RESTful API (cn)

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Hao Ma · ?? 10

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RESTful API (cn)

RESTful ???????? (API) ????????????? ?????????????? RESTful API ???

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- ??? Ensemble ??? RESTful Web ??
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API ??????

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- ????? ??? URL ???? ?? <u>http://localhost:57774/csp/msa/person</u>?
- ????? ??????? ??? HTTP ???????GET?POST?PUT…????????????????
- ???????? ?????????? ?????**??**??? URL ?????????**??**?????? URL ???**??**????????????**??**???? HTTP ?????
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GET ??????? ?? URL ??? ID ??????? ID ????????? ????? ID?? URL ??????? ID ??? ?? http://localhost:57774/csp/msa/person/12A33 ???? 12A33? ??????????????????????? ???http://localhost:57774/csp/msa/person?name=Hahn%20Istvan&dob=1961 ????? 1961 ????? Hahn Istvan ??????

DELETE ?????

POST ? http://localhost:57774/csp/msa/person/_init ????????

POST ? http://localhost:57774/csp/msa/person/_populate/100 ??? 100 ??????

API ??

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???　　http://localhost:57774/csp/msa/person

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???GET

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1	??	?? ID	????????? ID?

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200	??	?????
204	?	?????? ID ????
401	?	???????? ???????????????
403	?	???? ?????????
500	??	????????
501	??	?????????
503	??	????????

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???GET

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??	??	????	??
name	??	???	?????
motherMaidenName	??	???	
dob	??	??	
birthPlaceCounty	??	???	
birthPlaceCity	??	???	

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200	??	?????
204	?	??????
401	?	??????? ??????????????
403	?	???? ??????????
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503	??	????????

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503	??	????????

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???POST

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1	??	???	????????? ID?
name	??	???	?????
motherMaidenName	??	???	
dob	??	??	
birthPlaceCounty	??	???	
birthPlaceCity	??	???	

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_init	??		

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501	??	?????????
503	??	????????

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_populate	??		
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401	?	???????? ???????????????
403	?	???? ?????????
500	??	????????

| 501 | ?? | ????????? |
| 503 | ?? | ???????? |

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ID

Name

DOB

BirthPlace

MotherMaidenName

???
 ??

Country

City

??
 ??

Code

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Text

InnerError

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n ?? API ???????????????

n ??? UrlMap XData ????? **Route** ???

n ???????????????????

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```
<

Route Url="/:service" Method="GET" Call="QueryRegistry"/>

classmethod QueryRegistry(service) as %Status {

        try {

                set serviceInstance = ..getServiceInstance(service)

                do
 ..dumpResponse(serviceInstance.runQuery(..getQueryParameters($listbuild("name","dob"
,"motherMaidenName","birthPlaceCountry","birthPlaceCity"))))

        }

        catch ex {

                do ..ReportHttpStatusCode(..getHTTPStatusCode(ex),ex.AsStatus())
```

```
        }

        quit $$$OK

}




<

Route Url="/:service/:registryID" Method="GET" Call="GetEntry"/>

classmethod GetEntry(service,registryID) as %Status {

        try {

                set serviceInstance = ..getServiceInstance(service)

                do ..dumpResponse(serviceInstance.get(registryID))

        }

        catch ex {

                do ..ReportHttpStatusCode(..getHTTPStatusCode(ex),ex.AsStatus())

        }

        quit $$$OK

}




<

Route Url="/:service/:registryID" Method="DELETE" Call="DeleteEntry"/>

classmethod DeleteEntry(service,registryID) as %Status {

        try {

                set serviceInstance = ..getServiceInstance(service)

                do ..dumpResponse(serviceInstance.delete(registryID))

        }

        catch ex {

                do ..ReportHttpStatusCode(..getHTTPStatusCode(ex),ex.AsStatus())
```

```
        }

        quit $$$OK

}




<

Route Url="/:service/_init" Method="POST" Call="InitializeRegistry"/>

classmethod InitializeRegistry(service) as %Status {

        try {

                set serviceInstance = ..getServiceInstance(service)

                do ..dumpResponse(serviceInstance.init())

