A Simple Database (All tables) that I built:

```
covid19=# select * from participant;
 p_id | p_fname | p_lname  | p_gender |   p_dob    | t_id | pl_id | c_id
------+---------+----------+----------+------------+------+-------+------
 P001 | SAM     | SMITH    | M        | 1988-04-05 | T001 | PL001 | C001
 P002 | ANDY    | AMBROSE  | M        | 1966-12-05 | T002 | PL002 | C002
 P003 | SUSAN   | BOB      | F        | 1945-07-14 | T003 | PL003 | C003
 P004 | JOEL    | EMBIID   | M        | 1992-01-05 | T004 | PL004 | C004
 P005 | LILY    | COLE     | F        | 1956-02-28 | T005 | PL005 | C005
 P006 | COBY    | WHITE    | M        | 1985-11-11 | T006 | PL006 | C006
 P007 | ISH     | SMITH    | M        | 1988-06-15 | T007 | PL007 | C007
 P008 | TONY    | ALLEN    | M        | 1972-07-13 | T008 | PL008 | C008
 P009 | WINSON  | AMBER    | F        | 1990-04-17 | T009 | PL009 | C009
 P010 | NORMAN  | POWELL   | M        | 1982-12-06 | T010 | PL010 | C010
 P011 | ANGILE  | KING     | F        | 1979-09-22 | T011 | PL011 | C011
 P012 | WENDER  | HOWELL   | M        | 1969-09-17 | T012 | PL012 | C012
 P013 | KEELY   | MONK     | F        | 1984-01-09 | T013 | PL013 | C013
 P014 | DAN     | SIMMONS  | M        | 1986-02-02 | T014 | PL014 | C014
 P015 | AUDREY  | QUEEN    | F        | 1973-07-07 | T015 | PL015 | C015
 P016 | TOM     | BRAD     | M        | 1965-04-11 | T016 | PL016 | C016
 P017 | ANDY    | AMBROSE  | M        | 1966-12-05 | T017 | PL017 | C002
 P018 | RAY     | DUNCAN   | M        | 1971-10-10 | T018 | PL018 | C018
 P019 | POLLY   | WAN      | F        | 1966-06-06 | T019 | PL019 | C019
 P020 | ANTHONY | JAMES    | M        | 1977-07-07 | T020 | PL020 | C020
(20 rows)
```

```
covid19=# SELECT * FROM CONTACT;
 c_id |    c_phone     |       c_email        |                c_address                | c_postcode
------+----------------+----------------------+-----------------------------------------+------------
 C001 | 123456789012345 | SAMSMITH@GMAIL.COM     | WINSTON CHURCHILL AVE, PORTSMOUTH, HAMPSHIRE | PO1 2UP
 C002 | 223456789012345 | ANDYAMBROSE@GMAIL.COM  | GAME STATION AVE, PORTSMOUTH, HAMPSHIRE       | PO1 3AC
 C003 | 323456789012345 | SUSANBOB@GMAIL.COM     | KING AVE, PORTSMOUTH, HAMPSHIRE               | PO1 4RT
 C004 | 423456789012345 | JOELEMBIID@GMAIL.COM   | FALL AVE, PORTSMOUTH, HAMPSHIRE               | PO1 5PL
 C005 | 623456789012345 | LILYCOLE@GMAIL.COM     | ROCKET AVE, PORTSMOUTH, HAMPSHIRE             | PO1 7QA
 C006 | 723456789012345 | COBYWHITE@GMAIL.COM    | TABLESPOON AVE, PORTSMOUTH, HAMPSHIRE         | PO1 8IK
 C007 | 823456789012345 | ISHSMITH@GMAIL.COM     | AGRILE AVE, PORTSMOUTH, HAMPSHIRE             | PO1 9DM
 C008 | 923456789012345 | TONYALLEN@GMAIL.COM    | CHAMPION AVE, PORTSMOUTH, HAMPSHIRE           | PO1 10WC
 C009 | 103456789012345 | WINSONAMBER@GMAIL.COM  | DANCE AVE, PORTSMOUTH, HAMPSHIRE              | PO1 11ZC
 C010 | 113456789012345 | NORMANPOWELL@GMAIL.COM | GEORGE AVE, PORTSMOUTH, HAMPSHIRE             | PO1 12SH
 C011 | 133456789012345 | ANGILEKING@GMAIL.COM   | NAPOLEON AVE, PORTSMOUTH, HAMPSHIRE           | PO1 13JG
 C012 | 143456789012345 | WENDERHOWELL@GMAIL.COM | SAINT ANTONIO AVE, PORTSMOUTH, HAMPSHIRE      | PO1 14FB
 C013 | 153456789012345 | KEELYMONK@GMAIL.COM    | DALLAS AVE, PORTSMOUTH, HAMPSHIRE             | PO1 15VF
 C014 | 163456789012345 | DANSIMMONS@GMAIL.COM   | NEW JERSEY AVE, PORTSMOUTH, HAMPSHIRE         | PO1 16YU
 C015 | 173456789012345 | AUDREYQUEEN@GMAIL.COM  | OCEAN AVE, PORTSMOUTH, HAMPSHIRE              | PO1 17KS
 C016 | 183456789012345 | TOMBRAD@GMAIL.COM      | NOODLE AVE, PORTSMOUTH, HAMPSHIRE             | PO1 18DC
 C017 | 193456789012345 | LEONBALL@GMAIL.COM     | TURTLE AVE, PORTSMOUTH, HAMPSHIRE             | PO1 19LP
 C018 | 203456789012345 | RAYDUNCAN@GMAIL.COM    | MASK AVE, PORTSMOUTH, HAMPSHIRE               | PO1 20XS
 C019 | 213456789012345 | POLLYWAN@GMAIL.COM     | BRICK AVE, PORTSMOUTH, HAMPSHIRE             | PO1 21SA
 C020 | 523456789012345 | NULL                   | FLOWER AVE, PORTSMOUTH, HAMPSHIRE             | PO1 6RE
(20 rows)
```

```
covid19=# SELECT * FROM TEST_CENTRE;
 tc_id |     tc_country
-------+--------------------
 TC001 | ENGLAND
 TC002 | ENGLAND
 TC003 | ENGLAND
 TC004 | ENGLAND
 TC005 | ENGLAND
 TC006 | SCOTLAND
 TC007 | SCOTLAND
 TC008 | SCOTLAND
 TC009 | SCOTLAND
 TC010 | SCOTLAND
 TC011 | WALES
 TC012 | WALES
 TC013 | WALES
 TC014 | WALES
 TC015 | WALES
 TC016 | NORTHERN IRELAND
 TC017 | NORTHERN IRELAND
 TC018 | NORTHERN IRELAND
 TC019 | NORTHERN IRELAND
 TC020 | NORTHERN IRELAND
(20 rows)
```

```
covid19=# select * from place;
 pl_id |          pl_name
-------+--------------------------
 PL001 | STONEHENGE
 PL002 | TOWER OF LONDON
 PL003 | THE ROMAN BATHS
 PL004 | THE BRITISH MUSEUM
 PL005 | NATIONAL RAILWAY MUSEUM
 PL006 | EDINBURGH CASTLE
 PL007 | LOCH LOMOND AQUARIUM
 PL008 | STIRLING CASTLE
 PL009 | KELVINGROVE ART GALLERY
 PL010 | BRITISH GOLF MUSEUM
 PL011 | CARDIFF CASTLE
 PL012 | PORTMEIRION
 PL013 | NATIONAL SLATE MUSEUM
 PL014 | ANGLESEY
 PL015 | SOUTH STACK LIGHTHOUSE
 PL016 | TITANIC BELFAST
 PL017 | CARRICKFERGUS CASTLE
 PL018 | ARDS PENINSULA
 PL019 | THE TRANSPORT MUSEUM
 PL020 | LONDONDERRY
(20 rows)
```

```
covid19=# SELECT * FROM TEST;
 t_id |   t_date   | t_result | t_variant | tc_id
------+------------+----------+-----------+-------
 T002 | 2020-02-19 | N        | NULL      | TC002
 T003 | 2021-02-04 | N        | NULL      | TC003
 T004 | 2020-10-14 | N        | NULL      | TC004
 T006 | 2020-07-01 | N        | NULL      | TC006
 T007 | 2020-11-11 | N        | NULL      | TC007
 T009 | 2020-08-23 | N        | NULL      | TC009
 T010 | 2020-01-05 | N        | NULL      | TC010
 T012 | 2021-01-01 | N        | NULL      | TC012
 T013 | 2021-03-09 | N        | NULL      | TC013
 T015 | 2020-06-03 | N        | NULL      | TC015
 T016 | 2020-11-24 | N        | NULL      | TC016
 T018 | 2020-01-22 | N        | NULL      | TC018
 T019 | 2021-04-10 | N        | NULL      | TC019
 T020 | 2020-12-24 | N        | NULL      | TC020
 T005 | 2020-05-22 | P        | TYPE1     | TC005
 T008 | 2020-12-26 | P        | TYPE2     | TC008
 T011 | 2020-05-30 | P        | TYPE1     | TC011
 T014 | 2020-04-27 | P        | TYPE2     | TC014
 T017 | 2021-02-14 | P        | TYPE1     | TC017
 T001 | 2020-08-22 | P        | NULL      | TC001
(20 rows)
```

