

Why did we play with LEGOs?

- * Familiarize with Robotics "technology" and systems.
- * Teamwork
- * Fun!
- * Graphical programming

Lab 0	→	LEGO
Lab 1	→	LEGO & LabVIEW
Lab 2	→	LabVIEW & DaNI intro
3	↓	More complex
4		LabVIEW
5	↓	exercises

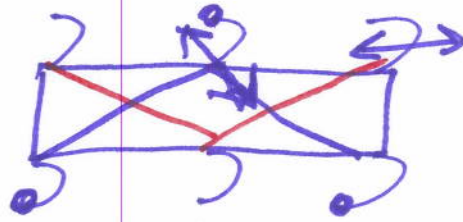
ECGR 4161 -

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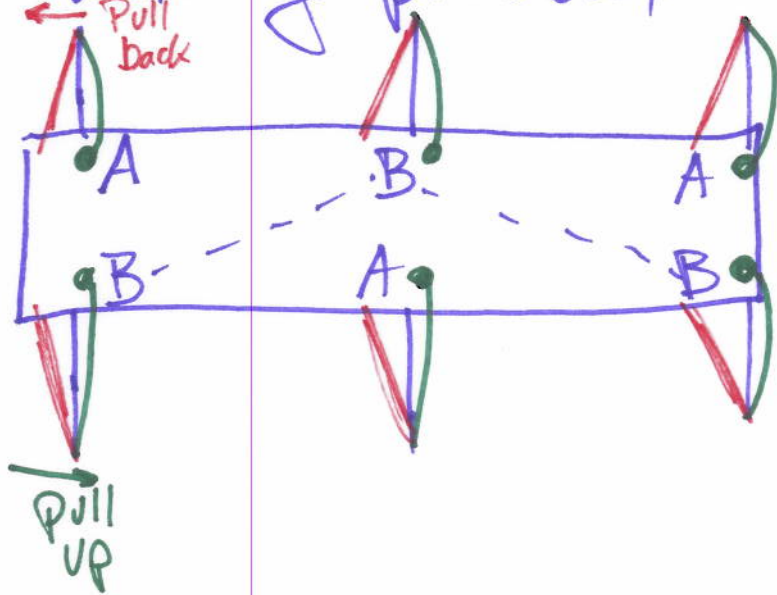
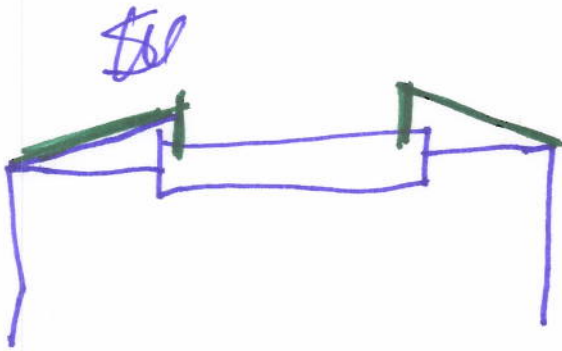
Insect Legs

6 legs



Motion → Forward & Backward
Up & Down

→ Solve the walking problem



UP/DOWN

FORWARD

STEPS:

- 1) Lift the B legs
 - 2) pull A legs back
 - 3)
 - 4)
 - 5)
- ↓

- Step 1: lift A up/down
- Step 2: pull forward A forward/back
- Step 3: relax (lower) A up/down
- Step 4: lift B (up/down)
- Step 5: relax A (forward/back)
- Step 6: pull forward B forward/back
- Step 7: relax B up/down
- Step 8: relax B forward/back

	A	A	B	B	
	FB	UD	FB	UD	
1		X			.5
2	X	X			1
3	X				.5
4	X			X	1
5				X	.5
6			X	X	1
7			X		.5
8			X		0
	3	2	2	3	