DESIGN:
SERVICE LAYERS (WEEK2)
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SERVICE LAYERS

“RESTful web services are built to work best on the Web. Representational State Transfer (REST) is an architectural style that specifies constraints, such as the uniform interface, that if applied to a web service induce desirable properties, such as performance, scalability, and modifiability, that enable services to work best on the Web. In the REST architectural style, data and functionality are considered resources and are accessed using Uniform Resource Identifiers (URIs), typically links on the Web. The resources are acted upon by using a set of simple, well-defined operations. The REST architectural style constrains an architecture to a client/server architecture and is designed to use a stateless communication protocol, typically HTTP. In the REST architecture style, clients and servers exchange representations of resources by using a standardized interface and protocol.” (Oracle, 2013)

HTTP VERBS

- POST - To create a resource on the server
- GET - To retrieve a resource from the server
- PUT - To change the state of a resource or to update it
- DELETE - To remove or delete a resource from the server

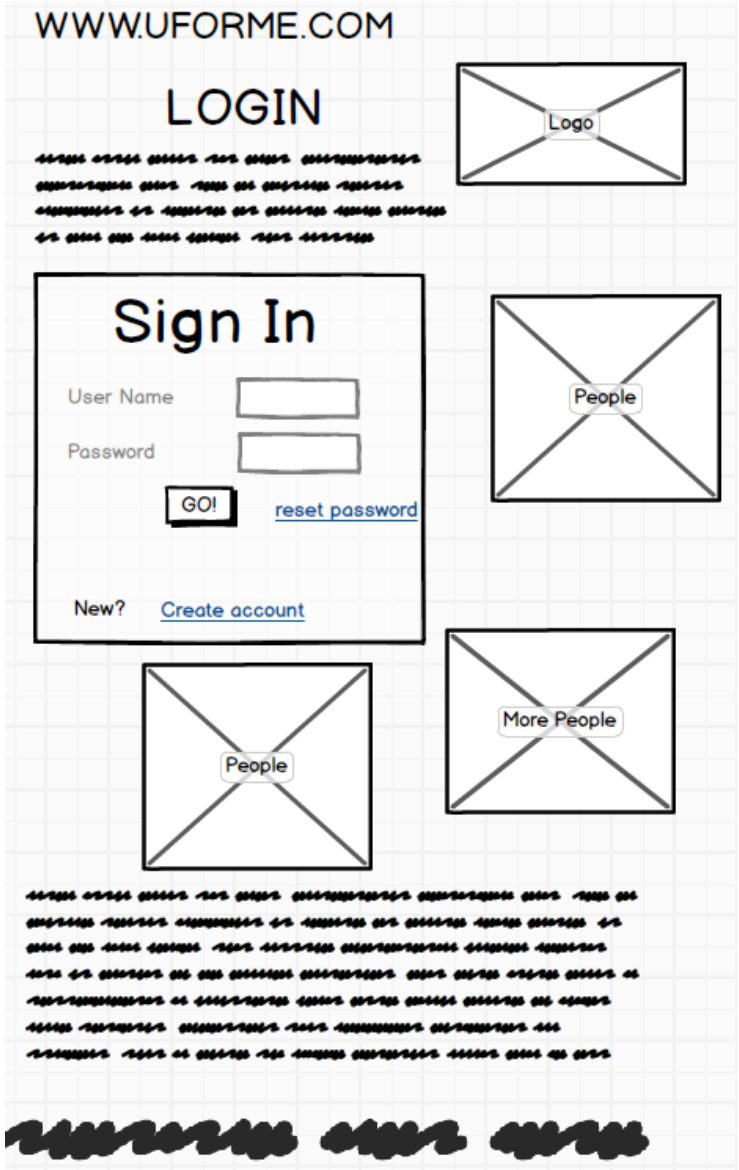
RESTFUL WEB SERVICES

Service Name	Description	HTTP Verb	Sample Request	Sample Response
CreateUser	Used to create a new user account	POST	http://www.uforme.com/u4meService/createuser Content-Type: application/json { "username": "<name_of_user>", "password": "<password>", "fullname" : "<full_name_of_user>"}	<result> <status>success</status> <errorcode>0</errorcode> </result>
LogIn	User can log into the system if they have an account	GET	http://www.uforme.com/u4meService/login Content-Type: application/json { "username": "<name_of_user>", "password": "<password>"}	<result> <status>success</status> <errorcode>0</errorcode> </result>
ResetPassword	Reset user account password	PUT	http://www.uforme.com/u4meService/passreset Content-Type: application/json { "username": "<name_of_user>", "password": "<password>"}	<result> <status>success</status> <errorcode>0</errorcode> </result>

Service Name	Description	HTTP Verb	Sample Request	Sample Response
CreateProfile	Used to create the attributes of the user to be used when partner searches for users	POST	http://www.uforme.com/u4meService/createprofile Content-Type: application/json { “age": "<age_of_user>", “height": "<height_of_user>", “gender" : "<gender_of_user>"}	<result> <status>created</status> <errorcode>0</errorcode> </result>
CreateMasks	Used for user to create the MASKS to be used in partner compatibility searches	POST	http://www.uforme.com/u4meService/createmasks Content-Type: application/json { “age": "<age_of_partner>", “height": "<height_of_partner>", “gender" : "<gender_of_partner>"}	<result> <status>created</status> <errorcode>0</errorcode> </result>
ManageMasks	Used for user to manage which MASKS should be used in searches for a partner	PUT	http://www.uforme.com/u4meService/managemasks Content-Type: application/json { “selectedmask": "<maskeid>", “activate": "<true>"}	<result> <status>selected</status> <maskid>132123</maskid> <errorcode>0</errorcode> </result>

