OAuth SDK

bool COAuthSDK::GetRequestToken(CClientDetails &objClientDetails) throw (...)

This function is use to get Request token using Customer Key and Customer secret. This function throws exception if m_strConsumerKey or m_strConsumerSecret parameter(s) is/are empty.

```
CClientDetails
{
        Environment m_environment;
        string m_strConsumerKey;
        string m_strConsumerSecret;
        string m_strToken;
        string m_strTokenSecret;
        string m_strCallback;
};

typedef enum
{
        SANDBOX= 0,
        LIVE   = 1
}Environment;
```

Type	Name	IN/OUT	Default	Description
Environment	m_environment	IN	SANDBOX	It is enumeration which has two value.
string	m_strConsumerKey	IN		The value used by the Consumer to identify itself to the Service Provider. Etrade provide Consumer key.
string	m_strConsumerSecret	IN		The value used by the Consumer to identify itself to the Service Provider. Etrade provide Consumer secret.
string	m_strToken	OUT		Not require. This parameter is set by function if function successful.
string	m_strTokenSecret	OUT		Not require. This parameter is set by function if function successful.
string	m_strCallback	IN	oob	Not required.

bool COAuthSDK::GetAccessToken(CClientDetails &objClientDetails,string strVerifier) throw (...)

This API is use to Access token using Customer Key, Customer secret, Request token and request secret. This function throws exception if m_strConsumerKey, m_strConsumerSecret, m_strToken or m_strTokenSecret parameter(s) is/are empty.

```
CClientDetails
{
Environment m_environment;
        string m_strConsumerKey;
        string m_strConsumerSecret;
        string m_strToken;
        string m_strTokenSecret;
```

```
        string m_strCallback;
};

typedef enum
{
        SANDBOX= 0,
        LIVE   = 1
}Environment;
```

Type	Name	IN/OUT	Default	Description
Environment	m_environment	IN	SANDBOX	Not required.
string	m_strConsumerKey	IN		The value used by the Consumer to identify itself to the Service Provider. Etrade provide Consumer key.
string	m_strConsumerSecret	IN		The value used by the Consumer to identify itself to the Service Provider. Etrade provide Consumer secret.
string	m_strToken	IN/OUT		This parameter is work as dual purpose it takes Request Token as input parameter and it will set Access Token. Function will set this parameter if it is successful.
string	m_strTokenSecret	IN/OUT		This parameter is work as dual purpose it takes Request Token Secret as input parameter and it will set Access Token Secret. Function will set this parameter if it is successful.
string	m_strCallback	IN	oob	Not required.
string	strVerifier	IN		The code received by the user to authenticate with the etrade application.

void COAuthSDK:: RenewToken(CClientDetails &objClientDetails) throw (...)
Access token is invalid if it is not used for some time (2 hours default value). This function is use for Renew Access Token which is invalid. It will return "Access Token has been renewed" if it is successful.

```
CClientDetails
{
Environment m_environment;
        string m_strConsumerKey;
        string m_strConsumerSecret;
        string m_strToken;
        string m_strTokenSecret;
        string m_strCallback;
};
```

Type	Name	IN/OUT	Default	Description
Environment	m_environment	IN	SANDBOX	Not required.
string	m_strConsumerKey	IN		The value used by the Consumer to identify itself to the Service Provider. Etrade provide Consumer

				key.
string	m_strConsumerSecret	IN		The value used by the Consumer to identify itself to the Service Provider. Etrade provide Consumer secret.
string	m_strToken	IN/OUT		This parameter is work as dual purpose when it calls it work as IN parameter. Function will set this parameter if it is successful.
string	m_strTokenSecret	IN/OUT		This parameter is work as dual purpose when it calls it work as IN parameter. Function will set this parameter if it is successful.
string	m_strCallback	IN	oob	Not required.

void COAuthSDK::RevokeToken(CClientDetails &objClientDetails) throw (...)
This function is use to revoke existing token. It will return "Revoked Access Token" if it is successful. Once function successful access token is invalid and can't be used.

```
CClientDetails
{
Environment m_environment;
      string m_strConsumerKey;
      string m_strConsumerSecret;
      string m_strToken;
      string m_strTokenSecret;
      string m_strCallback;
};
```

Type	Name	IN/OUT	Default	Description
Environment	m_environment	IN	SANDBOX	Not required.
string	m_strConsumerKey	IN		The value used by the Consumer to identify itself to the Service Provider. Etrade provide Consumer key.
string	m_strConsumerSecret	IN		The value used by the Consumer to identify itself to the Service Provider. Etrade provide Consumer secret.
string	m_strToken	IN/OUT		This parameter is work as dual purpose when it calls it work as IN parameter. Function will set this parameter to empty string if it is successful.
string	m_strTokenSecret	IN/OUT		This parameter is work as dual purpose when it calls it work as IN parameter. Function will set this parameter to empty string if it is successful.
string	m_strCallback	IN	oob	Not required.

