System Test Cases

- Performance Testing**: investigate the run-time performance within the context of an integrated system and how well and quickly does the system recover from faults
 - a. Street address confirmation using USPS API
 - b. Email address confirmation using JavaMail API
 - c. Test using JMeter
- Security Testing**: verify that protection mechanisms built into the system will
 protect from unauthorized access (hackers, disgruntled employees, fraudsters)
 - a. Test using Grabber tool
- 3. Stress (Load) Testing**: place abnormal load on the system
 - a. Test using JMeter
- 4. **User Acceptance Testing:** verifies that the system works as required and validates that the correct functionality has been delivered
 - a. The following UAT cases are to be implemented

Test Case ID: TC_UI_1			Test	Title: Verify Lo	gin with \	/alid	
			Cred	entials			
Test Priority: High			Description: Test that logging into GGMS with a valid username and password				
			1		•		ر بال
			1	oination authent		ser succe	SSTUIIY
			and	displays home p	page		
Modu	le Name: GGMS	Login	Pre-condition: User is not authenticated in GGMS				
	ndencies: Manag ntials with assigne	_	crede	ntials in GGMS.	. Trainer r	must regi	ster
Step	Test Steps	Test Data		Expected	Actual	Status	Notes
Sieh	1 est oteps	1631 Dala		•		Sialus	110162
				Result	Result		
1	Visit			GGMS login	N/A	N/A	

Step	rest Steps	lest Data	Expected	Actual	Status	Notes
			Result	Result		
1	Visit		GGMS login	N/A	N/A	
	/localhost:8080/		page displayed			
2	Fill in username field	Username:joe.smith	Username is valid	N/A	N/A	
3	Fill in password field	Password: gymRAT3	Password is valid	N/A	N/A	
4	Click Login button		GGMS authenticates User. Home page displayed	N/A	N/A	

Post-condition: User was authenticated in GGMS

Test Case ID: TC_UI_2 Test Title: Deny Login with Invalid Credentials	
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Test Priority: High	Description: Test that logging into GGMS with an invalid username and password combination does not authenticate User successfully and displays login page with error message
Module Name: GGMS Login	Pre-condition: User is not authenticated in GGMS

Dependencies: Manager must register credentials in GGMS. Trainer must register credentials with assigned id in GGMS.

Step	Test Steps	Test Data	Expected Result	Actual Result	Status	Notes
1	Visit /localhost:8080/		GGMS login page displayed	N/A	N/A	
2	Fill in username field	Username: joe.smith	Username is valid	N/A	N/A	
3	Fill in password field	Password: badPass	Password is invalid	N/A	N/A	
4	Click Login button		GGMS does not authenticate User. Login page displayed with password error message	N/A	N/A	
5	Fill in username field	Username: joe.smith.bad	Username is invalid	N/A	N/A	
6	Fill in password field	Password: gymRAT3	Password is valid (for username joe.smith)	N/A	N/A	
7	Click Login button		GGMS does not authenticate User. Login page displayed with username error message	N/A	N/A	

Post-condition: User was not authenticated in GGMS

Test Case ID: TC_UI_3 Test Title: Verify Logout							
Test Priority: High Description: Test that logging out of GGMS unauthenticates User successfully and displays login page			ys				
Modu	Module Name: GGMS Logout Pre-condition: Manager/Trainer is authenticate GGMS			ated in			
Depe	ndencies: Manage	er/Trainer n	nust be logged into G	GMS.			
Step	Test Steps	Test	Expected Result Actual Status Note				
		Data		Result		S	

1	Visit	GGMS login	N/A	N/A	
	/localhost:8080/	page displayed			
2	Click Logout	GGMS	N/A	N/A	
	button	unauthenticates			
		User. Home page			
		displays			
Post-	condition: User wa	as unauthenticated in GGMS			