Data Manipulation:

1) Result of Single Participant

```
covid19=# SELECT P.P_LNAME, P.P_DOB, C.C_POSTCODE, T.T_RESULT FROM CONTACT C, TEST T, PARTICIPANT P WHERE T.T_ID=P.T_ID AND C.C_ID
=P.C_ID AND P.P_LNAME= 'AMBROSE' AND P.P_DOB='1966-12-05' AND C.C_POSTCODE='PO1 3AC';
 p_lname |   p_dob    | c_postcode | t_result
---------+------------+------------+----------
 AMBROSE | 1966-12-05 | PO1 3AC    | N
 AMBROSE | 1966-12-05 | PO1 3AC    | P
(2 rows)
```

2) Virus Variant Distribution

```
covid19=# SELECT T_VARIANT, COUNT(T_VARIANT) FROM TEST WHERE T_VARIANT != 'NULL' AND T_DATE>='2020-05-21' GROUP BY T_VARIANT;
 t_variant | count
-----------+-------
 TYPE2     |     1
 TYPE1     |     3
(2 rows)
```

3) Positive Test per Country

```
covid19=# SELECT TC.TC_COUNTRY, COUNT(TC.TC_COUNTRY) FROM TEST T, TEST_CENTRE TC WHERE T.TC_ID=TC.TC_ID AND T_DATE>='2020-05-21' A
ND T.T_RESULT='P' GROUP BY TC.TC_COUNTRY;
    tc_country     | count
-------------------+-------
 ENGLAND           |     2
 NORTHERN IRELAND  |     1
 SCOTLAND          |     1
 WALES             |     1
(4 rows)
```