Log In"
Back : Moves back to **Interface DeviceAPI Guide Program Menu**.

Sending a data delete request to the server

Business Logic

Provide the server with ID and PASSWORD in order to verify the deletion of user account.

Code

```
var url = "/itf/xml/withdrawal.do";
var acceptType = "xml";
var userid = $("#secessionMemberId").val();
var userpw = $("#secessionMemberPasswd").val();
$.mobile.showPageLoadingMsg('a');
var params = {uuid :   device.uuid,
                userId: userid,
                userPw: userpw};
alert('Send Method:RESTful\n Send Type:POST('+ acceptType + ')\nparam:' +
JSON.stringify(params));

// get the data from server
window.plugins.EgovInterface.post(url, acceptType, params, function(xmldata) {
    console.log('DeviceAPIGuide fn_egov_secession_member request Complete');
    alert('Response Method:RESTful\n Response Type:POST('+ acceptType + ')\nparam:' +
xmldata);
    $.mobile.hidePageLoadingMsg('a');
    if($(xmldata).find("resultState").text() == "OK"){
        jAlert($(xmldata).find("resultMessage").text(), '성공', 'c', function(r){
            if(r == true){
                window.history.back();
            }
        });
    }else{
        jAlert($(xmldata).find("resultMessage").text(), 'Error', 'c');
    }
});
```

Related Screen and Implementation Manual

Function	URL	Controller	method	Display (HTML)
Sending a data delete request to the server	/itf/xml/logIn.do	EgovInterfaceAndroidAPIController	withdrawal Xml	InterfaceAPI.html#secession Member

Click on "Delete Account" in order to send a data deletion request to the server.
Note, however, that you need to validate the input data. Error messages are out in the event of insufficient condition.