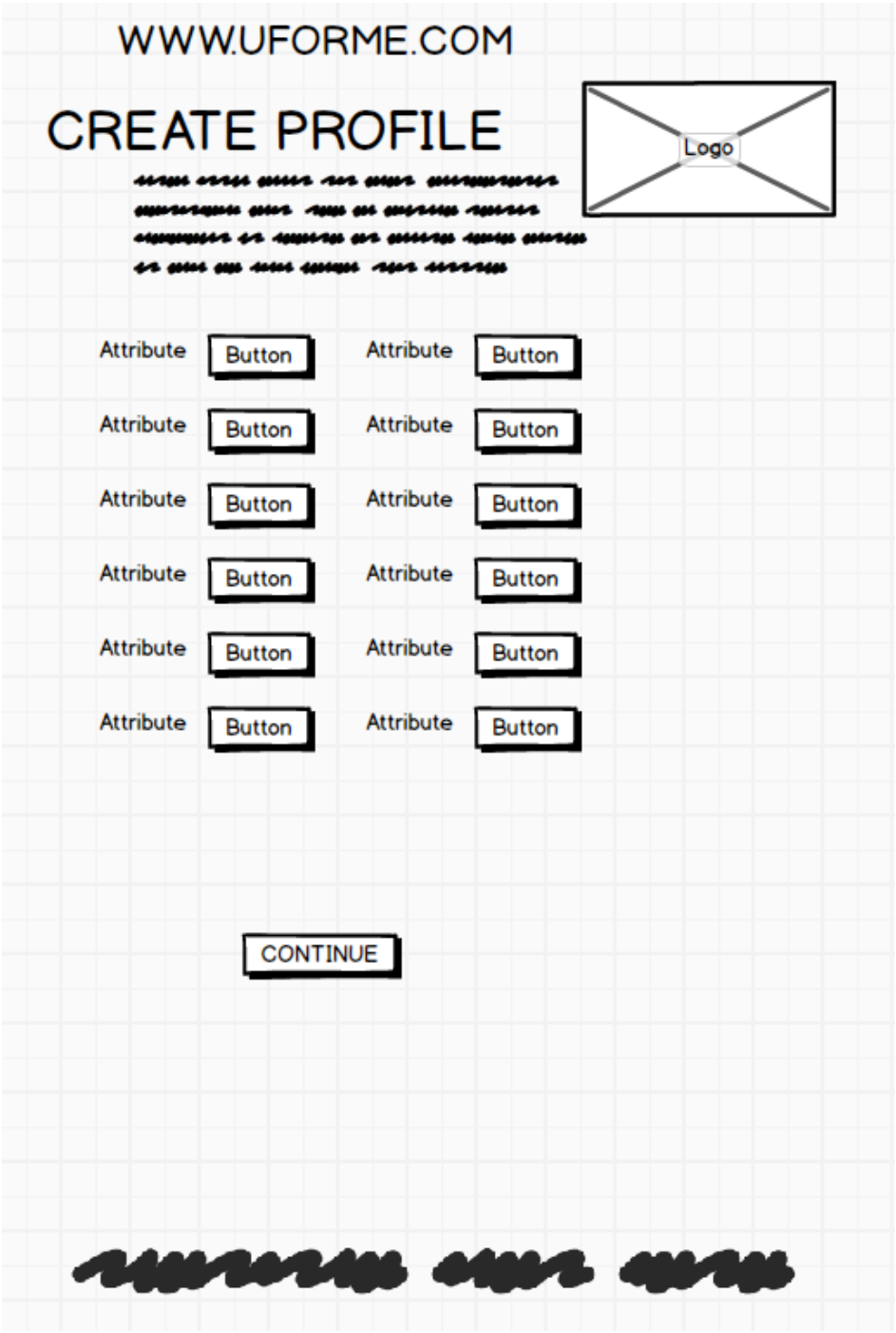
Service Name	Description	HTTP Verb	Sample Request	Sample Response
SelectLocation	Used so that the user can select the geographic location to search for a partner	PUT	http://www.uforme.com/u4meService/selectlocation Content-Type: application/json { “location": "<location_of_user>", “radius": "<radius_of_user>", “zipcode" : "<zipcode_of_user>"}	<result> <status>validlocation</status> <errorcode>0</errorcode> </result>
UploadImage	Used for user to allow user to upload profile pictures	POST	http://www.uforme.com/u4meService/uploadimage Content-Type: application/json { “imagename": "<name_of_image>", “image": "<bytes>"}	<result> <status>uploaded</status> <imageid>132123</imageid> <errorcode>0</errorcode> </result>

Service Name	Description	HTTP Verb	Sample Request	Sample Response
ReturnResults	Once user has selected all their MASKS, this service will return mask results	GET	http://www.uforme.com/u4meService/returnresults Content-Type: application/json { "userid": "<id_of_user>",}	<result> <partner> <name>Jane Doe</name> <id>123</id> </partner> <errorcode>0</errorcode> </result>
SelectMatch	Used to allow user to select who they want to match with	PUT	http://www.uforme.com/u4meService/selectmatch Content-Type: application/json { “partnerid": "<id_of_partner>"}	<result> <status>success</status> <errorcode>0</errorcode> </result>
RequestMatch	Used to allow user to request a connection from viewed partner	GET	http://www.uforme.com/u4meService/requestmatch Content-Type: application/json { “partnerid": "<id_of_partner>"}	<result> <status>success</status> <errorcode>0</errorcode> </result>
BlockPartner	Used to block partner (multiple reasons apply)	PUT	http://www.uforme.com/u4meService/blockpartner Content-Type: application/json { “partnerid": "<id_of_partner>"}	<result> <status>success</status> <errorcode>0</errorcode> </result>



