The Whats:

For each project we need to have it presenting some functionality, we've already discussed why we need your module, and how it is going to do it is up to you.

Table of Projects:

Project Name:	**Functionality Required for System**	**Data Input from system**	**Data output to system**

Navigation	`moveTo(x,y)`
	`stopMoving()`
	`angleTo(x,y)`
	`distanceTo(x,y)`
	`canMoveTo(x,y)`
		Wheel odometry
		Visual Odometry
		Goal locations
		Start Location
			Speed
			Location
			Error on Odom
			Wheel positions

Xbox Controller	`The functionality is provided by the buttons on the controller`
	
	`Doesn't matter what button does what:`
	`->Emergency stop`
	`->Joystick left should control speed`
	`->Joystick right control turns`
	`->Grasp object`
	`->left and right buttons should turn lazy susan`
		None	The commands from xbox controller

Dynamic Obstacle Avoidance	`IsAvoidingObstacle()`
	`detectsObstacle()`
	`startDetection()`
	`stopDetection()`
		A map
		Location of robot
			List of obstacles in front and their distances

Arm Controllers	`Control the arm.`
	`moveHand(x,y,z)`
	`canMoveTo(x,y,z`
		General info for a controller	Errors in positions, grasp true or false, locations of joints

	) isMoving()		
Speech Recognition	GetSpeakers() isListeningToSomeoneSpeak()	The sound stream	The information from the functions, the seperate stream of speakers
NLP	getLastName() getLastAction() getLastCommand() getBeverage() getObjectToCleanUp()	Sound stream, speaker stream	The verbs, nouns, adjectives, etc..
Facial Recognition	memorizePerson(string name) getPerson(string name) getPerson(Image img) recognize(Image img) recognize(string name)	Video	Functionality responses
Gesture Recognition	GetPointingDirection() listenForStopSignal() listenForGoSignal()		
Object Classification	GetObjectsInScene() containsObject(string object) findBeverage() findCleanUpObject() classify(Image img)		
Person Recognition and Tracking	recognizePerson(Image img) trackPerson(Image img, string name) hasPerson(Image		

	`img)`
	`isTracking()`
	`stopTracking()`		

Scene Recognition	`GetScene()` `getSceneList()`		

Pan/Tilt Head	`lookAt(x,y,z)`
	`angleTo(x,y,z)`
	`isMoving()`		

Emergency Stop	`EmergencyStop()`		