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File:

Version: V1.0

Date: 07.05.19

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## MySQL QUERIES

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Search queries below refer to arguments db\_input, db\_query and db\_output in the database API function:

```
def db_request(db_input, db_query, db_output)
```

Hypothetical outputs are shown.

KEY:

===

NA = combination not allowed

string = db\_query entered as a search string

## STRING SEARCH QUERIES

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### Search for ACCESSION NUMBER

```
(1,'string',1)

SELECT acc_num FROM gb_main WHERE acc_num = 'string';

db_result = [['AF485254']]

(2,'string',1)

SELECT acc_num FROM gb_main WHERE chrom_loc LIKE '%string%';

db_result = [['AF485254','U49845','Z27420']]

(3,'string',1)

SELECT acc_num FROM gb_main WHERE gene_id LIKE '%string%';

db_result = [['AF485254','U49845','Z27420']]

(4,'string',1)

SELECT acc_num FROM gb_main WHERE prot_name LIKE '%string%';

db_result = [['AF485254','U49845','Z27420']]
```

### Search for CHROMOSOMAL LOCATION

```
(1,'string',2)

SELECT acc_num, chrom_loc FROM gb_main WHERE acc_num = 'string';

db_result = [['18q24.3'],

             ['U55184']]

(2,'string',2)

SELECT chrom_loc, acc_num FROM gb_main WHERE chrom_loc LIKE '%string%';

db_result = [['18q24.3','18q24','18q24.6'],

             ['AF485254','U49845','Z27420']]

(3,'string',2)

SELECT chrom_loc, acc_num FROM gb_main WHERE gene_id LIKE '%string%';

db_result = [['18q24.3','18q24','18q24.6'],

             ['AF485254','U49845','Z27420']]

(4,'string',2)

SELECT chrom_loc, acc_num FROM gb_main WHERE chrom_loc LIKE '%string%';

db_result = [['18q24.3','18q24','18q24.6'],

             ['AF485254','U49845','Z27420']]
```

### Search for GENE IDENTITY

```
(1,'string',3)

SELECT acc_num, gene_id FROM gb_main WHERE acc_num = 'string';

db_result = [['AF485254','U49845','Z27420'],

             ['NPC1','NPC1R','pseudoNPC1a']]
```

```

(2,'string',3)

SELECT gene_id, acc_num FROM gb_main WHERE chrom_loc LIKE '%string%';

db_result = [['NPC1','NPC1R','pseudoNPC1a'],
              ['AF485254','U49845','Z27420']]

(3,'string',3)

SELECT gene_id, acc_num FROM gb_main WHERE gene_id LIKE '%string%';

db_result = [['NPC1','NPC1R','pseudoNPC1a'],
              ['AF485254','U49845','Z27420']]

(4,'string',3)

SELECT gene_id, acc_num FROM gb_main WHERE prot_name LIKE '%string%';

db_result = [['NPC1','NPC1R','pseudoNPC1a'],
              ['AF485254','U49845','Z27420']]

```

#### Search for PROTEIN PRODUCT

```

(1,'string',4)

SELECT acc_num, prot_name FROM gb_main WHERE acc_num = 'string';

db_result = [['AJ001716'],
              ['desmoglein type 1']]

(2,'string',4)

SELECT prot_name, acc_no FROM gb_main WHERE chrom_loc LIKE '%string%';

db_result = [['desmoglein 1','desmoglein 4','myelin'],
              ['AF485254','U49845','Z27420']]

(3,'string',4)

SELECT prot_name, acc_no FROM gb_main WHERE gene_id LIKE '%string%';

db_result = [['desmoglein 1','desmoglein 4','myelin'],
              ['AF485254','U49845','Z27420']]

(4,'string',4)

SELECT prot_name, acc_no FROM gb_main WHERE prot_name LIKE '%string%';

db_result = [['desmoglein 1','desmoglein 4','myelin'],
              ['AF485254','U49845','Z27420']]

```

#### Search for LOCUS DNA SEQUENCE

```

(1,'string',5)

SELECT acc_num, locus_seq FROM gb_seq WHERE acc_num = 'string';

db_result = [['AF485254'],
              ['gtaactac']]

```

```
(2,'string',5)

SELECT locus_seq,gb_main.acc_num FROM gb_main

INNER JOIN gb_seq ON gb_main.acc_num = gb_seq.acc_num

WHERE chrom_loc LIKE '%string%';

db_result = [['gtaactac','gccagtttt','agtatgtc'],

              ['AF485254','U49845','Z27420']]
```

```
(3,'string',5)

SELECT locus_seq,gb_main.acc_num FROM gb_main

INNER JOIN gb_seq ON gb_main.acc_num = gb_seq.acc_num

WHERE gene_id LIKE '%string%';

db_result = [['gtaactac','gccagtttt','agtatgtc'],

              ['AF485254','U49845','Z27420']]
```

```
(4,'string',5)

SELECT locus_seq,gb_main.acc_num FROM gb_main

INNER JOIN gb_seq ON gb_main.acc_num = gb_seq.acc_num

WHERE prot_name LIKE '%string%';

db_result = [['gtaactac','gccagtttt','agtatgtc'],

              ['AF485254','U49845','Z27420']]
```

