· · · · · · · · · · · · · · · · · · ·		Mechanics				
		Base movement				
Base movement forward	4 wheels	2 long tracks	4 short tracks	1x 360° wheel and 2 short		
Precision	good	perfect	perfect	tracks at the back moderate		
Rotation of the base	4 wheels	2 long tracks	4 short tracks	1x 360° wheel and 2		
Range of movement	rotation problematic	if used wiith two different motors we can obtain 360°	if used wiith two different motors we can	tracks at the back if used wiith two different motors we can obtain		
Independent movement of left and right axis	4 weels both axels	rotation 2 long tracks	obtain 360° rotation 4 short tracks	360° rotation 1x 360° weel and 2 tracks at the back	4 weels back axle	4 wheels feront ax
Position of axels used	front and back	left and right	left and right	2 axles left and right on tracks	back	front
Note:	Tracks are the best so	lutions as they can be rigidly co	nnected and still provide e	excelent manuverablility .	•	
	Poweri	ng & moving the robot				
Motor	Lego motor	step motor	DC brush motor	servo motor		
Ease of implementation to the build	easy	requires custom mount	requires custom mount	requires custom mount		
Crytiria (price [zł])	139zł	30zł	24zł	29zł		
Note:	Although the most expensive lego motors were provided to us so we can skip	the cost of them. They are the	bast solution as they excel	in accuracy and are the eas	iest to integrate into the strue	ctural build of our robo
		hanical movement				
		errain overtaking				
Base movement	4 wheels	2 long tracks	4 rigid tracks		4 tracks but 2 forward with	
		-	-	at the back	capbility of elevating	
Weight	heavy hard	very heavy	very heavy	moderate	very heavy	
Complexity of built and programing		easy	moderate	complex	hard	
Speed	fast	moderate	moderate	slow	moderate	
		moderate effective	moderate efective	slow not efective	moderate very effective	nodetate speed.
Speed Efectivity in had terain	fast limited	moderate effective	moderate efective	slow not efective	moderate very effective	nodetate speed.
Speed Efectivity in had terain	fast limited 4 tracks but 2 forward with capbility of elevating is the best solution	moderate effective as it mot only allows our robot	moderate efective	slow not efective	moderate very effective	nodetate speed.
Speed Efectivity in had terain	fast limited 4 tracks but 2 forward with capbility of elevating is the best solution	moderate effective as it mot only allows our robot electronics	moderate efective	slow not efective	moderate very effective	odetate speed.
Speed Efectivity in had terain Note:	fast limited 4 tracks but 2 forward with capbility of elevating is the best solution Control	moderate effective as it mot only allows our robot electronics ing motors and sensors	moderate efective to conquer nerly any kond	slow not efective of terain but aslwo gives it t	moderate very effective he best mauverability with m	
Speed Efectivity in had terain Note: Micro controler	fast limited 4 tracks but 2 forward with capbility of elevating is the best solution Control Arduino Uno	moderate effective as it mot only allows our robot electronics ng motors and sensors Arduino Mega	moderate efective to conquer nerly any kond Raspberry Pi 4 B	slow not efective of terain but aslwo gives it t Husarion core 2	moderate very effective he best mauverability with m fpga	NXT brick
Speed Efectivity in had terain Note: Note: Micro controler Cost	fast limited 4 tracks but 2 forward with capbility of elevating is the best solution Control Arduino Uno 92 modeare	moderate effective as it mot only allows our robot electronics ing motors and sensors Arduino Mega 160	moderate efective to conquer nerly any kond Raspberry PI 4 8 200 hard	slow not efective of terain but aslwo gives it t Husarion core 2 500 moderate	moderate very effective he best mauverability with m fpga 62zl	NXT brick 150
Speed Efectivity in had terain Note: Note: Micro controler Cost Complexity of built and programing	fast limited 4 tracks but 2 forward with capbility of elevating is the best solution Control Arduino Uno 92 modeare The NXT is the easies	moderate effective as it mot only allows our robot electronics ing motors and sensors Arduino Mega 160 moderate	moderate efective to conquer nerly any kond Raspberry PI 4 8 200 hard	slow not efective of terain but aslwo gives it t Husarion core 2 500 moderate	moderate very effective he best mauverability with m fpga 62zl	NXT brick 150
Speed Efectivity in had terain Note: Micro controler Cost Complexity of built and programing	fast limited 4 tracks but 2 forward with capbility of elevating is the best solution Control Arduino Uno 92 modeare The NXT is the easies	moderate effective as it mot only allows our robot electronics ng motors and sensors Arduino Mega 160 moderate to easily integrate into the rob	moderate efective to conquer nerly any kond Raspberry PI 4 8 200 hard	slow not efective of terain but aslwo gives it t Husarion core 2 500 moderate	moderate very effective he best mauverability with m fpga 62zl	NXT brick 150
Speed Efectivity in had terain Note: Note: Micro controler Cost Complexity of built and programing Note:	fast limited 4 tracks but 2 forward with capbility of elevating is the best solution Control Arduino Uno 92 modeare The NXT is the easies Di	moderate effective as it mot only allows our robot electronics ing motors and sensors Arduino Mega 160 moderate to easily integrate into the rob stance estimation	moderate efective to conquer nerly any kond Raspberry Pi 4 B 200 hard ot structure and is fairly si	slow not efective of terain but aslwo gives it t Husarion core 2 500 moderate mple to program as well. manual control over	moderate very effective he best mauverability with m fpga 62zl	NXT brick 150
Speed Efectivity in had terain Note: Note: Micro controler Cost Complexity of built and programing Note: Sensor	fast limited 4 tracks but 2 forward with capbility of elevating is the best solution Control Arduino Uno 92 modeare The NXT is the easies Di two cameras	moderate effective as it mot only allows our robot electronics ing motors and sensors Arduino Mega 160 moderate to easily integrate into the rob stance estimation ultrasonic	moderate efective to conquer nerly any kond Raspberry Pi 4 B 200 hard ot structure and is fairly si radar	slow not efective of terain but aslwo gives it t Husarion core 2 500 moderate mple to program as well. manual control over bluetooth	moderate very effective he best mauverability with m fpga 62zl	NXT brick 150
Speed Efectivity in had terain Note: Micro controler Cost Complexity of built and programing Note: Sensor Accuracy	fast limited 4 tracks but 2 forward with capbility of elevating is the best solution 4 tracks but 2 forward with capbility of elevating is the best solution Control Arduino Uno 92 modeare The NXT is the easies Di two cameras fair	moderate effective as it mot only allows our robot electronics ing motors and sensors Arduino Mega 160 moderate t to easily integrate into the rob stance estimation ultrasonic good medium	moderate efective to conquer nerly any kond Raspberry Pi 4 B 200 hard ot structure and is fairly si radar very good fair	slow not efective of terain but aslwo gives it t Husarion core 2 500 moderate mple to program as well. manual control over biuetooth excelent easy	moderate very effective he best mauverability with m fpga 62z1 moderate	NXT brick 150 easy
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