

Submission Date	2018-02-03
Project Name	Parts Crib Database
Student Name	Ifeoluwa Adese, Mohand Ferawana and Tosin Ajayi
Project repository	<a href="https://github.com/IfeoluwaDavid/PartsCribDatabase">https://github.com/IfeoluwaDavid/PartsCribDatabase</a>
Sensors/Effectors choices	USB Barcode Scanner, Magnetic Strip and PC2 Barcode Scanner.
The database will store	Information on the various available tools and equipment in a categorized manner. It will also store information on student data like student names, student IDs, contact details and tools they have in possession.
The mobile device functionality will include	User Sign Up (i.e. student or admin), Ability to Search and Select Equipment Available at the Parts Crib, Display Record of Equipment already booked by the student, view all student holding a particular item, Edit and Approve Student Equipment Cart, Update Student Equipment Returns, Edit Item information, Display Inventory etc.
I will be collaborating with the following company/department	Humber College Applied Technology Parts Crib.
My group in the winter semester will include	Mohand Ferawana and Tosin Ajayi
50 word problem statement	the frequent loss of materials to unidentified students and the cost of man power used in the Parts Crib Services as well as cost of papers used on a daily basis as a result of students having to manually list and sign out the items needed before borrowing them.
100 words of background	Simply the collection of the necessary student data like student names and IDs, email addresses etc. and associating them with randomly generated and registered barcode pins for easy student identification. These barcode pins will be the main information required to figure out which student has what equipment in possession. It simply implements a database consisting of different tables holding valuable information on the various available tools and equipment in a categorized manner, as well as administrative user and student user information. This will surely help improve accountability for materials in the Parts Crib, in order to keep good record of them.
Current product APA citation	Iron Tread Mobile App. (n.d.). Retrieved from <a href="https://play.google.com/store/apps/details?id=irontread.com.irontreadinspector&amp;hl=en&amp;rdid=irontread.com.irontreadinspector">https://play.google.com/store/apps/details?id=irontread.com.irontreadinspector&amp;hl=en&amp;rdid=irontread.com.irontreadinspector</a>
Existing research IEEE paper APA citation	X. Wang, J. Liu and H. Yi, "Design of Multifunctional Barcode System Based on MEGA128L," 2011 International Conference on Control, Automation and Systems Engineering (CASE), Singapore, 2011, pp. 1-4. doi: 10.1109/ICCSE.2011.5997548. URL: <a href="http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&amp;arnumber=5997548&amp;isnumber=5997514">http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&amp;arnumber=5997548&amp;isnumber=5997514</a>
Brief description of planned purchases	Raspberry PI 3 Unit and USB Interfaced Barcode Scanner Module.
Solution description	From an Administrative perspective, this project will be highly beneficial to the Parts Crib Employees in the sense that, it will heavily improve accountability for tools and equipment in the crib, just like a library keeping record of the books coming in and going out, It will also speed up the process of borrowing out equipment to students during peak hours for lab sessions. From the user perspective, It can also help provide students with information on the kind of tools and equipment available at the parts crib before their lab sessions, as well as keep a digital record of the parts crib tools they have in possession.