#### Search for CDS MAP

```
(1,'string',6)

SELECT gb_main.acc_num, cds_map, start_cod, gene_span FROM gb_main

INNER JOIN gb_cds_map ON gb_main.acc_num = gb_cds_map.acc_num

WHERE gb_main.acc_num = 'string';

db_result = [['AF485254'], ['179..5187,6619..7050'], ['start=3'], ['24..8876']]

(2,'string',6)
```

```
SELECT cds_map,start_cod,gene_span,gb_main.acc_num FROM gb_main

INNER JOIN gb_cds_map ON gb_main.acc_num = gb_cds_map.acc_num

WHERE chrom_loc LIKE '%string%';

(3,'string',6)
```

```
SELECT cds_map,start_cod,gene_span,gb_main.acc_num FROM gb_main

INNER JOIN gb_cds_map ON gb_main.acc_num = gb_cds_map.acc_num

WHERE gene_id LIKE '%string%'
```

```
(4,'string',6)

SELECT cds_map,start_cod,gene_span,gb_main.acc_num FROM gb_main

INNER JOIN gb_cds_map ON gb_main.acc_num = gb_cds_map.acc_num

WHERE prot_name LIKE '%string%'

db_result =

[['179..5187,6619..7050','64..676,24..8876','NF'], ['start=3','start=1','start=2'],/

 ['24..8876','64..676','24..8876'], ['AF485254','U49845','Z27420']]
```

### Return LIST, SHORT

```
(1,'string',7)

SELECT acc_num, chrom_loc, gene_id, prot_name
FROM gb_main WHERE acc_num = 'string';

db_result = [['D00596'],
             ['18q24'],
             ['TPMT'],
             ['desmoglein type 1']]

(2,'string',7)

SELECT acc_num, chrom_loc, gene_id, prot_name
FROM gb_main WHERE chrom_loc LIKE '%string%';

db_result = [['AF485254','U49845','Z27420'],
             ['18q24.3','18q24','18q24.6'],
             ['NPC1','NPC1R','pseudoNPC1a'],
             ['desmoglein 1','desmoglein 4','myelin']]

(3,'string',7)

SELECT acc_num, chrom_loc, gene_id, prot_name
FROM gb_main WHERE chrom_loc LIKE '%string%';

db_result = [['AF485254','U49845','Z27420'],
             ['18q24.3','18q24','18q24.6'],
             ['NPC1','NPC1R','pseudoNPC1a'],
             ['desmoglein 1','desmoglein 4','myelin']]

(4,'string',7)

SELECT acc_num, chrom_loc, gene_id, prot_name
FROM gb_main WHERE chrom_loc LIKE '%string%';

db_result = [['AF485254','U49845','Z27420'],
             ['18q24.3','18q24','18q24.6'],
             ['NPC1','NPC1R','pseudoNPC1a'],
             ['desmoglein 1','desmoglein 4','myelin']]
```

### LIST, LONG

```
(1,'string',8)

SELECT m.acc_num, chrom_loc, gene_id, prot_name, locus_seq, cds_map, start_cod, gene_span
FROM gb_main m, gb_seq s, gb_cds_map c
WHERE s.acc_num = m.acc_num AND c.acc_num = m.acc_num AND m.acc_num = 'string';

db_result = [['U11424'], ['18q11.2'], ['DSG1'], ['desmoglein type 1'],
             ['caccttctactatgacctgaggggttgctacatcacccaccac'],
             ['179..5187,6619..7050'], ['start=3'], ['24..8876']]
```

```

(2,'string',8)

SELECT m.acc_num, chrom_loc, gene_id, prot_name, locus_seq, cds_map, start_cod, gene_span
FROM gb_main m, gb_seq s, gb_cds_map c
WHERE s.acc_num = m.acc_num AND c.acc_num = m.acc_num AND chrom_loc LIKE '%string%';
db_result = [['D00596','U11424'], ['18q24','18q24'], ['TPMT','pseudoTPMT'],
             ['desmoglein type 1','desmoglein 4 preproprotein'],
             ['caccacatataacccaatgta','tcttagaaggcaac'],
             ['99..187,300..490,6619..7050','159..1187,1200..5079'],
             ['start=1','start=3'], ['22..7953','103,6012']]

(3,'string',8)

SELECT m.acc_num, chrom_loc, gene_id, prot_name, locus_seq, cds_map, start_cod, gene_span
FROM gb_main m, gb_seq s, gb_cds_map c
WHERE s.acc_num = m.acc_num AND c.acc_num = m.acc_num AND gene_id LIKE '%string%';
db_result = [['D00596','U11424'], ['18q24','18q24'], ['TPMT','pseudoTPMT'],
             ['desmoglein type 1','desmoglein 4 preproprotein'],
             ['caccacatataacccaatgta','tcttagaaggcaac'],
             ['99..187,300..490,6619..7050','159..1187,1200..5079'],
             ['start=1','start=3'], ['22..7953','103,6012']]

(4,'string',8)

SELECT m.acc_num, chrom_loc, gene_id, prot_name, locus_seq, cds_map, start_cod, gene_span
FROM gb_main m, gb_seq s, gb_cds_map c
WHERE s.acc_num = m.acc_num AND c.acc_num = m.acc_num AND prot_name LIKE '%string%';
db_result = [['D00596','U11424'], ['18q24','18q24'], ['TPMT','pseudoTPMT'],
             ['desmoglein type 1','desmoglein 4 preproprotein'],
             ['caccacatataacccaatgta','tcttagaaggcaac'],
             ['99..187,300..490,6619..7050','159..1187,1200..5079'],
             ['start=1','start=3'], ['22..7953','103,6012']]