string COAuthSDK::AuthorizeUrl(CClientDetails &objClientDetails) throw (...)
This function is generating Authorize URL to login in Etrade site.

```
CClientDetails
{
Environment m_environment;
        string m_strConsumerKey;
        string m_strConsumerSecret;
        string m_strToken;
        string m_strTokenSecret;
        string m_strCallback;
};
```

Type	Name	IN/OUT	Default	Description
Environment	m_environment	IN	SANDBOX	Not required.
string	m_strConsumerKey	IN		The value used by the Consumer to identify itself to the Service Provider. Etrade provide Consumer key
string	m_strConsumerSecret	IN		Not required.
string	m_strToken	IN/OUT		This parameter is work as dual purpose when it calls it work as IN parameter. Function will set this parameter to empty string if it is successful.
string	m_strTokenSecret	IN/OUT		Not required.
string	m_strCallback	IN	oob	Not required.

string COAuthSDK::GetProtectedResourse(CClientDetails &objClientDetails,string strUrl, HttpMethodConstants httpMethod , string postParameters) throw (...)

Using this function user can call any Etrade's API. Function will return XML or JSON response. Default response in XML. For JSON response adds .json to URL.

```
CClientDetails
{
Environment m_environment;
        string m_strConsumerKey;
        string m_strConsumerSecret;
        string m_strToken;
        string m_strTokenSecret;
        string m_strCallback;
};

typedef enum
{
        GETMethod    = 0,
        POSTMethod   = 1,
        DELETEMethod = 2
}HttpMethodConstants;
```

Type	Name	IN/OUT	Default	Description
Environment	m_environment	IN	SANDBOX	Not required.
string	m_strConsumerKey	IN		The value used by the Consumer to identify itself to the Service Provider. Etrade provide Consumer key.

string	m_strConsumerS ecret	IN		The value used by the Consumer to identify itself to the Service Provider. Etrade provide Consumer secret.
string	m_strToken	IN/OU T		This parameter is set by GetAccessToken function.
string	m_strTokenSecr et	IN/OU T		This parameter is set by GetAccessToken function.
string	m_strCallback	IN	oob	Not required.
string	strUrl	IN		This is rest API url. it will take query parameter for get method. e.g. https://uatetws.etrade.com/accounts/rest/acco untpositions/83410432?count=10.
HttpMe thodCo nstant s	httpMethod	IN	GETMethod	This type of HTTP method. e.g GETMethod, POSTMethod or DELETEMethod.
string	postParameters	IN	""	This parameter is require only if POST method. e.g. <PlaceEquityOrder xmlns="http://order.etws.etrade.com"><EquityO rderRequest><accountId>83410432</accountId><c lientOrderId>test23</clientOrderId><limitPric e>19</limitPrice><quantity>90</quantity><symb ol>ETFC</symbol><orderAction>BUY</orderAction ><priceType>LIMIT</priceType><marketSession>R EGULAR</marketSession><orderTerm>GOOD_FOR_DAY </orderTerm></EquityOrderRequest></PlaceEquit yOrder>

Here is a code snippet how to call OptionChanis API(it is get Method).
For XML response (Following URL is for UAT for Production just replace uatetws.etrade.com to etws.etrade.com)
strUrl =
"https://uatetws.etrade.com/market/rest/optionchains?expirationMonth=06&expirationYear=20 11&chainType=PUT&skipAdjusted=true&underlier=ETFC";
httpMethod = GETMethod;

For JSON response (Following URL is for UAT for Production just replace uatetws.etrade.com to etws.etrade.com)
strUrl =
"https://uatetws.etrade.com/market/rest/optionchains.JSON?expirationMonth=06&expirationYe ar=2011&chainType=PUT&skipAdjusted=true&underlier=ETFC";
httpMethod = GETMethod;

Here is a code snippet how to call DeleteAlter API(it is delete Method). Following URL is for UAT for Production just replace uatetws.etrade.com to etws.etrade.com
strUrl = "https://uatetws.etrade.com/accounts/rest/alerts/25";
httpMethod = DELETEMethod;

Here is a code snippet how to call PlaceEquityOrder API(it is POST Method). Following URL is for UAT for Production just replace uatetws.etrade.com to etws.etrade.com
This will give response in JSON format because we are pass URL as JSON.
strUrl = "https://uatetws.etrade.com/order/rest/placeequityorder.json";
httpMethod = POSTMethod;

```
postParameters = "<PlaceEquityOrder
xmlns="http://order.etws.etrade.com"><EquityOrderRequest><accountId>83410432</accountId><
clientOrderId>test23</clientOrderId><limitPrice>19</limitPrice><quantity>90</quantity><sy
mbol>ETFC</symbol><orderAction>BUY</orderAction><priceType>LIMIT</priceType><marketSessio
n>REGULAR</marketSession><orderTerm>GOOD_FOR_DAY</orderTerm></EquityOrderRequest></PlaceE
quityOrder>";
```