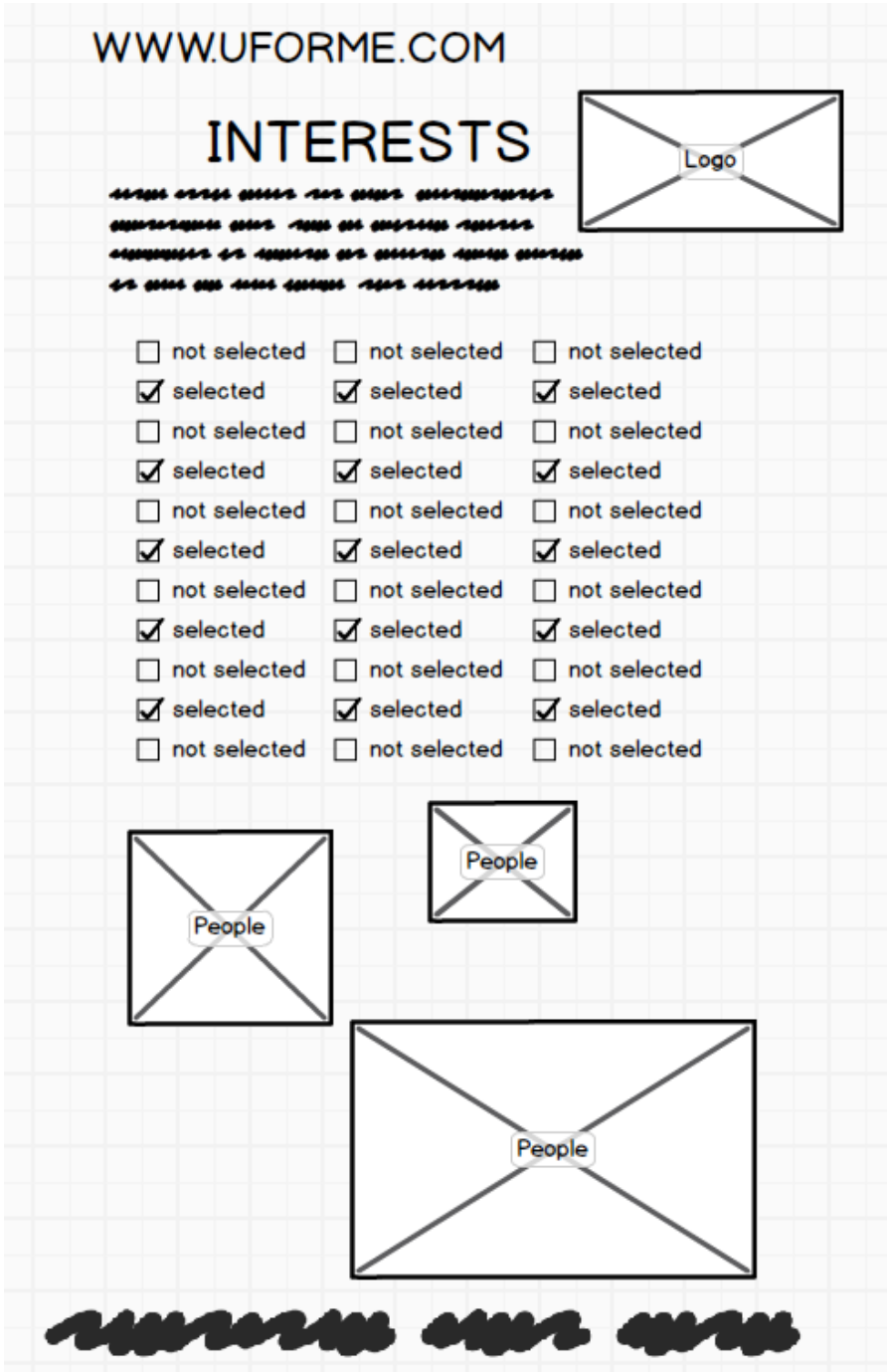
User Interface Endpoints Mapping

- createuser
- login
- resetpassword
- uploadimage



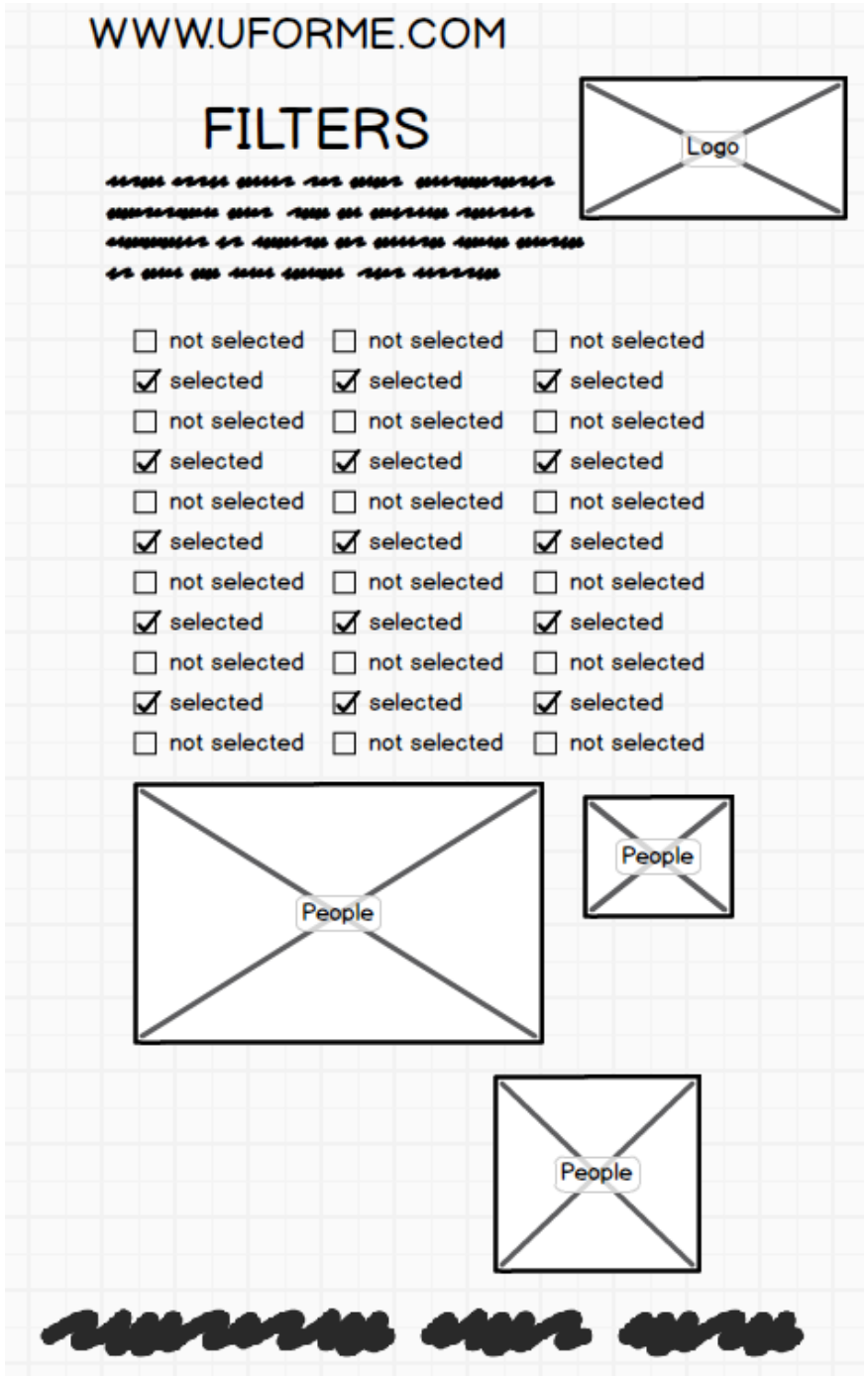