        }

        catch ex {

                do ..ReportHttpStatusCode(..getHTTPStatusCode(ex),ex.AsStatus())

        }

        quit $$$OK

}




<

Route Url="/:service/_populate/:numberOfRecords" Method="POST" Call="Populate"/>

classmethod Populate(service,numberOfRecords) as %Status {

        try {

                set serviceInstance = ..getServiceInstance(service)

                do ..dumpResponse(serviceInstance.populate(numberOfRecords))

        }

        catch ex {
```

```
                do ..ReportHttpStatusCode(..getHTTPStatusCode(ex),ex.AsStatus())

        }

        quit $$$OK

}
```

```
<

Route Url="/:service/:registryID" Method="POST" Call="UpdateAttribute"/>

classmethod UpdateAttribute(service,registryID) as %Status {

        try {

                set serviceInstance = ..getServiceInstance(service)

                do
 ..dumpResponse(serviceInstance.updateAttribute(registryID, ..getFormParameters($list
build("name","dob","motherMaidenName","birthPlaceCountry","birthPlaceCity"))))

        }

        catch ex {

                do ..ReportHttpStatusCode(..getHTTPStatusCode(ex),ex.AsStatus())

        }

        quit $$$OK

}
```

```
<

Route Url="/:service" Method="PUT" Call="AddOrUpdate"/>

classmethod AddOrUpdate(service) as %Status {

        try {

                set serviceInstance = ..getServiceInstance(service)

                do
 ..dumpResponse(serviceInstance.addOrUpdate(..getContentParameter()))
```

```
        }

        catch ex {

                do ..ReportHttpStatusCode(..getHTTPStatusCode(ex),ex.AsStatus())

        }

        quit $$$OK

}
```

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```
classmethod getServiceInstance(serviceName) as Ens.BusinessService {

        set
 status = ##class(Ens.Director).CreateBusinessService(serviceName, .instance)

        throw:$$$ISERR(status) ##class(NoProduction).%New(status)

        quit instance

}
```

```
classmethod getHTTPStatusCode(ex) {

        quit $case(ex.%ClassName(1),

                                ##class(NoProduction).%ClassName(1)                    :5
03,

                                ##class(NotImplemented).%ClassName(1)         :501,

                        :500)

}
```

```
classmethod dumpResponse(responseObject) {

        if $isObject(responseObject) {

                if
 responseObject.%Ex
tends(##class(%DynamicObject).%ClassName(1)) { write responseObject.%ToJSON() }

                elseif
```

```
responseObject.%Extends(##class(%ZEN.proxyObject).%ClassName(1)) {

                do
##class(%ZEN.Auxiliary.jsonProvider).%ObjectToJSON(responseObject)

            }

            elseif responseObject.%Extends(##class(%XML.Adaptor).%ClassName(1)) {

                do responseObject.XMLExportToString(.ret)

                write ret

            }

            else { throw ##class(Serialization).%New() }

        }

        else {

            write responseObject

        }

}




classmethod getQueryParameters(parameterList) as %DynamicObject {

        set parameterObject = {}

        for i=1:1:$listlength(parameterList) {

                set parameterName=$listget(parameterList,i)

                set
$property(parameterObject, parameterName) = %request.Get(parameterName)

        }

        quit parameterObject

}




classmethod getFormParameters(parameterList,queryObject) as %DynamicObject {

        if $data(queryObject) { set parameterObject = queryObject }

        else { set parameterObject = {} }

        for i=1:1:$listlength(parameterList) {

                set parameterName=$listget(parameterList,i)
```

```
            set
$property(parameterObject, parameterName) = %request.Get(parameterName)

        }

        quit parameterObject

}




classmethod getContentParameter() as %DynamicObject {

        quit {}.%FromJSON(%request.Content)

}
```

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[#REST API](#) [#??](#) [#Ensemble](#)
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? URL: https://cn.community.intersystems.com/post/restful-api-cn