**Outreach Mobile Web App High Level Design**

Draft 0.3

Last Updated: January 25, 2015

**Abstract**

This document describes the scope, high level design, database mappings and API specifications for the Outreach mobile web application.

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# Version History

|  |  |  |  |
| --- | --- | --- | --- |
| Version | Date | Author | Description |
| Draft 0.1 | 01-25-2015 | Ashaar Riaz | Initial Draft |

Table : Version History

# References

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S.No. | Version | Source | Author | Document Name |
|  |  |  |  |  |
|  |  |  |  |  |
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Table : References

# Abbreviations and Acronyms

|  |  |
| --- | --- |
| Abbreviation/Acronym | Description |
| API | Application Programming Interface |
|  |  |
|  |  |
|  |  |
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Table : Abbreviations and Acronyms

# Assumptions, Issues and Risks

## Assumptions

|  |  |  |  |
| --- | --- | --- | --- |
| S.No. | Assumption | Comments | Status |
|  |  |  | Closed |
|  |  |  |  |
|  |  |  |  |

Table : Assumptions

## Issues

|  |  |  |  |
| --- | --- | --- | --- |
| S.No. | Assumption | Comments | Status |
|  |  |  |  |
|  |  |  |  |

Table : Issues

## Risks

|  |  |  |  |
| --- | --- | --- | --- |
| S.No. | Assumption | Comments | Status |
|  |  |  |  |
|  |  |  |  |

Table : Risks

# Introduction

Outreach Mobile is a mobile web application primarily focused in

## Scope

* All use cases specified in Outreach\_SRS\_v1.1.pdfdocument.
* The layout design is based on the approved design mockup. The same layout will be used for phone and tablet.
* Outreach Mobile Web application Web Services design, implementation and deployment.
* Outreach UI design, Implementation and deployment.

## Out of Scope

* Layout for desktop is not in the current scope of work.
* Database Design

# Solution Design

### Outreach Mobile UI

Web container to publish HTML screens.

### OAuth Provider

OAuth 2.0 provider.

### Service

Outreach Mobile Web Service container

### Database

MySQL Cloud database.

## Security Model

## Interface Specification and data mappings

### Generic Response Type

All response to the APIs in the subsequent sections will have the following structure for the web service response.

{

"header": {

"code": 0,

"message": "",

"total\_count": 234

},

"body": [

Array of Requested Data Structure

]

}

The code field identifies whether the response is success or failure. If the value of code is 0 then it is a success else it is a failure. The following is a sample failure response. Only header is sent for failure scenarios.

{

"header": {

"code": 1001,

"message": "No records found",

}

}

|  |  |  |
| --- | --- | --- |
| Field | Description | Mandatory(M)/Optional(O) |
| header | A generic response header | M |
| code | Response Code  0 – Success  >0 – Failure | M |
| message | Description of failure/error. | O |

Table : Generic Response Header

### Authentication and Authorization Service

All web services are authenticated and authorized using the OAuth 2.0 implicit grant flow. Please refer section 7.2 for the OAuth 2.0 implicit grant flow.

### Client Service

The following sample XML represents a ClientDetailVO object.

<clientDetailVO>

<clientKey>75864</clientKey>

<dateOfBirth>1965-09-11</dateOfBirth>

<ethnicityVO>

<codeKey>105</codeKey>

<description>Hispanic</description>

<logDateTime>2014-12-18 20:26:02</logDateTime>

<recActiveGct>1</recActiveGct>

</ethnicityVO>

<genderVO>

<codeKey>1</codeKey>

<description>Male</description>

<logDateTime>2014-07-31 19:59:34</logDateTime>

<recActiveGct>1</recActiveGct>

</genderVO>

<logDateTime>2015-01-04 02:46:18</logDateTime>

<nameFirst>Joe</nameFirst>

<nameLast>Moss</nameLast>

<nameMiddle>A</nameMiddle>

<socSecNumber>37669885</socSecNumber>

</clientDetailVO>

{

clientDetailVO :

{

“clientKey”:75864,

“dateOfBirth”:” 1965-09-11”,

“logDateTime”:” 2015-01-04 02:46:18”,

“nameFirst”:”Joe”,

“nameLast”:”Moss”,

“nameMiddle”:”A”,

“socSecNumber”:”37669885”

ethnicityVO:

{

“codeKey”:105,

“description”:”Hispanic”,

“logDateTime”:” 2014-12-18 20:26:02”,

“recActiveGct”:1

}

genderVO:

{

“codeKey”:1,

“description”:”Male”,

“logDateTime”:” 2014-12-18 20:26:02”,

“recActiveGct”:1

}

}

}

#### Add New Client

|  |  |
| --- | --- |
|  |  |
| END POINT | /addClient/<emailID>/<serviceAccountID> |
| HTTP METHOD | POST |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: |
| HTTP HEADERS | Content-Type:application/json, application/xml  Accept:application/json, application/xml |
| REQUEST XML | CLIENTDETAILVO [Ref: 7.5.3.1] |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  <CLIENTDETAILVO\_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Failed to add"  }  } |

#### Update Existing Client Information

|  |  |
| --- | --- |
|  |  |
| END POINT | /updateClient/<ClientKey>/<emailID>/<serviceAccountID> |
| HTTP METHOD | PUT |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: |
| HTTP HEADERS | Content-Type:application/json, application/xml  Accept:application/json, application/xml |
| REQUEST XML | CLIENT\_OBJECT [Ref: 7.5.3.1] |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  <CLIENTDETAILVO\_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Failed to update"  }  } |

#### Lookup Client by ClientKey

|  |  |
| --- | --- |
|  |  |
| END POINT | /client/<ClientKey>/<emailID>/<serviceAccountID> |
| HTTP METHOD | GET |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: |
| HTTP HEADERS | Content-Type:application/json,application/xml  Accept:application/json,application/xml |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  },  "body": [  {  <ClientVO\_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  },  "body": [  {  <clientVO\_OBJECT>  }  ]  } |
|  |  |

|  |  |
| --- | --- |
|  |  |
| END POINT | /clientdetail/<ClientKey>/<emailID>/<serviceAccountID> |
| HTTP METHOD | GET |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: |
| HTTP HEADERS | Content-Type:application/json, application/xml  Accept:application/json, application/xml |
| REQUEST JSON | CLIENT\_OBJECT [Ref: 7.5.3.1] |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  <CLIENTDETAILVO\_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Failed to add"  }  } |

### Gender Service

The following sample JSON represents a Gender object (GENDER\_OBJECT).

{

“codeKey”:1,

“description”:”Male”,

“logDateTime”:” 2014-12-18 20:26:02”,

“recActiveGct”:1

}

#### Add New Gender

|  |  |
| --- | --- |
|  |  |
| END POINT | /addGender |
| HTTP METHOD | POST |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: |
| HTTP HEADERS | Content-Type:application/json, application/xml  Accept:application/json, application/xml |
| REQUEST JSON |  |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Failed to add"  }  } |

#### WSAPI\_06: Update Gender

|  |  |
| --- | --- |
|  |  |
| END POINT | /updateGender |
| HTTP METHOD | PUT |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: |
| HTTP HEADERS | Content-Type:application/json, application/xml  Accept:application/json, application/xml |
| REQUEST JSON | Array of DISABILITIES\_OBJECT [Ref: 7.5.4.1] |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  <DISABILITIES\_OBJECT>  },  {  <DISABILITIES\_OBJECT>  },  {  <DISABILITIES\_OBJECT>  },  ...  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Failed to update"  }  } |

#### WSAPI\_07: Lookup All Gendera

|  |  |
| --- | --- |
|  |  |
| END POINT | /gender/<emailID>/<serviceAccountID> |
| HTTP METHOD | GET |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: |
| HTTP HEADERS | Content-Type:application/json, application/xml  Accept:application/json, application/xml |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Not Found"  }  } |

### Race Service

The following sample JSON represents a Date of Engagement object (DOE\_OBJECT).

{

"DateOfEngagementID": "4321s",

"ProjectEntryID": "w5641",

"DateOfEngagement": "2016-04-17"

}

#### WSAPI\_08: Add New Date of Engagement to existing client and enrollment

|  |  |
| --- | --- |
|  |  |
| END POINT | /doe |
| HTTP METHOD | POST |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: Bearer <BASE64 Encoded Access Token>  Refer section 7.5.2.1 to get the access token |
| HTTP HEADERS | Content-Type:application/json  Accept:application/json |
| REQUEST JSON | DOE\_OBJECT [Ref:7.5.5.1]  {  <DOE\_OBJECT>  }  The following fields must **NOT** be specified  DateOfEngagementID |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  < DOE\_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Failed to add"  }  } |