Toct	Casa ID: TC III	1	Toct Title	a: Varify Naw	Hear Pa	aictratio	n Dort 1
Test Case ID: TC_UI_4 Test Priority: High		Test Title: Verify New User Registration Part 1 Description: Test that registering without an initial id as a new User in GGMS successfully creates and adds a new Manager instance to GGMS and displays home page				out an ssfully	
Modu	ıle Name: GGMS	Register		dition: User is			GGMS
New l							
	ndencies: N/A	T			1	O	
Ste p	Test Steps	Test Data		Expected Result	Actua I Resul t	Statu	Notes
1	Visit /localhost:8080 /			GGMS login page displayed	N/A	N/A	
2	Fill in username field	Username:	don.ward	Username is valid	N/A	N/A	
3	Fill in password field	Password: gymCool9		Password is valid	N/A	N/A	
4	Click Register as New User (no id) button			GGMS displays confirmatio n that credentials are valid and User has been registered as a Manager in GGMS. Manager form displays.	N/A	N/A	
5	Fill in id field	ld: 001		ld is valid	N/A	N/A	Manage r id must

						begin with '0'
6	Fill in name field	Name: Don	Name is valid	N/A	N/A	
7	Fill in last name field	Last name: Ward	Last name is valid	N/A	N/A	
8	Fill in address field	Address: street1=777 Main St, street2=Apt 77, city=Dover, state=RI, zip code=41190	Address is valid and verified by USPS API	N/A	N/A	
9	Fill in phone number field	Phone number: 3139998212	Phone number is 10 digit Integer and valid	N/A	N/A	
10	Fill in email field	Email: donward@email.co m	Email is valid and verified by JavaMail API	N/A	N/A	
11	Fill in insurance field	Insurance: Aetna	Insurance is valid	N/A	N/A	
12	Click Submit Form button		GGMS displays confirmatio n that Manager was created and entered into GGMS.	N/A	N/A	
13	Click OK button on Confirmation message		Home page displays	N/A	N/A	

Post-condition: Manager was registered as a new User in GGMS. Manager was created and added to GGMS

Test Case ID: TC_UI_5	Test Title: Verify New User Registration Part 2
Test Priority: High	Description: Test that registering with an initial id
	as a new User in GGMS successfully adds login

	credentials to an existing Trainer instance in GGMS and displays home page
Module Name: GGMS Register	Pre-condition: User is not registered in GGMS
New User	_
Dependencies: Trainer must be	hired by Manager, i.e., Trainer must be created and

Dependencies: Trainer must be hired by Manager, i.e., Trainer must be created and added to GGMS by Manager.

Step	Test Steps	Test Data	Expected Result	Actual Result	Status	Notes
1	Visit /localhost:8080/		GGMS login page displayed	N/A	N/A	
2	Fill in username field	Username: jerry.jones	Username is valid	N/A	N/A	
3	Fill in password field	Password: gymFun4	Password is valid	N/A	N/A	
4	Click Register as New User (have id) button		GGMS displays confirmation that credentials are valid and User has been registered as a Trainer in GGMS. Trainer form displays.	N/A	N/A	
5	Click OK button on Confirmation message		Home page displays	N/A	N/A	

Post-condition: Trainer was registered as a new User in GGMS

	• ID TO I		T (TH)/ '/ T : E O : :					
Test	Case ID: TC_L	JI_6	Test Title: Verify Trainer Form Submission					
Test Priority: Med		Description: Test that, as a Manager authenticated in GGMS, completing a Trainer form						
				•	•	_		
				nd adds a new				
Modu	ı le Name: GGI	MS Hire	Pre-condi	tion: Manager	is authe	nticated	in GGMS	
Trainer								
Dependencies: Manager must I			e logged in	to GGMS.				
Ste	Test Steps	Test Data		Expected	Actua	Statu	Notes	
р				Result	1	S		
					Resul	_		
					t			
1	Click			Trainer form	N/A	N/A		
					IN/A	IN/A		
	Trainer form			displays				
	button							
2	Fill in id field	ld: 100		ld is valid			Custome	
							r id must	