User Interface Endpoints Mapping

- createprofile



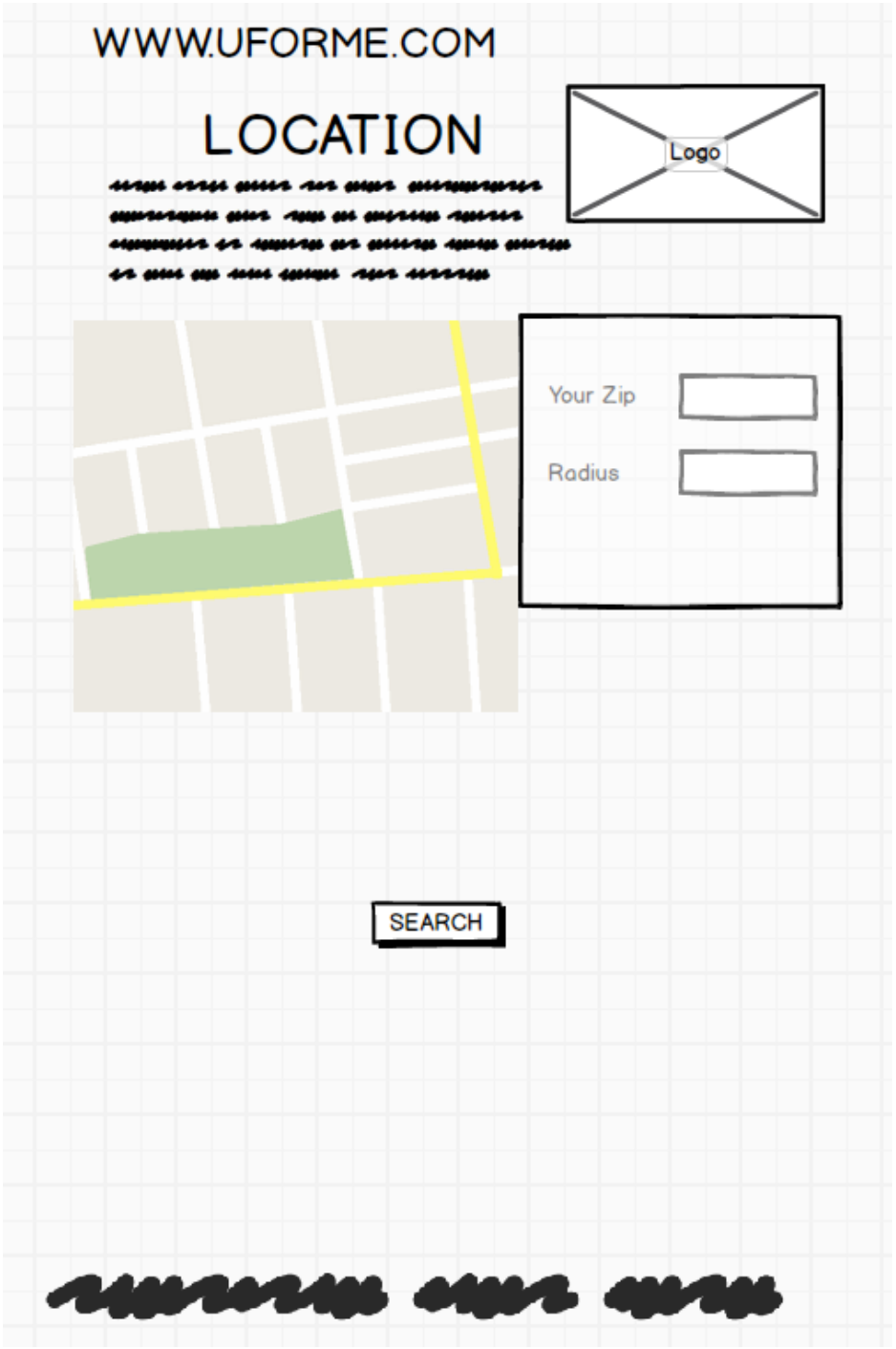
User Interface Endpoints Mapping

- createmasks



