Team Number:	302						
Project Name:	**NA**						
Team Member Names:	**Enyinnaya Onyenso, Elton Salt, Kalin Comins, Marla Hawthorne**						
Version:	**1**						
A. List ALL major components (active devices, integrated circuits, etc.) except for power sources, voltage regulators,							
All Major Components	**Component Name**	**Part Number**	**yVoltageRar**	**#**	**aximumCurre**	**alCurrent(mA)**	**Unit**
Pressure sensor		Ur thing is tras		1		0	mA
Motor driver	IC HALF BRIDGE DRIVER 6A 1	IFX9201SGAUM/	-0.3V - 40V	1	13	13	mA
PIC microcontroller	IC MCU 8BIT 128KB FLASH 44	PIC18F47Q10-I/I	1.8V - 5.5V	1	5.8	5.8	mA
Rain gauge	SENSOR LEVEL RESIST	1528-2561-ND	r thing is tras	1		0	mA
ADC	IC ADC 16BIT SIGMA-DELTA 9	MCP3425A0T-	2.7V - 5.5V	2	0.19	0.38	mA
						0	mA
B. Assign each major component above to ONE power rail below. Try to minimize the number of different power rails in							
+5V Power Rail	**Component Name**	**Part Number**	**yVoltageRar**	**#**	**aximumCurre**	**alCurrent(mA)**	**Unit**
Motor driver	IC HALF BRIDGE DRIVER 6A 1	IFX9201SGAUM/	-0.3V - 40V	1	13	13	mA
						0	mA
						0	mA
						0	mA
						0	mA
					Subtotal	13	mA
					Safety Margin	25%	
					Total Current Required on +5V Rail	16.25	mA
c2. Regulator or Source Choice		LT3645	3.3V	1	300	300	mA
					Total Remaining Current Available on +5V Rail	283.75	mA
+3.3V Power Rail	**Component Name**	**Part Number**	**yVoltageRar**	**#**	**aximumCurre**	**alCurrent(mA)**	**Unit**
Motor driver	IC HALF BRIDGE DRIVER 6A 1	IFX9201SGAUM/	-0.3V - 40V	1	13	13	mA
Pressure sensor		Ur thing is tras		1		0	mA
PIC microcontroller	IC MCU 8BIT 128KB FLASH 44	PIC18F47Q10-I/I	1.8V - 5.5V	1	5.8	5.8	mA
Rain gauge	SENSOR LEVEL RESIST	1528-2561-ND	r thing is tras	1		0	mA
ADC	IC ADC 16BIT SIGMA-DELTA 9	MCP3425A0T-	2.7V - 5.5V	2	0.19	18.8	mA
					Safety Margin	25%	
					Total Current Required on +3.3V Rail	23.5	mA
c4. Regulator or Source Choice		LT3645	5V	1	200	200	mA
					Total Remaining Current Available on 3.3V Rail	176.5	mA
D. Select a specific external power source (wall supply or battery) for your system, and confirm that it can supply all of							
External Power Source 1	**Component Name**	**Part Number**	**yVoltageRar**	**Outpu**	**aximumCurre**	**alCurrent(mA)**	**Unit**
Power Source 1 Selection						0	mA
Power Rails Connected to External Power Source 1	+3.3V	LT3645	3.3V	1	300	300	mA
	+5V	LT3645	5V	1	200	200	mA
						0	mA
					Total Remaining Current Available on External Power Source 1	-500	mA
E. Calculate Battery Life (if applicable). For each battery, also check the worst-case lifetime of the							
	Component Name	**Part Number**	**yVoltageRange**		**Capacity(mAh)**	**redByRegulators**	
						500	
					Battery Life	0	hours
Notes							
External Supply Voltage should be determined by the dropout voltage for highest-voltage regulator (e.g., +14V for a +12V							
If you have multiple units in your design (e.g., a base unit and remote unit) then you need a separate power budget for each unit							

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For inductive loads (e.g., motors, solenoids) this is often called "stall current" on the data sheet