						begin with '1'
3	Fill in name field	Name: Bob	Name is valid	N/A	N/A	
4	Fill in last name field	Last name: Barker	Last name is valid	N/A	N/A	
5	Fill in address field	Address: street1=123 Main St, street2=Apt 12, city=Denver, state=CO, zip code=80222	Address is valid and verified by USPS API	N/A	N/A	
6	Fill in phone number field	Phone number: 1234567890	Phone number is 10 digit Integer and valid	N/A	N/A	
7	Fill in email field	Email: bobbarker@email.co m	Email is valid and verified by JavaMail API	N/A	N/A	
8	Fill in insurance field	Insurance: Aetna	Insurance is valid	N/A	N/A	
9	Fill in work schedule field	Work Schedule: [Monday, 9:30 AM, 3:30 PM], [Tuesday, 10:00 AM, 4:30 PM]	Work schedule is valid	N/A	N/A	
10	Fill in qualification s fields	Qualifications: Personal trainer certified, CPR	Qualification s are valid	N/A	N/A	
11	Click Submit Form button		GGMS displays confirmation that Trainer was created and entered into GGMS.	N/A	N/A	
12	Click OK button on Confirmatio n message		Home page displays	N/A	N/A	
Post	-condition: Tra	niner was created and er	ntered into GGN	/IS		

Test (Case ID: TC_UI_7		Te	Test Title: Verify Trainer Form Modification					
Test I	Test Priority: Low			Description: Test that, as a Manager					
			1	ithenticated in GGM					
				dates an existing T					
	ı le Name: GGMS I	Modify	Pr	'e-condition: Mana	iger is aut	thenticate	ed in GGMS		
Traine									
			e lo	ogged into GGMS. I	Manager	must per	form search		
for Tra	ainer to be modifie								
Step	Test Steps	Test Da	ata	Expected Result	Actual Result	Status	Notes		
1	Click Edit			Trainer form	N/A	N/A			
	button on			displays					
	Trainer			A.	NI/A	N1/A			
2	Change text in name field	Name: Tim		Name is valid	N/A	N/A			
3	Click Submit			GGMS displays	N/A	N/A			
	Form button			confirmation that					
				Trainer was					
				modified in					
_				GGMS.	N 1 / A	N1/A			
4	Click OK button			Home page	N/A	N/A			
	on Confirmation			displays					

message

Post-condition: Trainer was modified in GGMS

Test Case ID: TC_UI_8			Test Title: Verify Customer Form Submission					
Test Priority: Med			authentic	Description: Test that, as a Manager authenticated in GGMS, completing a Customer form creates and adds a new Customer instance to				
	Ile Name: GGM ter Customer	S	Pre-con	dition: Manag	er is auth	enticated	I in GGMS	
Depe	Dependencies: Manager must be			into GGMS.				
Step	Test Steps	Test Data		Expected Result	Actual Result	Status	Notes	
1	Click Customer form button				N/A	N/A		
2	Fill in id field Id: 200			ld is valid			Customer id must begin with '2'	

3	Fill in name field	Name: Bill	Name is valid	N/A	N/A
4	Fill in last name field	Last name: Ford	Last name is valid	N/A	N/A
5	Fill in address field	Address: street1=246 Main St, street2=Apt 24, city=Bryan, state=TX, zip code=77800	Address is valid and verified by USPS API	N/A	N/A
6	Fill in phone number field	Phone number: 9876543210	Phone number is 10 digit Integer and valid	N/A	N/A
7	Fill in email field	Email: billford@email.com	Email is valid and verified by JavaMail API	N/A	N/A
8	Fill in insurance field	Insurance: Medicaid	Insurance is valid	N/A	N/A
9	Select membership status	Status: ACTIVE	Status is valid	N/A	N/A
10	Click Submit Form button		GGMS displays confirmation that Customer was created and entered into GGMS.	N/A	N/A
11	Click OK button on Confirmation message		Home page displays	N/A	N/A
Post-		tomer was created an	d entered into (GMS	

Post-condition: Customer was created and entered into GGMS

Test Case ID: TC_UI_9	Test Title: Verify Customer Form Modification
Test Priority: Low	Description: Test that, as a Manager authenticated in GGMS, modifying a Customer form updates an existing Customer instance in
	GGMS

Module Name: GGMS Modify | Pre-condition: Manager is authenticated in GGMS Customer Dependencies: Manager must be logged into GGMS. Manager must perform search

for Customer to be modified.

