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Let's Automate Business.

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Automic JAVA API

Advanced

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Our Goal

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- Understanding how the AE Java API works
- How to contribute to the common Code and enhance it

Prerequisites

- You need some Java exposure
- A Java IDE must be installed
- An AE instance must be available for testing
- Automic AE Java API Extended source code must be downloaded*
- You need a minimal knowledge of Git

* If you don’t have it: see next slide

*Getting the AE Java API Extended source code

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It is publicly stored on Github here (Git):

https://github.com/brendanSapience/UC4-Automic---Java-API-Framework-Simplified

Our Process

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Step 1
Understanding the structure of the Code

Step 2
Understanding the main classes

Step 3
Contributing

Code Structure

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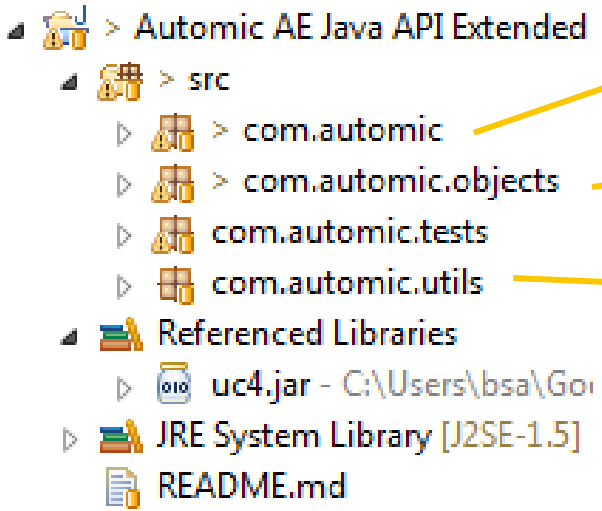


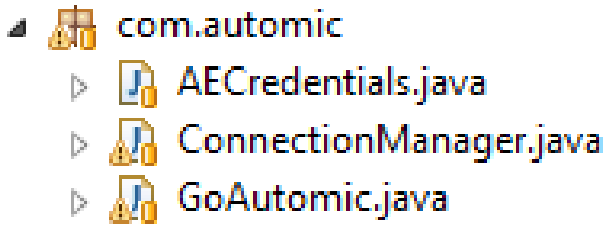
Connection Objects (credentials, connection method etc.)

Object Specific classes (JOBS, JOBP, HOSTGROUP, etc.)

Common utilitarian methods

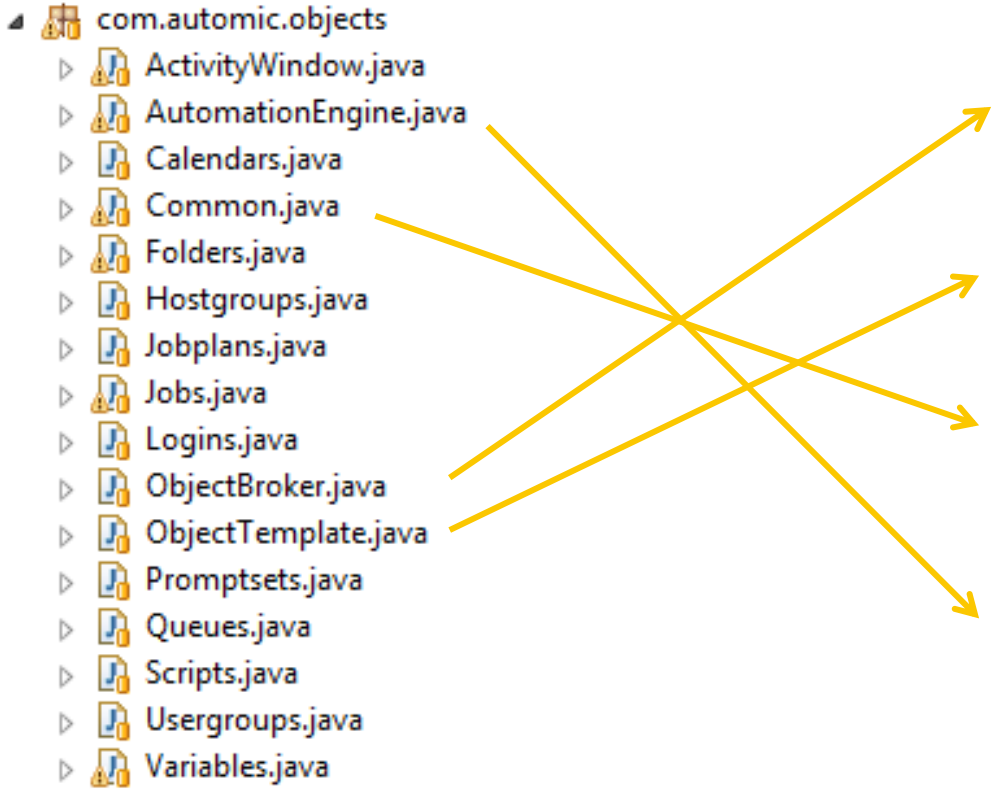
AE Central API (imported from the thick client)

