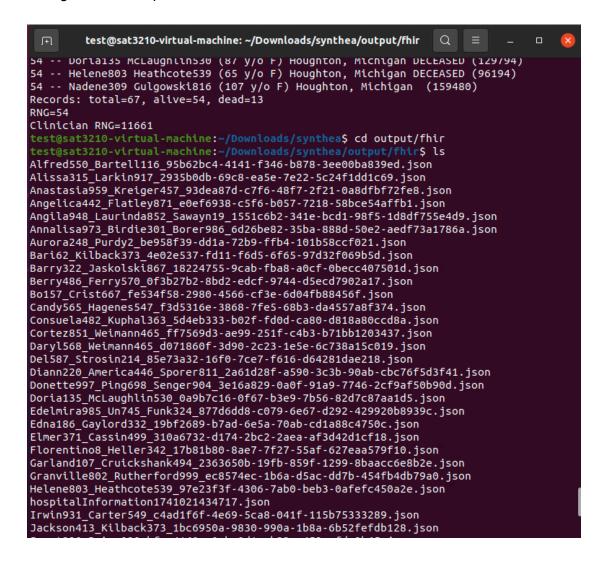Architecture Development Part 3
SAT 5424 Population Health Informatics
Eli Pinnoo
Professor Changarnkothapeecherikkal

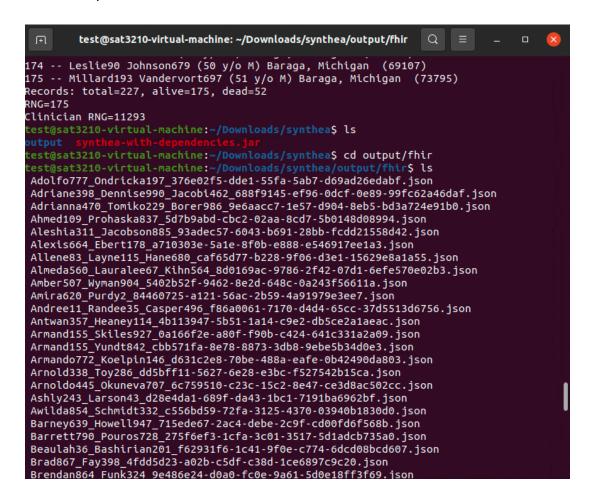**A. Screenshot of the .json files for each of the 4 hospitals:**

1. Aspirus Hospital:

```
test@sat3210-virtual-machine:~/Downloads/synthea/output/fhir$ ls
 Alona471_Michaela318_Lindgren255_df458aec-d670-57a3-ca06-6d97252ce095.json
 Angelica442_Apolonia139_Connelly992_59f186b0-323e-431c-a4f3-3b3142bddf34.json
 Beatriz277_Khalilah870_Harris789_6949de3e-f3d8-3eb1-ee8d-2a239ff37199.json
 Bill567_Mohr916_23879b77-e04c-c430-9687-0cfb0e6fbecd.json
 Chiquita638_Dare640_b91f78c7-c7f1-b54c-5335-1325a0123508.json
 Damien170_Schmitt836_049bdd0b-6022-8987-4d0e-de3a2b493c75.json
 Deangelo7_Wehner319_f6b90be2-51aa-fcc1-9918-cca906558615.json
 Delisa884_Mindi87_Swift555_19a75264-e670-231a-4ed2-1430623f8be9.json
 Dominque770_Kendra609_Pagac496_808a3f02-5876-9d62-8d61-2476fd9a0a15.json
 Donte636_Bradtke547_28188120-c572-9d32-fdc8-6bfa674be5f3.json
 Dwayne786_Schumm995_5cb5a850-a507-acbd-f0ff-a29a420b3ae6.json
 Filiberto722_Gutkowski940_72382ea9-594f-97fe-913e-4186b309c8ed.json
 Gregorio366_Gislason620_3bb1a8ce-0101-2e8f-49ac-86a703419e7d.json
 hospitalInformation1741020074445.json
 Hugh686_Parisian75_417e7ca6-e565-1a20-8863-c68d482fe69d.json
"Jesusita936_O'Connell601_24250296-b7dc-224a-c1c7-afad99bd409e.json"
 Malcolm243_Strosin214_7cd6e04c-3d71-7206-db9d-0d5765c5a79e.json
 practitionerInformation1741020074445.json
 Shoshana283_Penelope500_Stehr398_b3dd13ab-70b7-2a7d-4144-1a4e6fcd415a.json
 Thad495_Leannon79_da050946-1a8e-c61c-8baf-bc50d4ff3fe1.json
 Tory770_Effertz744_637254ef-365b-9b86-d962-3733b43d0fda.json
 Tracy345_Champlin946_73e89392-98d2-4ef2-6c76-cf00eb9f6624.json
 Tuyet839_Alane21_Breitenberg711_f18436c1-6a05-c6e2-1e4e-2072561bd9ba.json
test@sat3210-virtual-machine:~/Downloads/synthea/output/fhir$ S
```