Step	Test Steps	Test Data	Expected Result	Actual Result	Status	Notes
1	Click Edit button on Customer		Customer form displays	N/A	N/A	
2	Change text in name field	Name: Tim	Name is valid	N/A	N/A	
3	Click Submit Form button		GGMS displays confirmation that Trainer was modified in GGMS.	N/A	N/A	
4	Click OK button on Confirmation message		Home page displays	N/A	N/A	

Post-condition: Customer was modified in GGMS

Test Case ID: TC_UI_10	Test Title: Verify Equipment Form Submission
Test Priority: Med	Description: Test that, as a Manager authenticated in GGMS, completing an Equipment form creates and adds a new Equipment instance to GGMS
Module Name: GGMS Inventory Equipment	Pre-condition: Manager is authenticated in GGMS
Dependencies: Manager must	be logged into GGMS.

Depe	Dependencies. Manager must be logged into GGMS.									
Step	Test Steps	Test Data	Expected Result	Actual Result	Status	Notes				
1	Click Equipment form button		Equipment form displays	N/A	N/A					
2	Fill in name field	Name: dumbbell	Name is valid	N/A	N/A					
3	Fill in picture field	Picture: null	Picture is valid	N/A	N/A					
4	Fill in quantity field	Quantity: 3	Quantity is valid (non-negative)	N/A	N/A					
5	Click Submit Form button		GGMS displays confirmation that Equipment was created and	N/A	N/A					

		entered into the Inventory of GGMS.			
6	Click OK button on Confirmation message	Home page displays	N/A	N/A	
Doot		ant was arouted and entered	into the l	oventory o	t CCMC

Post-condition: Equipment was created and entered into the Inventory of GGMS

Test (Case ID: TC_UI_1	1	Те	Test Title: Verify Equipment Form Modification				
Test Priority: Low			au for	Description: Test that, as a Manager authenticated in GGMS, modifying a Equipment form updates an existing Equipment instance in GGMS				
Equip				e-condition: Mana				
	ndencies: Manago uipment to be mod		e Ic	egged into GGMS.	Manager	must per	form search	
Step	Test Steps	Test Data		Expected Result	Actual Result	Status	Notes	
1	Click Edit button on Equipment			Equipment form displays	N/A	N/A		
2	Change text in quantity field	Quantity 8	y:	Quantity is valid	N/A	N/A		
3 Click Submit Form button				GGMS displays confirmation that Equipment in the Inventory of GGMS was modified.	N/A	N/A		
4 Click OK button on Confirmation message				Home page displays	N/A	N/A		
Post-	condition: Equipn	nent was	mo	dified in the Invent	tory of GG	MS		

Test Case ID: TC_UI_12				Test Title: Verify Exercise Form Submission Part 1				
i ii			in G	Description: Test that, as a Trainer authenticated in GGMS, completing an Exercise form creates and adds a new Exercise instance to GGMS				
Module Name: GGMS Create Exercise			Pre-	condition: Trainer i	is authenti	cated in (GGMS	
Depe	ndencies: Trainer	must be	logge	ed into GGMS.				
Step Test Steps Test Da				Expected Result	Actual Result	Status	Notes	

1	Click Exercise form button		Exercise form displays	N/A	N/A
2	Fill in name field	Name: dumbbell squats	Name is valid	N/A	N/A
3	Fill in equipment field	Equipment: [dumbbell]	Equipment is valid	N/A	N/A
4	Fill in duration field	Duration: 120 seconds	Duration is valid	N/A	N/A
5	Click Submit Form button		GGMS displays confirmation that Exercise was created and entered into GGMS.	N/A	N/A
6	Click OK button on Confirmation message		Home page displays	N/A	N/A
Post-	condition: Exercise	se was created	and entered into G	GMS	

