Student Name:	Marlon Gwira
Student Number:	M00539673
Project Title:	Building a mobile robot with ROS
Supervisor:	Dr Zhijun Yang

Checklist of unive

	Comments
Workshop (inc. waterjet & laser cutters)	
3D printing	wh
Solidworks	
Arduino	
Bolts and nuts	
Washers	
Odroid C2	this arm board's computation is m

Name	link
0droid C2	https://www.amazon.co.uk/Odroid-C2-Einplatinen-Workstation-1-5GHz-Quad/dp/B01CY4V5LC/ref=sr_1_1?ie=UTF8&qid=1518437278&sr=8-1&keywords=odroid+c2
Robot Eletronic RD02 12V complete Robot Drive System	https://www.ebay.co.uk/itm/Robot-Electronics-RD02-12V-Complete-Robot-Drive-System/122036524463?epid=1977840311&hash=item1c69f195af:g:sHcAAOSw-KFXe2zd
Emergency stop button	https://www.ebay.co.uk/itm/ABB-Bouton-darret-durgence-diametre-30mm-Rouge-NO-NF-Type-Champignon-NEUF/182641967433?hash=item2a864f4149:g:iiQAAOSwN2VZU93J
Power Switch	
12v Lipo battery	https://www.amazon.co.uk/Turnigy-2200-mAh-11-1-25-%C2%B0C-Battery/dp/B00GK61Z98/ref=sr_1_8?s=electronics&ie=UTF8&qid=1518582462&sr=1-8&keywords=lipo+battery+11.1v

Usb step down module	https://www.amazon.co.uk/Adjustable-4-USB-Step-down-Power-Module/dp/B00MLTWK9C/ref=sr_1_10?s=electronics&ie=UTF8&qid=1518582701&sr=1-10&keywords=usb+step+down+module
Lidar	https://www.robotshop.com/uk/rplidar-a1m8-360-degree-laser-scanner-development-kit.html
Voltmeter and Ammeter gauge	https://www.amazon.co.uk/Yeeco-DC0-100V-Voltmeter-Multimeter-Motorcycle/dp/B015O6CEA8/ref=sr_1_2?s=electronics&ie=UTF8&qid=1518583565&sr=1-2&keywords=digital+voltmeter+and+ammeter
Black acrylic sheets-5 mm thick	/
Acrylic tube 10mm-1 meter long	/
Threaded rod M6-1 metre long	/
15g Servos x4	
9g Micro Servos x6	https://www.amazon.co.uk/Top-Spring-Servos-Helicopter-Airplane-controls/dp/B01KNWN8LW/ref=sr_1_4?s=kids&ie=UTF8&qid=1518615469&sr=1-4&keywords=servo+motor
Robber band	/
PLA	https://www.ebay.co.uk/itm/3D-Printer-Filament-PLA-1-75mm-1Kg-15-Colours-Makerbot-Up-Leapfrog/122033441977?_trkparms=aid%3D555019%26algo%3DPL.BANDIT%26ao%3D1%26asc%3D20151005190705%26meid%3D5d5811fff80f468a9d200cc43d520495%26pid%3D100506%26rk%3D1%26rkt%3D1%26%26itm%3D122033441977&_trksid=p2045573.c100506.m3226
mini wifi router	https://www.amazon.co.uk/WiFi-Router-150Mbps-Hotspot-Wireless/dp/B01N63NJFA/ref=sr_1_23?s=electronics&ie=UTF8&qid=1518613983&sr=1-23&keywords=mini+wifi+router
casters	https://www.amazon.co.uk/Ball-Caster-Metal-3-8-Black/dp/B0054JDI0G/ref=sr_1_6?s=electronics&ie=UTF8&qid=1518615025&sr=1-6&keywords=casters

PDE3400 PROJECT BUDGET

rsity resources required (delete rows

machine tools will be used to build
here traditional methods of machining won't work in bu
this resource will allow for 3d mo
will be required to do some low
no charges appli
no charges appl
nore powerful than the raspberry pi, which will reduce

Estimated Budget

Quantity	unit cost (ex VAT)	unit cost (inc VAT)	cost
1		65.00	65.00
1		120.97	120.97
1		14.99	14.99
			0.00
2		29.60	59.20

1		5.24	5.24
1	147.40	176.88	176.88
1		7.99	7.99
2		29.72	59.44
1		2.16	2.16
1		0.52	0.52
1			22.99
1		11.99	11.99
/			0.00
1		10.99	10.99
1		7.99	7.99
2		5.30	10.60
		TOTAL	576.95

| |
| |
| |
| |

s if not applicable)

| |
| and assemble the robot |
| uiding components, 3D printin will be required |
| delling of components |
| v level programming |
| ed |
| lied |
| compiling time and overall time spent in the programming and testing phase |

| |
| Comments |
| |
| The kit comes with 2 motors, the H-bridge, 2 wheels and 2 supports for the motors |
| |
| |
| |

80-100£ to be added to the total to compensate for any losses or in case of redesign