2. Portage Health Hospital:

54 -- Doria135 McLaughlin530 (87 y/o F) Houghton, Michigan DECEASED (129794)
54 -- Helene803 Heathcote539 (65 y/o F) Houghton, Michigan DECEASED (96194)
54 -- Nadene309 Gulgowski816 (107 y/o F) Houghton, Michigan (159480)
Records: total=67, alive=54, dead=13
RNG=54
Clinician RNG=11661
test@sat3210-virtual-machine:~/Downloads/synthea$ cd output/fhir
test@sat3210-virtual-machine:~/Downloads/synthea/output/fhir$ ls
Alfred550_Bartell116_95b62bc4-4141-f346-b878-3ee00ba839ed.json
Alissa315_Larkin917_2935b0db-69c8-ea5e-7e22-5c24f1dd1c69.json
Anastasia959_Kreiger457_93dea87d-c7f6-48f7-2f21-0a8dfbf72fe8.json
Angelica442_Flatley871_e0ef6938-c5f6-b057-7218-58bce54affb1.json
Angila948_Laurinda852_Sawayn19_1551c6b2-341e-bcd1-98f5-1d8df755e4d9.json
Annalisa973_Birdie301_Borer986_6d26be82-35ba-888d-50e2-aedf73a1786a.json
Aurora248_Purdy2_be958f39-dd1a-72b9-ffb4-101b58ccf021.json
Bari62_Kilback373_4e02e537-fd11-f6d5-6f65-97d32f069b5d.json
Barry322_Jaskolski867_18224755-9cab-fba8-a0cf-0becc407501d.json
Berry486_Ferry570_0f3b27b2-8bd2-edcf-9744-d5ecd7902a17.json
Bo157_Crist667_fe534f58-2980-4566-cf3e-6d04fb88456f.json
Candy565_Hagenes547_f3d5316e-3868-7fe5-68b3-da4557a8f374.json
Consuela482_Kuphal363_5d4eb333-b02f-fd0d-ca80-d818a80ccd8a.json
Cortez851_Weimann465_ff7569d3-ae99-251f-c4b3-b71bb1203437.json
Daryl568_Weimann465_d071860f-3d90-2c23-1e5e-6c738a15c019.json
Del587_Strosin214_85e73a32-16f0-7ce7-f616-d64281dae218.json
Diann220_America446_Sporer811_2a61d28f-a590-3c3b-90ab-cbc76f5d3f41.json
Donette997_Ping698_Senger904_3e16a829-0a0f-91a9-7746-2cf9af50b90d.json
Doria135_McLaughlin530_0a9b7c16-0f67-b3e9-7b56-82d7c87aa1d5.json
Edelmira985_Un745_Funk324_877d6dd8-c079-6e67-d292-429920b8939c.json
Edna186_Gaylord332_19bf2689-b7ad-6e5a-70ab-cd1a88c4750c.json
Elmer371_Cassin499_310a6732-d174-2bc2-2aea-af3d42d1cf18.json
Florentino8_Heller342_17b81b80-8ae7-7f27-55af-627eaa579f10.json
Garland107_Cruickshank494_2363650b-19fb-859f-1299-8baacc6e8b2e.json
Granville802_Rutherford999_ec8574ec-1b6a-d5ac-dd7b-454fb4db79a0.json
Helene803_Heathcote539_97e23f3f-4306-7ab0-beb3-0afefc450a2e.json
hospitalInformation1741021434717.json
Irwin931_Carter549_c4ad1f6f-4e69-5ca8-041f-115b75333289.json
Jackson413_Kilback373_1bc6950a-9830-990a-1b8a-6b52fefdb128.json