Deleting Account: To send a data deletion request to the server, input ID and PASSWORD, then click on the "Delete Account."
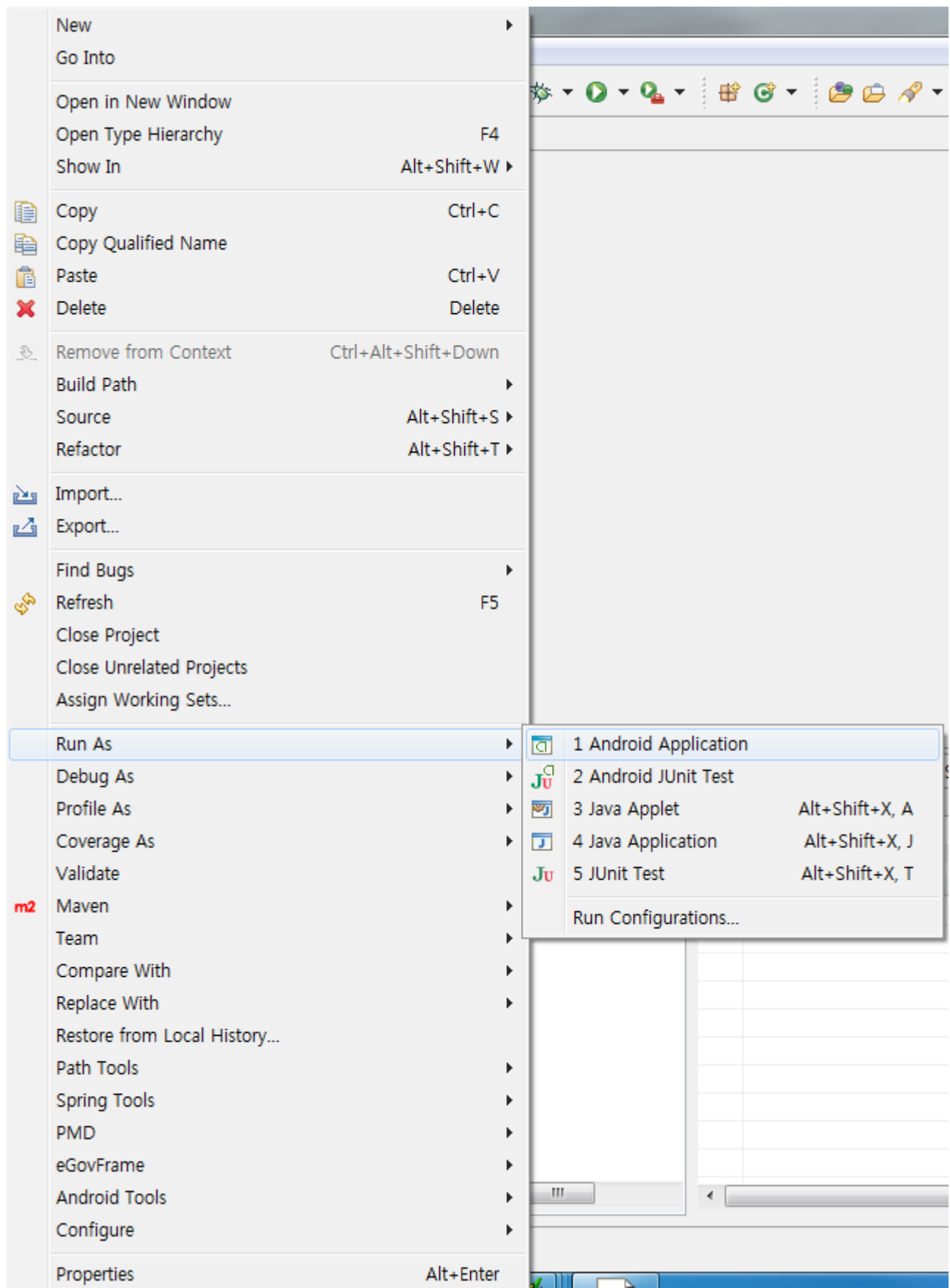Back : Moves back to **Interface DeviceAPI Guide Program Menu**.
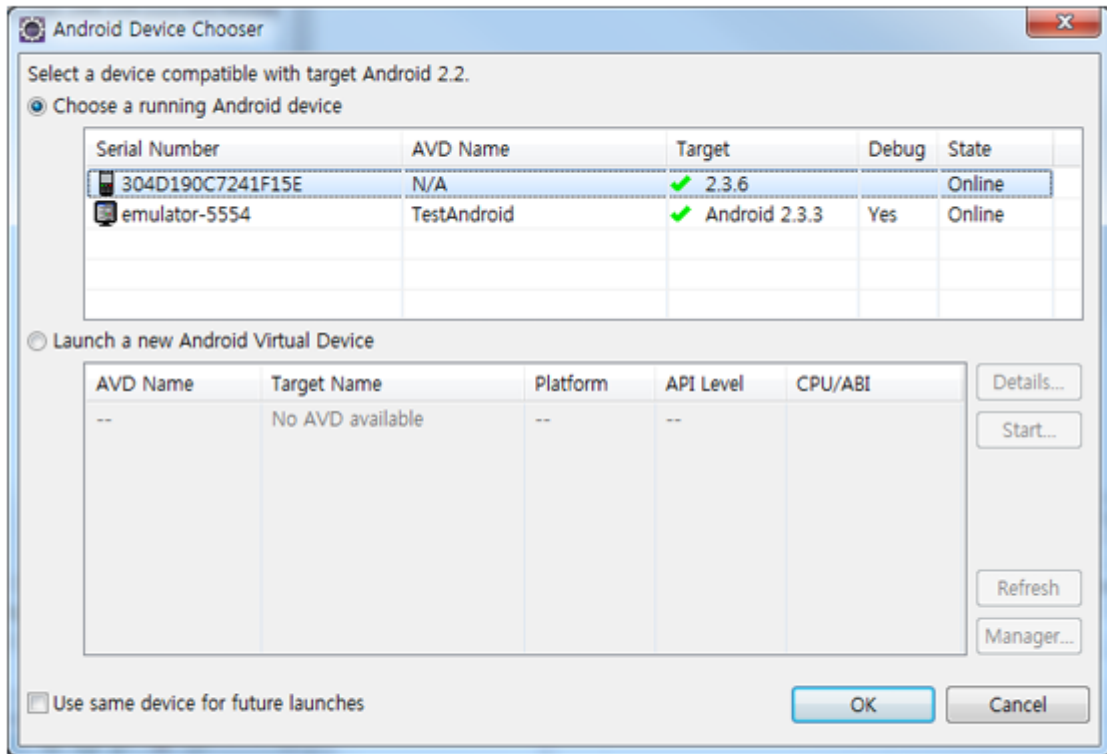
Compiling, debugging, distributing

Compiling

How to compile "InterfaceAPI Device Applicaton"

- Right-click on the Device API Guide(Android) project, and click on the "Android Application" at the "Run As" tab. The guide program will be built and installed into the Android device.