Test Case ID: TC_UI_13			Test Ti	Test Title: Verify Exercise Form Submission Part 2					
Test Priority: Med			in GGN	Description: Test that, as a Trainer authenticated in GGMS, completing an Exercise form creates and adds a new Exercise instance to GGMS					
Modu Exerc	lle Name: GGMS (ise	Create	Pre-co	ndition: Trainer is	s authent	icated in	GGMS		
Depe	ndencies: Trainer	must be	logged	into GGMS.					
Step	Test Steps	Test Da	ıta	Expected Result	Actual Result	Status	Notes		
1	Click Exercise form button			Exercise form displays	N/A	N/A			
2	Fill in name field	Name: dumbbe bench p		Name is valid	N/A	N/A			
3	Fill in equipment field	Equipm [dumbb		Equipment is valid	N/A	N/A			
4	Fill in number of sets field	Number Sets: 3	r of	Number of Sets is valid	N/A	N/A			
5	Fill in repetitions per set field	Repetiti per Set		Repetitions per Set is valid	N/A	N/A			

6	Click Submit Form button	GGMS displays confirmation that Exercise was created and entered into GGMS.	N/A	N/A	
7	Click OK button on Confirmation message	Home page displays	N/A	N/A	
Post-	-condition: Exercise	e was created and entered into G	GMS		

Test (Case ID: TC_UI_1	4	Test Title: Verify Exercise Form Modification Part 1				
Test Priority: Low Description: Test that, as a Trainer authenticate in GGMS, modifying an Exercise form updates a existing Exercise instance in GGMS							
Module Name: GGMS Modify Pre-condition: Trainer is auther Exercise				enticated	in GGMS		
	Dependencies: Trainer must be logged into GGMS. Trainer must perform search f Exercise to be modified.					n search for	
Step Test Steps Test Da			а	Expected Result	Actual Result	Status	Notes

Step	Test Steps	Test Data	Expected Result	Actual Result	Status	Notes
1	Click Edit button on Exercise		Exercise form displays	N/A	N/A	
2	Change text in duration field	Duration: 300 seconds	Duration is valid	N/A	N/A	
3	Click Submit Form button		GGMS displays confirmation that Exercise was modified in GGMS.	N/A	N/A	
4	Click OK button on Confirmation message		Home page displays	N/A	N/A	

Post-condition: Exercise was modified in GGMS

Test Case ID: TC_UI_15	Test Title: Verify Exercise Form Modification Part 2
Test Priority: Low	Description: Test that, as a Trainer authenticated
	in GGMS, modifying an Exercise form updates an
	existing Exercise instance in GGMS
Module Name: GGMS Modify	Pre-condition: Trainer is authenticated in GGMS
Exercise	

Dependencies: Traine	r must be logged into	GGMS.	Trainer must perform	search for
Exercise to be modifie	1 .			

Step	Test Steps	Test Data	Expected Result	Actual Result	Status	Notes
1	Click Edit button on Exercise		Exercise form displays	N/A	N/A	
2	Change number in number of sets field	Number of Sets: 5	Number of Sets is valid	N/A	N/A	
3	Click Submit Form button		GGMS displays confirmation that Exercise was modified in GGMS.	N/A	N/A	
4	Click OK button on Confirmation message		Home page displays	N/A	N/A	

Post-condition: Exercise was modified in GGMS

Test (Case ID: TC_UI_1	6	Test T	itle: Verify Routin	e Form S	ubmissio	n
Test Priority: Med Description: Test that, as a Trainer authenticate in GGMS, completing a Routine form creates an adds a new Routine instance to GGMS							
	lle Name: GGMS (Create	Pre-condition: Trainer is authenticated in GGMS				
Routir	ne						
Depe	ndencies: Trainer	must be	logged	into GGMS.			
Step	Test Steps	Test Da	ıta	Expected	Actual	Status	Notes
				Result	Result		
1	Click Routine			Routine form	N/A	N/A	
	form button			displays			