#### WSAPI\_09: Update Existing Date of Engagement Information

|  |  |
| --- | --- |
|  |  |
| END POINT | /doe |
| HTTP METHOD | PUT |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: Bearer <BASE64 Encoded Access Token>  Refer section 7.5.2.1 to get the access token |
| HTTP HEADERS | Content-Type:application/json  Accept:application/json |
| REQUEST JSON | DOE\_OBJECT [Ref: 7.5.5.1]  {  <DOE\_OBJECT>  }  The following fields must be specified  DateOfEngagementID |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  < DOE \_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Failed to update"  }  } |

#### WSAPI\_10: Lookup Date of Engagement by DateOfEngagementID

|  |  |
| --- | --- |
|  |  |
| END POINT | /doe/<DateOfEngagementID> |
| HTTP METHOD | GET |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: Bearer <BASE64 Encoded Access Token>  Refer section 7.5.2.1 to get the access token |
| HTTP HEADERS | Content-Type:application/json  Accept:application/json |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  <DOE\_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Not Found"  }  } |

### Ethnicity Service

The following sample JSON and XML represents a EthnicityVO object (ETHNICITYVO\_OBJECT).

<ethnicityVO>

<codeKey>0</codeKey>

<description>(select)</description>

<logDateTime>2015-01-10 09:30:25</logDateTime>

<recActiveGct>1</recActiveGct>

</ethnicityVO>

{

“codeKey”:0,

“description”:”(select)”

“logDateTime”:” 2015-01-10 09:30:25”

“recActiveGct”:1

}

#### Get all ethnicities from the system

|  |  |
| --- | --- |
|  |  |
| END POINT | /ethnicity/{emailID}/{serviceAccountID} |
| HTTP METHOD | GET |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: |
| HTTP HEADERS | Content-Type:application/json, application/xml  Accept:application/json, application/xml |
| REQUEST JSON | DOE\_OBJECT [Ref:7.5.6.1]  {  <PATH\_OBJECT>  } |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  <PATH\_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Failed to add"  }  } |

#### WSAPI\_12: Update Existing PATH Status Information

|  |  |
| --- | --- |
|  |  |
| END POINT | /pathstatus |
| HTTP METHOD | PUT |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: Bearer <BASE64 Encoded Access Token>  Refer section 7.5.2.1 to get the access token |
| HTTP HEADERS | Content-Type:application/json  Accept:application/json |
| REQUEST JSON | DOE\_OBJECT [Ref: 7.5.6.1]  {  <PATH\_OBJECT>  }  The following fields must be specified  PathStatusID |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  <PATH\_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Failed to update"  }  } |

#### WSAPI\_13: Lookup PATH Status by PathStatusID

|  |  |
| --- | --- |
|  |  |
| END POINT | /pathstatus/<PathStatusID> |
| HTTP METHOD | GET |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: Bearer <BASE64 Encoded Access Token>  Refer section 7.5.2.1 to get the access token |
| HTTP HEADERS | Content-Type:application/json  Accept:application/json |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  <PATH\_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Not Found"  }  } |

### Referral Source Service

The following sample JSON represents a Referral Source object (REF\_SRC\_OBJECT).

{

"ReferralSourceID": "jhjhyyy",

"ProjectEntryID": "w5641",

"ReferralSource": "18",

"CountOutreachReferralApproaches": "3"

}

#### WSAPI\_14: Add New ReferralSource to existing client and enrollment

|  |  |
| --- | --- |
|  |  |
| END POINT | /referralsrc |
| HTTP METHOD | POST |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: Bearer <BASE64 Encoded Access Token>  Refer section 7.5.2.1 to get the access token |
| HTTP HEADERS | Content-Type:application/json  Accept:application/json |
| REQUEST JSON | REF\_SRC\_OBJECT [Ref:7.5.7.1]  {  <REF\_SRC\_OBJECT>  }  The following fields must **NOT** be specified  ReferralSourceID |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  <REF\_SRC\_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Failed to add"  }  } |

#### WSAPI\_15: Update Existing Referral Source Information

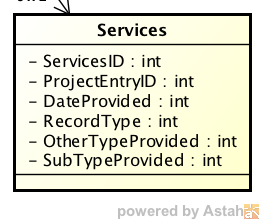
|  |  |
| --- | --- |
|  |  |
| END POINT | /referralsrc |
| HTTP METHOD | PUT |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: Bearer <BASE64 Encoded Access Token>  Refer section 7.5.2.1 to get the access token |
| HTTP HEADERS | Content-Type:application/json  Accept:application/json |
| REQUEST JSON | REF\_SRC\_OBJECT [Ref: 7.5.7.1]  {  <REF\_SRC\_OBJECT>  }  The following fields must be specified  ReferralSourceID |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  <REF\_SRC\_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Failed to update"  }  } |