3. BCMH Hospital:


```
test@sat3210-virtual-machine: ~/Downloads/synthea/output/fhir

174 -- Leslie90 Johnson679 (50 y/o M) Baraga, Michigan  (69107)
175 -- Millard193 Vandervort697 (51 y/o M) Baraga, Michigan  (73795)
Records: total=227, alive=175, dead=52
RNG=175
Clinician RNG=11293
test@sat3210-virtual-machine:~/Downloads/synthea$ ls
output  synthea-with-dependencies.jar
test@sat3210-virtual-machine:~/Downloads/synthea$ cd output/fhir
test@sat3210-virtual-machine:~/Downloads/synthea/output/fhir$ ls
 Adolfo777_Ondricka197_376e02f5-dde1-55fa-5ab7-d69ad26edabf.json
 Adriane398_Dennise990_Jacobi462_688f9145-ef96-0dcf-0e89-99fc62a46daf.json
 Adrianna470_Tomiko229_Borer986_9e6aacc7-1e57-d904-8eb5-bd3a724e91b0.json
 Ahmed109_Prohaska837_5d7b9abd-cbc-02aa-8cd7-5b0148d08994.json
 Aleshia311_Jacobson885_93adec57-6043-b691-28bb-fcdd21558d42.json
 Alexis664_Ebert178_a710303e-5a1e-8f0b-e888-e546917ee1a3.json
 Allene83_Layne115_Hane680_caf65d77-b228-9f06-d3e1-15629e8a1a55.json
 Almeda560_Lauralee67_Kihn564_8d0169ac-9786-2f42-07d1-6efe570e02b3.json
 Amber507_Wyman904_5402b52f-9462-8e2d-648c-0a243f56611a.json
 Amira620_Purdy2_84460725-a121-56ac-2b59-4a91979e3ee7.json
 Andree11_Randee35_Casper496_f86a0061-7170-d4d4-65cc-37d5513d6756.json
 Antwan357_Heaney114_4b113947-5b51-1a14-c9e2-db5ce2a1aeac.json
 Armand155_Skiles927_0a166f2e-a80f-f90b-c424-641c331a2a09.json
 Armand155_Yundt842_cbb571fa-8e78-8873-3db8-9ebe5b34d0e3.json
 Armando772_Koelpin146_d631c2e8-70be-488a-eafe-0b42490da803.json
 Arnold338_Toy286_dd5bff11-5627-6e28-e3bc-f527542b15ca.json
 Arnoldo445_Okuneva707_6c759510-c23c-15c2-8e47-ce3d8ac502cc.json
 Ashly243_Larson43_d28e4da1-689f-da43-1bc1-7191ba6962bf.json
 Awilda854_Schmidt332_c556bd59-72fa-3125-4370-03940b1830d0.json
 Barney639_Howell947_715ede67-2ac4-debe-2c9f-cd00fd6f568b.json
 Barrett790_Pouros728_275f6ef3-1cfa-3c01-3517-5d1adcb735a0.json
 Beaulah36_Bashirian201_f62931f6-1c41-9f0e-c774-6dcd08bcd607.json
 Brad867_Fay398_4fdd5d23-a02b-c5df-c38d-1ce6897c9c20.json
 Brendan864_Funk324_9e486e24-d0a0-fc0e-9a61-5d0e18ff3f69.json
```