Code Structure



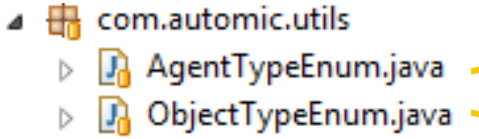
- Contains all connection parameters (Login, Password, Port, IP Adress etc..)
- Contains the actual authentication method to AE (it uses the information from the AEDCredentials class)
- It contains the “Main” method (the starting point for the execution of this java code). The main itself simply calls tests (from the test package)

Code Structure



- **The ObjectBroker is the most important class here**. It is the one that will give you access to any Object-specific method. It should be instantiated in the “main” method (see previous slide)
- All Object classes inherit from the **ObjectTemplate** class.
- The Common class contains methods that are generic to all objects (open, save, delete, close, create. Execute etc.)
- The **AutomationEngine** class contains methods specific to the AE (get the list of agents, server details etc.)

Code Structure



- **ObjectTypeEnum** is used as an object type for the methods related to retrieving lists of specific objects in the **Common** class

- **AgentTypeEnum** is used as an agent type for the methods related to retrieving lists of specific agents in the **AutomationEngine** class

Main Classes

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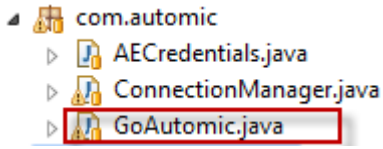
If you want to add a new AE object to work with:

- Add the object class under **com.automic.objects**
- Declare your object class in the **ObjectBroker** class

If you want to add methods to an existing object:

- Add your methods in the corresponding object class

Main Classes



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```
public static void main(String argv[]) throws IOException {

// 1- First, use the static connection object to initiate the connection
//    (see ConnectionManager class for details)
AECredentials myClient = new
AECredentials("192.168.11.128",2217,1001,"UC4","UC4","universe",'E');

// 2- initialize an Object broker object,
//    it gives you access to all object methods
ConnectionManager mgr = new ConnectionManager();
Connection conn = mgr.connectToClient(myClient);

// 3- declare the Object Broker!
ObjectBroker broker = new ObjectBroker(conn,false);

// 4- use the Object Broker!
ArrayList<IFolder> mylist = broker.folders.getAllFolders(true);
```

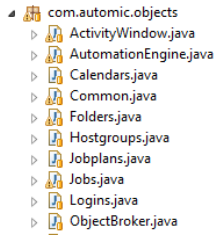
1- Declare your credentials

2- Authenticate

3- instantiate the Object Broker second

4- use the Object Broker to access object-specific methods (we invoke a method on Folders in this example)

Main Classes



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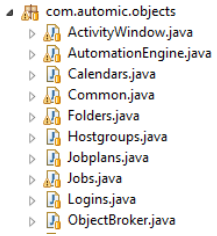
```
public class Folders extends ObjectTemplate{

        public Folders(Connection conn, boolean verbose) {
                super(conn, verbose);
        }
        private ObjectBroker getBrokerInstance(){
                return new ObjectBroker(this.connection,true);
        }

        public IFolder getRootFolder() throws IOException{
                FolderTree tree = new FolderTree();
                this.connection.sendRequestAndWait(tree);
                return tree.root();
        }
```

1- IF adding a new type of object (an object class), always extend the Object Template class

2- IF adding a new type of object (an object class), its constructor should use a Connection object and boolean

3- IF adding a new type of object (an object class), add a getBrokerInstance method

Main Classes



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```
public class ObjectBroker {

private Connection connection;

public Folders folders;
public Jobs jobs;
public Common common;

public ObjectBroker(Connection conn, boolean verbose){
this.connection = conn;

folders = new Folders(this.connection,verbose);
jobs = new Jobs(this.connection,verbose);
common = new Common(this.connection,verbose);
}

public void setConnection(Connection conn){
this.connection = conn;
}
}
```

1- IF adding a new type of object (an object class), declare it in the Object Broker class

2- IF adding a new type of object (an object class), instantiate it in the Object Broker constructor

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Remember that:

- Before you modify the code, make sure you **FETCH** the code from the public repository
- The code is collaborative
- If you add something, make it as **generic and reusable** as possible
- If you want to contribute to the project, simply fork the repo and send a pull request