#### WSAPI\_16: Lookup Referral Source by ReferralSourceID

|  |  |
| --- | --- |
|  |  |
| END POINT | /referralsrc/<ReferralSourceID> |
| HTTP METHOD | GET |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: Bearer <BASE64 Encoded Access Token>  Refer section 7.5.2.1 to get the access token |
| HTTP HEADERS | Content-Type:application/json  Accept:application/json |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  <REF\_SRC\_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Not Found"  }  } |

### Services Service

#### Services Data Structure



The following sample JSON represents a Services object (SVCS\_OBJECT).

{

"ServicesID": "44gg",

"ProjectEntryID": "w5641",

"DateProvided": "2015-09-06",

"RecordType": "16",

"TypeProvided": "11",

"OtherTypeProvided": "some other type here",

"SubTypeProvided": "12",

"FAAmount": "1145.59",

"ReferralOutcome": "2"

}

#### WSAPI\_17: Add New Servicesto existing client and enrollment

|  |  |
| --- | --- |
|  |  |
| END POINT | /services |
| HTTP METHOD | POST |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: Bearer <BASE64 Encoded Access Token>  Refer section 7.5.2.1 to get the access token |
| HTTP HEADERS | Content-Type:application/json  Accept:application/json |
| REQUEST JSON | SVCS\_OBJECT [Ref:7.5.8.1]  {  <SVCS\_OBJECT>  }  The following fields must **NOT** be specified  ServicesID |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  <SVCS\_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Failed to add"  }  } |

#### WSAPI\_18: Update Existing Services Information

|  |  |
| --- | --- |
|  |  |
| END POINT | /services |
| HTTP METHOD | PUT |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: Bearer <BASE64 Encoded Access Token>  Refer section 7.5.2.1 to get the access token |
| HTTP HEADERS | Content-Type:application/json  Accept:application/json |
| REQUEST JSON | SVCS\_OBJECT [Ref: 7.5.8.1]  {  <SVCS\_OBJECT>  }  The following fields must be specified  ServicesID |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  <SVCS\_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Failed to update"  }  } |

#### WSAPI\_19: Lookup Services by ServicesID

|  |  |
| --- | --- |
|  |  |
| END POINT | /services/<ServicesID> |
| HTTP METHOD | GET |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: Bearer <BASE64 Encoded Access Token>  Refer section 7.5.2.1 to get the access token |
| HTTP HEADERS | Content-Type:application/json  Accept:application/json |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  <SVCS\_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Not Found"  }  } |

### Services Service

#### Services Data Structure

The following sample JSON represents a Disabilties object (LOV\_OBJECT).

{

"id": 26,

"name": "No",

"value": "0"

}

#### WSAPI\_20: Get LOV by Type

|  |  |
| --- | --- |
|  |  |
| END POINT | /lov/<LOV NAME>  Refer Table 9in Section 9 for LOV Names  Eg: /lov/fiveValDKRefused |
| HTTP METHOD | GET |
| TRANSPORT | SSL |
| AUTHENTICATION | HTTP Header  Authorization: Bearer <BASE64 Encoded Access Token>  Refer section 7.5.2.1 to get the access token |
| HTTP HEADERS | Content-Type:application/json  Accept:application/json |
| SUCCESS RESPONSE | HTTP 200 OK  {  "header": {  "code": 0  },  "body": [  {  <LOV\_OBJECT>  }  ]  } |
| FAILURE RESPONSE | HTTP 200 OK  {  "header": {  "code": 1001,  "message": "Not Found"  }  } |

# Implementation Strategy

## Technology Selection

All tools and technologies that we use are either Open Source or available for free.

| Business Functionality | Technology | Reason |
| --- | --- | --- |
| Solution Platform |  |  |
| Web Services | Jersey REST API |  |
| OAuth Provider |  |  |
| Database Access |  |  |
| Database | MySQL Cloud Database |  |
| JEE Web Server | Tomcat 8.0.1 |  |
| Java Version | JDK 7.0 |  |
| JEE Version | J2EE 6 |  |

Table : Recommendation Service Technology Selection

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