New	▶	
Go Into		
Open in New Window		
Open Type Hierarchy	F4	
Show In	Alt+Shift+W ▶	
Copy	Ctrl+C	
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...		
Find Bugs	▶	
Refresh	F5	
Close Project		
Close Unrelated Projects		
Assign Working Sets...		
Run As	▶	
Debug As	▶	
Profile As	▶	
Coverage As	▶	
Validate		
Maven	▶	
Team	▶	
Compare With	▶	
Replace With	▶	
Restore from Local History...		
Path Tools	▶	
Spring Tools	▶	
PMD	▶	
eGovFrame	▶	
Android Tools	▶	
Configure	▶	
Properties	Alt+Enter	

Run As submenu:

1 Android Application		
2 Android JUnit Test		
3 Java Applet	Alt+Shift+X, A	
4 Java Application	Alt+Shift+X, J	
5 JUnit Test	Alt+Shift+X, T	
Run Configurations...		

- When "Android Device Chooser" window appears, select appropriate device and click on the "OK" button.

- Program display on the emulator
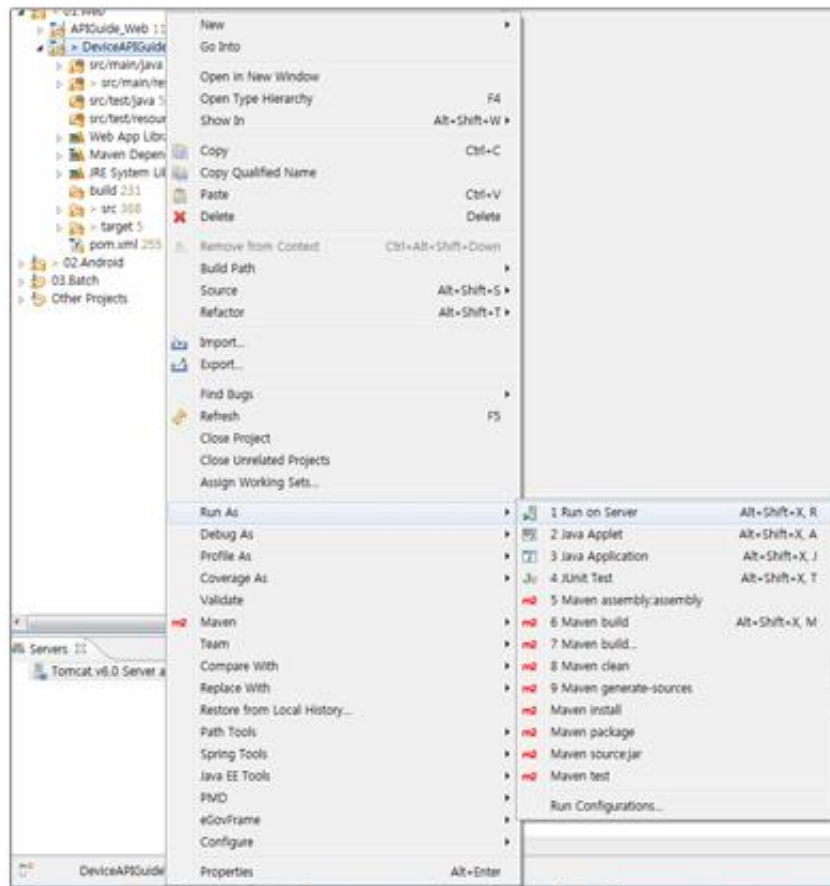
- Program display on the device

How to compile "InterfaceAPI Server Applicaton"

- Right-click on the project and click on Run As>Run On Server in order to run the InterfaceAPI server-side Guide Program.