4. MGH Hospital:


```
3)
1997 -- Ina660 Jayme42 Rippin620 (89 y/o F) Marquette, Michigan DECEASED (169067
)
1997 -- Amelia635 Georgette866 Terry864 (93 y/o F) Marquette, Michigan  (137311)
Records: total=2467, alive=2000, dead=467
RNG=2000
Clinician RNG=11160
test@sat3210-virtual-machine:~/Downloads/synthea$ cd output/fhir
test@sat3210-virtual-machine:~/Downloads/synthea/output/fhir$ ls
 Abby752_Dinorah501_Ferry570_ec3ec873-dc9c-fcfd-76e6-81471daf41c7.json
 Abdul218_Reichert620_d6eae3fb-1d54-4734-0977-51477cdbfbdf.json
 Abe604_Abshire638_a47d6b88-f9c4-f652-6b0b-bdef7d433594.json
 Abe604_Predovic534_a8fb5415-d136-68be-fa71-52688753b9a7.json
 Abraham100_Cole117_44439ce7-77d0-9db5-56c3-e1dddb5935bb.json
 Abraham100_Johns824_ce49d25e-1694-d388-5324-70c1c8ed1967.json
 Adaline602_Rachael540_Schroeder447_6e4759b5-7904-4842-9093-a13f6910566d.json
 Addie421_Stracke611_ed01de7f-71ae-a35e-4a7f-fe42fa049c5c.json
 Adelaide981_Torp761_4de25c92-9ace-0f63-c3c7-613d1050c3ab.json
 Adelia946_Yost751_044dc9c1-601e-78f0-200f-464e9fd4d882.json
 Adell482_Lebsack687_232ac4ff-0d31-2990-2330-2963415afda6.json
 Adelle43_Swift555_4fe7e7ff-a2e1-b6e2-eb47-4adc6f29a159.json
 Adolfo777_Tillman293_fea9c45e-eca0-dd0d-9aa1-f13f6636c65e.json
 Adrian111_Lehner980_d25a5a12-6de3-0038-3314-980f825194fc.json
 Adrianne466_Loralee922_Bins636_d368c20f-a035-fe7d-ff91-a6404c5b2b04.json
 Adriene242_Elsy53_Koelpin146_e9bf48d4-1db8-0a93-2017-ee82652b3a3c.json
 Agustina460_Kunde533_8ba9a3d1-b8e4-9aaf-0e00-c4ffbdd9935d.json
 Ahmad985_Glover433_b6e5f00d-e2b8-be56-c756-604b4bf3efdd.json
 Ahmad985_Gusikowski974_9989c4c8-d488-d7da-37a9-959a113208a1.json
 Ahmed109_Padberg411_d554df62-18d9-3501-2f65-8aa3016cf019.json
 Aileen250_Nicolas769_4e2ade4e-8d7e-5aa7-9976-4bc06e4f997b.json
 Ailene520_Joyce806_Hoeger474_d1e6f9f7-d1eb-19c8-3700-fc0697629640.json
 Akiko835_Daniela614_Batz141_5c4461d4-ec14-6367-a486-913e556f36ba.json
 Akiko835_Maribel82_Stokes453_97c393ca-d6d0-da80-63fc-7280df9300cf.json
 Akilah516_Hansen121_4de959f6-695e-6d63-4e5c-ae8749170138.json
 Alana17_Daniel959_23fdd180-97cc-c024-9419-25b404a18760.json
 Alanna27_Bins636_beb612ef-65a2-701c-00f7-5153b862f223.json
```

B. Completed Table:

Hospital	% Used of Total Served Hospital Population	Amount of COVID Patients Created
Aspirus	0.4%	20
Portage Health	0.6%	54
BCMH	2.5%	175
MGH	10%	2,000

C. What was the most challenging portion of the assignment? Why?

I would say the most challenging part of this assignment is making sure the virtual machines do not timeout and logout while the patient data is being generated. This is difficult, because I had to make sure I was around my computer to click on the virtual machine every few seconds. Especially for MGH where I created 2,000 patients.

To me the directions were straightforward and experienced no challenges to get each virtual machine to generate the synthetic patient data.