**Diagram details**

1. **RFID reader:** We used MFRC522 low frequency RFID reader.

Its job is to scan user’s RFID.

1. **Arduino:** To read RFID reader’s signal we will use it. It will communicate with PC via USB cable.
2. **Vendor machine(VM):** It is an UI, written in java. User will choose food, pay here. After scanning, Arduino will send it to PC as serial data via COM port. On VM there will be an Arduino adaptor who will collect that serial data from com port. Here for faster communication Arduino adaptor will use event based listener. On the other hand, it required much calibration, because serial communication produces a bit glitch on program. It can be handled on Arduino code. Roughly 2.5 second will be required to read and fetch data to VM.
3. **NSU database:** It will be our university database. Can be accessed only from Main API.
4. **Main API:** This is the main API. The beauty of our project. Internal mechanism of payment system will be here. Its job is to handle our RDS together with payment system. It can only be used by VM and RDS webapp. Also it will communicate with Bank API. As per its related to money, for security we can’t share internal mechanism here.
5. **Bank API:** It is a dummy bank API. For project we can’t use real one, so we will develop this for our demonstration, to make sure our Main API can be used in real environment. Every feature exists in reality (on real banking system), will be implemented here. (Only those things, which will be needed for our payment system)
6. **Bank database:** Every transaction detail will be stored here and will be visible only for Bank API.
7. **RDS web application:** It will be our dummy university RDS. We will need this for maintaining our Payment system. Only that part needed for handling payment system, will be implemented here.

**[More details on SRS]**