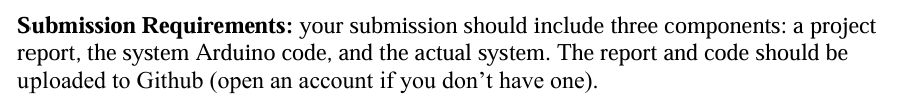
**Envirotech**

**Midterm Assignment**

Report by Gill Tsemach



**Project Report:**

**Section 1:** short introduction to the system & experimental design.

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**Section 2:** Bill of materials\*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Component** | **Company** | **Cost** | **Description** | **Link** |
| Uno R3 board | GeekCreit | $ 12 | Arduino-like Uno board | [tindie.com](https://www.tindie.com/products/mmm999/geekcreit-uno-r3-atmega328p-development-board/) |
| USB 2.0 cable A to B | - | $ 3 | For data transfer and supplying power. | [Amazon](https://www.amazon.com/DIYables-Cable-Arduino-Mega-Pieces/dp/B0DLM5JBZ8?source=ps-sl-shoppingads-lpcontext&ref_=fplfs&th=1) |
| Shifting microSD Breakout | SparkFun | $ 6.50 | Allow integration of storage unit, uses 5V. | [Sparkfun](https://www.sparkfun.com/sparkfun-level-shifting-microsd-breakout.html) |
| RTC DS3231 | Adafruit | $ 17.50 | Real-time-clock measures accurate time and capable of measuring temp. | [Adafruit](https://www.adafruit.com/product/3013) |
| SHTC3 | Adafruit | $ 6.95 | Sensor: temp and RH. | [Adafruit](https://www.adafruit.com/product/4636) |
| SCD40 + Stemma QT | Sensirion | $ 44.95 | Sensor: temp, RH and CO2 concentration. | [Adafruit](https://www.adafruit.com/product/5187) |
| Battery for RTC | VARTA | $ 9.70 | CR1220 lithium 3V battery compatible for RTC. | [eBay](https://www.ebay.com/itm/167167933682?_trkparms=amclksrc%3DITM%26aid%3D1110006%26algo%3DHOMESPLICE.SIM%26ao%3D1%26asc%3D285606%2C286222%2C285599%2C286024%26meid%3Dc9500721721a48a88c7c24163bd9673d%26pid%3D101875%26rk%3D4%26rkt%3D4%26sd%3D145311634144%26itm%3D167167933682%26pmt%3D1%26noa%3D0%26pg%3D2332490%26algv%3DSimVIDwebV3WithCPCExpansionEmbeddingSearchQuerySemanticBroadMatchSingularityRecallReplaceKnnV4WithVectorDbNsOptHotPlRecallCIICentroidCoviewCPCAuto%26brand%3DVARTA&_trksid=p2332490.c101875.m1851&itmprp=cksum%3A167167933682c9500721721a48a88c7c24163bd9673d%7Cenc%3AAQAKAAABgG96wQ16jds4VFcrhy1F3d4mbwZUJI9Fs%252BgdXYAHIzlX2e3YaNh7x%252BEnKA3G%252BCqSl1Xn4McfcWFK1GytmS2qxJ87mtE8Gm3iR1Ja4WBwh0hNHJrJx3Ki5mp04ow4CO7lP%252BooCybZDDU%252BbbSwmg7CbTin%252BBzBzbCYVnbjvyQAHu6--HI4MB7SvJl5IJqlyvomgoLMlgT6qAJzX0SANJhty2dJcd4YOd%252BxP7rY6QGtoIFZgHiysA6OsjxFBtO33ENGSd4JegPioNHW246J5iwylQziU7KXifYBLzCUamjc%252Bm%252B%252FDvrvROpncFveT6Rm%252B8QL5L6FP6Jw3a7iBfMeDPuY%252FeBCbHwGjdCNE%252Fq5tjo9DOj7OQlNirxPd57QH%252BHsW1DA1fAHyO3EVnkMRUWnyNnjw0RdYacgA1FuYOYtV9lAX4auOtRVQQ1Hrq6fCZMEhWuYmHW5IVjPFTt10J%252FceY7Y2dWlLVEB04HdVFkbFY%252BswRpg9CTiyqxt0HELX69Fk1X4uQ%253D%253D%7Campid%3APL_CLK%7Cclp%3A2332490&itmmeta=01JVDN2VJNM8Z2AKKBRYKB3JVW) |
| MicroSD card | SanDisk | $ 9.64 | Ultra 32GB micro SD card | [Amazon](https://www.amazon.com/SanDisk-Ultra-microSDHC-Class-SDSDQUA-032G-A11A/dp/B007JTKLEK/ref=asc_df_B007JTKLEK?mcid=68d551c4acfb3a9a82e17b44c5bba246&tag=hyprod-20&linkCode=df0&hvadid=693392565994&hvpos=&hvnetw=g&hvrand=13525153973692378347&hvpone=&hvptwo=&hvqmt=&hvdev=c&hvdvcmdl=&hvlocint=&hvlocphy=9058138&hvtargid=pla-613868574658&psc=1&hvocijid=13525153973692378347-B007JTKLEK-&hvexpln=0) |
| SPL 84 | Leaka | $ 0.75 | Splitter 4-in 8-out, | [Alibaba](https://www.alibaba.com/product-detail/Supplier-SPL84-electrical-4-in-8_1600379482886.html) |
| Jump wires | Various | - | MicroSD – X7 wires  RTC – X4 wires  SHTC3 – X4 wires  SPL84-to-Uno – X4 wires  Total: 19 wires (excluding QT) | - |

*\* All materials and components were supplied by the Envirotech lab.*

*\*\* Prices are correct as of the time of creating the document, and may change with time and depending on the supplier.*

**Section 3:**  Photo of the system

**Section 4:** Connection Diagram

**Section 5:** Results

**Section 6:** Conclusions