- When the build is successfully completed, a message reading 'Server Startup in xxx ms' will display on the console window on the Eclipse.

```
2012-09-14 09:15:49,759 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Returning cached instance of singleton bean 'org.springframework.web.serv
2012-09-14 09:15:49,767 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Returning cached instance of singleton bean 'org.springframework.web.serv
2012-09-14 09:15:49,768 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Creating instance of bean 'org.springframework.web.servlet.view.DefaultRe
2012-09-14 09:15:49,771 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Finished creating instance of bean 'org.springframework.web.servlet.view.
2012-09-14 09:15:49,771 DEBUG [org.springframework.web.servlet.DispatcherServlet] Unable to locate RequestToViewNameTranslator with name 'viewNameTranslator': using default
2012-09-14 09:15:49,771 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Returning cached instance of singleton bean 'org.springframework.web.serv
2012-09-14 09:15:49,771 DEBUG [org.springframework.beans.factory.support.DefaultListableBeanFactory] Returning cached instance of singleton bean 'viewResolver'
2012-09-14 09:15:49,772 DEBUG [org.springframework.web.servlet.DispatcherServlet] Published WebApplicationContext of servlet 'action' as ServletContext attribute with name [c
2012-09-14 09:15:49,772  INFO [org.springframework.web.servlet.DispatcherServlet] FrameworkServlet 'action': initialization completed in 1373 ms
2012-09-14 09:15:49,772 DEBUG [org.springframework.web.servlet.DispatcherServlet] Servlet 'action' configured successfully
2012. 9. 14 오전 9:15:49 org.apache.coyote.http11.Http11Protocol start
정보: Starting Coyote HTTP/1.1 on http-80
2012. 9. 14 오전 9:15:49 org.apache.jk.common.ChannelSocket init
정보: JK: ajp13 listening on /0.0.0.0:8009
2012. 9. 14 오전 9:15:49 org.apache.jk.server.JkMain start
정보: Jk running ID=0 time=0/30  config=null
2012. 9. 14 오전 9:15:49 org.apache.catalina.startup.Catalina start
정보: Server startup in 7209 ms
```

Debugging

Use console.log in order to check the details on any errors on the device application, and to conduct debugging. Debug codes in console.log are available in JavaScript syntaxes that you can use in Eclipse.

See the following for how to code console.log:

```
function fn_egov_subscribe_member() {
    var url = "/itf/xml/addInterfaceInfo.do";
    var acceptType = "xml";
```
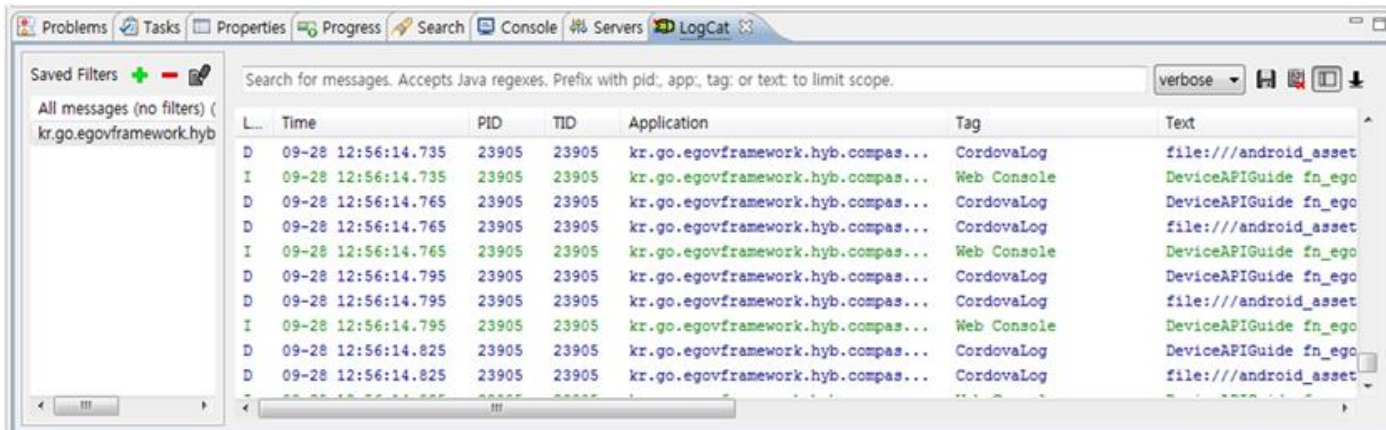
```
...
window.plugins.EgovInterface.post(url, acceptType, params, function(xmldata) {
    console.log("DeviceAPIGuide fn_egov_subscribe_member request Complete");
        ...
}
...
}
```

When the debugging code is executed, check out the following console message appears:

Interface device API Guide Program will output the following console information for debugging.

Debug code	Debug information
DeviceAPIGuide fn_egov_login_member request Complete	Receive to information data device successful
DeviceAPIGuide fn_egov_subscribe_member request Complete	Send to information data device successful
DeviceAPIGuide fn_egov_secession_member request Complete	Data deletion request to server successfully processed
DeviceAPIGuide EgovInterface.get request Fail	HTTP GET Method request failed
DeviceAPIGuide EgovInterface.post request Fail	HTTP POST Method request failed
DeviceAPIGuide EgovInterface.geturl Fail Distribution	geturl function request failed

Download Interface device API Guide: Click

References
- UX/UI library : jQuery MobileClick
- Phonegap 4.3.0 : Click
- Spring for Android : http://www.springsource.org/spring-android