Weight Subsystem Power Budget

Team Number:	202
Project Name:	**Smart Trash Can**
Team Member Names:	**Damian, Vedaa, Lia, Mohammed**
Version:	

A. List ALL major components (active devices, integrated circuits, etc.) except for power sources, voltage regulators, resistors, capacitors, or passive elements

All Major Components	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
	50kg Load Cell	SEN-10245	<= 10V	1	10	10	mA
	Operational Amplifier	AD620ANZ	-18V to 18V	1	2	2	mA
	Curiosity Nano	PIC18F57Q43	1.8V to 5.5V	1	500	500	mA
						0	mA
						0	mA
						512	mA

B. Assign each major component above to ONE power rail below. Try to minimize the number of different power rails in the design.

+5V Power Rail	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
	50kg Load Cell	SEN-10245	<= 10V	1	10	10	mA
	Operational Amplifier	INA333AIDGKR	1.8V to 5V	1	2	2	mA
	Curiosity Nano	PIC18F57Q43	1.8V to 5.5V	1	500	500	mA
						0	mA
						0	mA
					Subtotal	512	mA
					Safety Margin	25%	
					Total Current Required on +5V Rail	640	mA
c2. Regulator or Source Ch	5V Regulator	LM7805T	7V to 25V	1	1500	1500	mA
					Total Remaining Current Available on +5V Rail	860	mA

0V Power Rail	Component Name	Part Number	SupplyVoltageRange	#	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
	Operational Amplifier	INA333AIDGKR	1.8V to 5V	1	2	2	mA
							mA
						0	mA
						0	mA
					Subtotal	2	mA
					Safety Margin	25%	
					Total Current Required on 0V Rail	2.5	mA
c3. Regulator or Source Ch	5V Regulator	LM7805T	7V to 25V	1	1500	1500	mA
					Total Remaining Current Available on 0V Rail	1497.5	mA

C. For each power rail above, select a specific voltage regulator using the same process as for major component selection. Confirm that the Total Remaining Current Available on each rail

D. Select a specific external power source (wall supply or battery) for your system, and confirm that it can supply all of the regulators for all of the power rails simultaneously. If you need

External Power Source 1	Component Name	Part Number	SupplyVoltageRange	Outpu	AbsoluteMaximumCurrent (mA)	TotalCurrent(mA)	Unit
Power Source 1 Selection	Plug-in Wall Supply	AC/DC Power Adaptor	100-240VAC	+9V	3000	3000	mA
Power Rails Connected to	+9V regulator	PJ-102AH	24V	1	1000	1000	mA
External Power Source 1	+5V Regulator	LM7805T	7V to 25V	1	1500	1500	mA
					Total Remaining Current Available on External Power Source 1	500	mA