			Result	Result	
1	Click Routine form button		Routine form displays	N/A	N/A
2	Fill in name field	Name: dumbbell stuff	Name is valid	N/A	N/A
3	Fill in exercises field	Exercises: [dumbbell squats], [dumbbell bench press]	Exercises are valid	N/A	N/A
4	Click Submit Form button		GGMS displays confirmation that Routine was created	N/A	N/A

		and entered into GGMS.			
5	Click OK button on Confirmation message	Home page displays	N/A	N/A	
Doct	condition. Pouting	use erected and entered into Cu	CNIC		

Post-condition: Routine was created and entered into GGMS

Test Case ID: TC_UI_17			Те	Test Title: Verify Routine Form Modification				
Test Priority: Low			De	Description: Test that, as a Trainer authenticated in GGMS, modifying an Routine form updates an existing Routine instance in GGMS				
Module Name: GGMS Modify Routine Pre-condition: Trainer is authenticated in GGN				in GGMS				
•	ndencies: Trainer ne to be modified.	must be	log	ged into GGMS. Tra	ainer mus	st perform	search for	
Step	Test Steps	Test Da	ıta	Expected Result	Actual Result	Status	Notes	
1	Click Edit button on Routine			Routine form displays	N/A	N/A		
2	Change exercise in exercises field	Exercise [dumbb squats]		Exercises are valid	N/A	N/A		
3	Click Submit Form button			GGMS displays confirmation that Routine was modified in GGMS.	N/A	N/A		
4	Click OK button on Confirmation message			Home page displays	N/A	N/A		
Post-	condition: Routine	e was mo	odifi	ed in GGMS				

Test Case ID: TC_UI_18 **Test Title:** Verify Routine Assignment for Customer Test Priority: Med **Description:** Test that, as a Trainer authenticated in GGMS, assigning Routine(s) to a Customer updates an existing Customer instance in GGMS Module Name: GGMS Assign Pre-condition: Trainer is authenticated in GGMS Routine Dependencies: Trainer must be logged into GGMS. Trainer must perform search for Customer to be modified. Step | Test Steps **Test Data** Expected Actual Notes Status

Result

Result

1	Click Edit button on Customer		Customer form displays	N/A	N/A
2	Add routine to assigned routines field	Assigned Routines: [dumbbell stuff]	Assigned Routines are valid	N/A	N/A
3	Click Submit Form button		GGMS displays confirmation that Customer was assigned a Routine(s) and modified in GGMS.	N/A	N/A
4	Click OK button on Confirmation message		Home page displays	N/A	N/A

Post-condition: Customer was assigned Routine(s) and modified in GGMS

Test Case ID: TC_UI_19		Test Title: Verify Search Form Submission						
Test Priority: High			Description: Test that, as a Manager/Trainer authenticated in GGMS, completing a Search form returns the result found in GGMS with View and Edit buttons					
Module Name: GGMS Search			Pre-condition: Manager/Trainer is authenticated in GGMS					
Depe	ndencies: Manag	er/Traine	r must be	logged into GC	SMS.			
Step	Test Steps	Test Data		Expected Result	Actual Result	Status	Notes	
1	Click Search form button			Search form displays	N/A	N/A		
2	Select option in Filter dropdown list	- Filter dropdown option (as Manager): Customer - Filter dropdown option (as Trainer): Exercise		Filter dropdown option is valid	N/A	N/A		
3	Fill in name field	- Name (as Manager): Bill Ford		Name is valid	N/A	N/A		

		- Name (as Trainer): dumbbell squats					
4	Click Submit Form button	·	GGMS displays result with View and Edit button.	N/A	N/A		
Post-condition: Search was performed in GGMS and a result was returned							

Post-condition: Search was penormed in GGMS and a result was returned

** Optional to implement but still plan to unless time does not permit

References

- 1. http://rgaucher.info/beta/grabber/
- 2. https://github.com/neuroo/grabber
- 3. http://jmeter.apache.org/
- 4. http://www.softwaretestinghelp.com/what-is-user-acceptance-testing-uat/
- 5. http://www.softwaretestinghelp.com/test-case-template-examples/