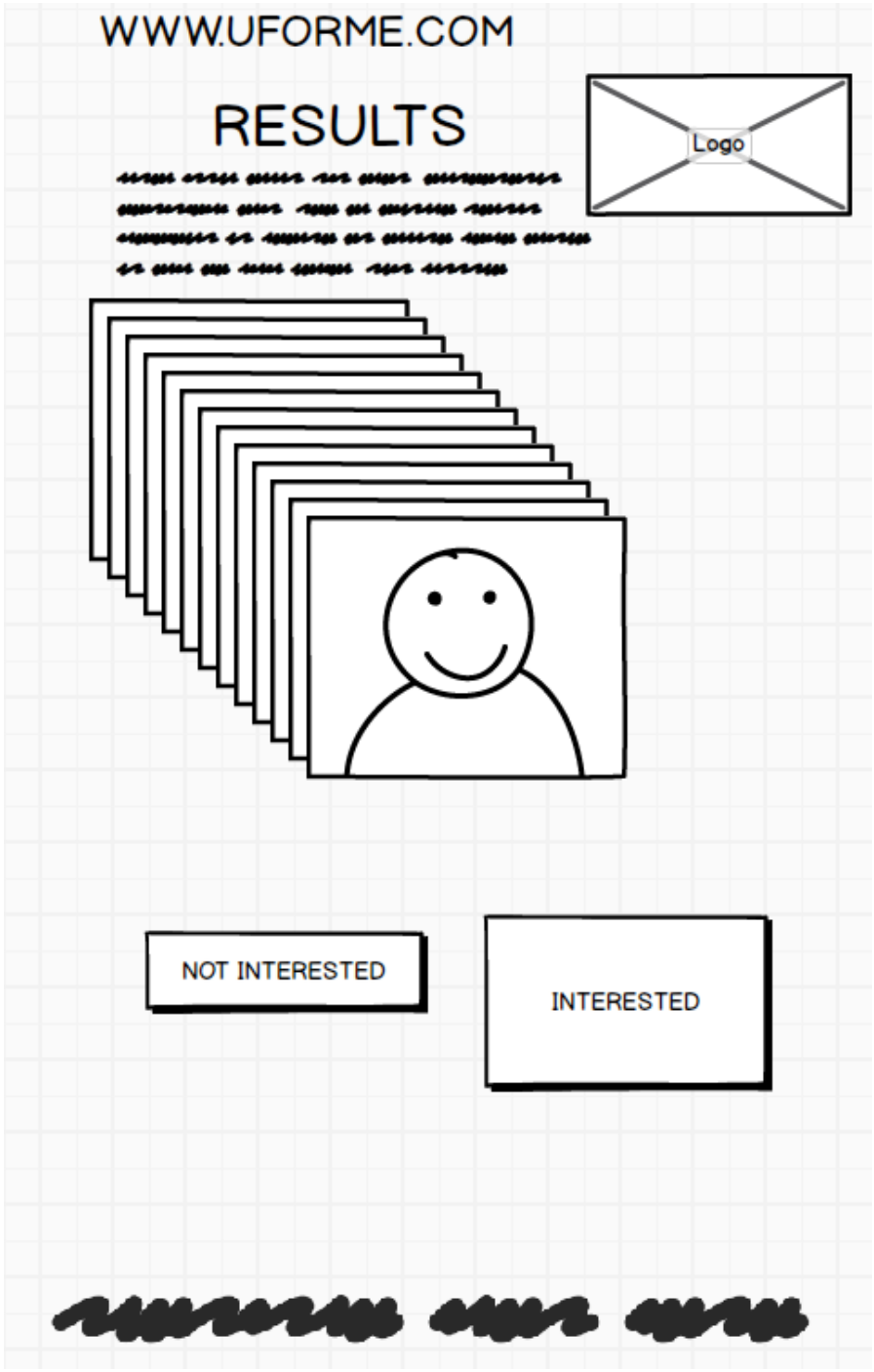
User Interface Endpoints Mapping

- managemasks



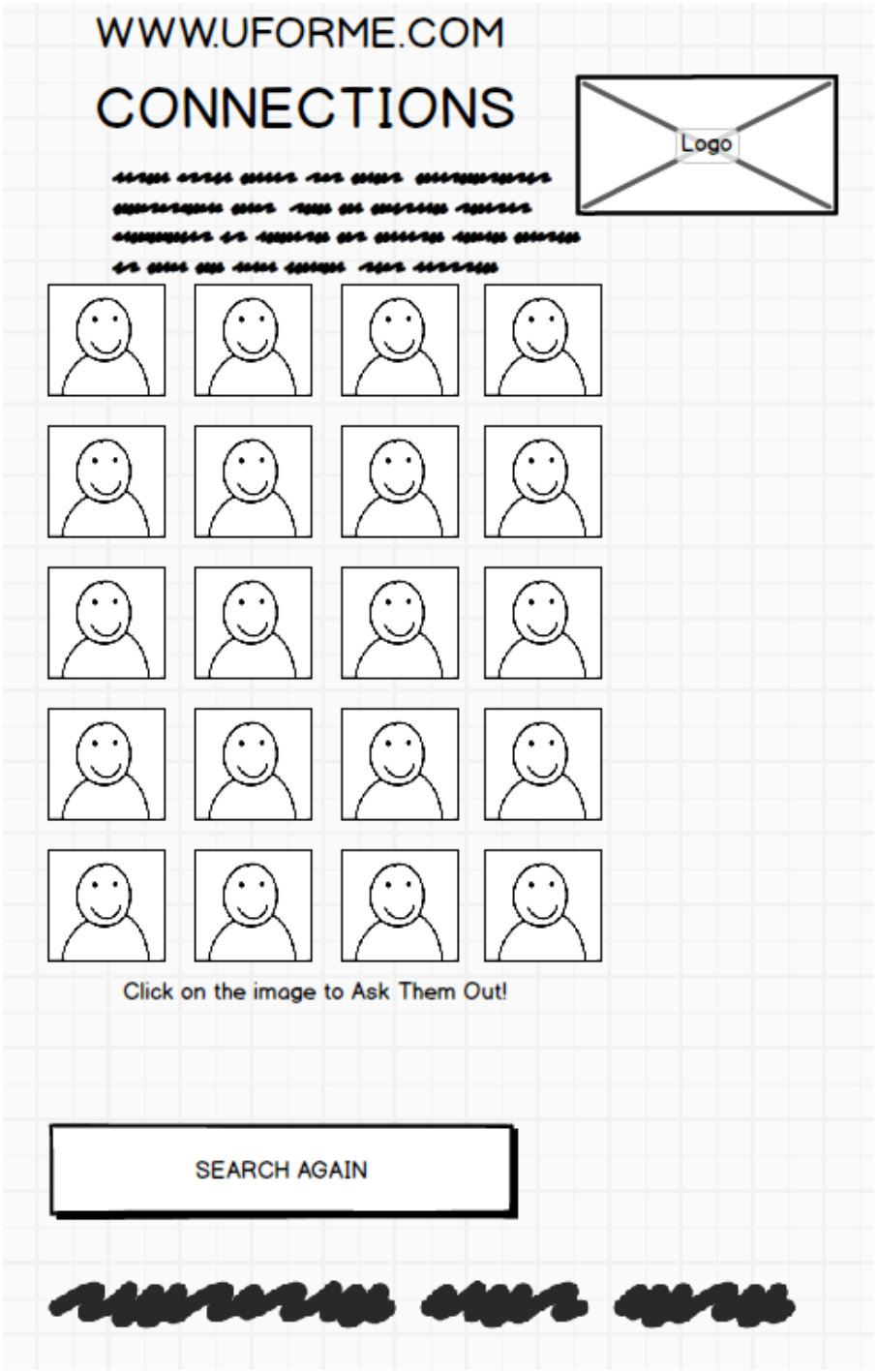
User Interface Endpoints Mapping

- selectlocation



User Interface Endpoints Mapping

- selectmatch
- returnresults



User Interface Endpoints Mapping

- requestmatch
- blockpartner

REFERENCES

Oracle. (2013, January 01). The Java EE 6 Tutorial. Retrieved July 13, 2019, from https://docs.oracle.com/javaee/6/tutorial/doc/gijqy.html