```

## BROWSE SEARCH QUERIES

-----

## ACCESSION NUMBER

```

(1,'B',1)

SELECT acc_num FROM gb_main;

db_result = [['AF485254','AF67554', ..., 'Z27420']]

(2,'B',1)

SELECT chrom_loc, acc_num FROM gb_main;

db_result = [['18q24.3','18q24', ..., '18q24.6'],
             ['AF485254','U49845', ..., 'Z27420']]

```

```

(3,'B',1)

SELECT gene_id, acc_num FROM gb_main;

db_result = [['NPC1','NPC1R',...,'pseudoNPC1a'],
              ['AF485254','U49845', ..., 'Z27420']]

(4,'B',1)

SELECT prot_name, acc_num FROM gb_main;

db_result = [['desmoglein type 1','desmoglein 4',...,'myelin'],
              ['AF485254','U49845', ..., 'Z27420']]

(5,'B',1) NA
(6,'B',1) NA
(7,'B',1) NA
(8,'B',1) NA

```

#### CHROMOSOMAL LOCATION

```

(1,'B',2)

SELECT acc_num, chrom_loc FROM gb_main;

db_result = [['AF485254','U49845', ..., 'Z27420'],
              ['18q24.3','18q24', ..., '18q24.6']]

(2,'B',2)

SELECT chrom_loc, acc_num FROM gb_main;

db_result = [['18q24.3','18q24', ..., '18q24.6'],
              ['AF485254','U49845', ..., 'Z27420']]

(3,'B',2)

SELECT gene_id, chrom_loc, acc_num FROM gb_main;

db_result = [['NPC1','NPC1R',...,'pseudoNPC1a'],
              ['18q24.3','18q24', ..., '18q24.6'],
              ['AF485254','U49845', ..., 'Z27420']]

(4,'B',2)

SELECT prot_name, chrom_loc, acc_num FROM gb_main;

db_result = [['desmoglein 1','desmoglein 4',...,'myelin'],
              ['18q24.3','18q24', ..., '18q24.6'],
              ['AF485254','U49845', ..., 'Z27420']]

(5,'B',2) NA
(6,'B',2) NA
(7,'B',2) NA
(8,'B',2) NA

```

#### GENE IDENTITY

```

(1,'B',3)

```

```

SELECT acc_num, gene_id, FROM gb_main;

db_result = [['AF485254','U49845', ..., 'Z27420'],
              ['NPC1','NPC1R',..., 'pseudoNPC1a']]

(2,'B',3)

SELECT chrom_loc, gene_id, acc_num FROM gb_main;

db_result = [['18q24.3','18q24', ..., '18q24.6'],
              ['NPC1','NPC1R',..., 'pseudoNPC1a'],
              ['AF485254','U49845', ..., 'Z27420']]

(3,'B',3)

SELECT gene_id, acc_num FROM gb_main;

db_result = [['NPC1','NPC1R',..., 'pseudoNPC1a'],
              ['AF485254','U49845', ..., 'Z27420']]

(4,'B',3)

SELECT prot_name, gene_id, acc_num FROM gb_main;

db_result = [['desmoglein 1','desmoglein 4',..., 'myelin'],
              ['NPC1','NPC1R',..., 'pseudoNPC1a'],
              ['AF485254','U49845', ..., 'Z27420']]

(5,'B',3) NA
(6,'B',3) NA
(7,'B',3) NA
(8,'B',3) NA

```

# PROTEIN PRODUCT

```

(1,'B',4)

SELECT acc_num, prot_name FROM gb_main;

db_result = [['desmoglein 1','desmoglein 4',..., 'myelin'],
              ['AF485254','U49845', ..., 'Z27420']]

(2,'B',4)

SELECT chrom_loc, prot_name, acc_no FROM gb_main;

db_result = [['18q24.3','18q24', ..., '18q24.6'],
              ['desmoglein 1','desmoglein 4',..., 'myelin'],
              ['AF485254','U49845', ..., 'Z27420']]

(3,'B',4)

SELECT gene_id, prot_name, acc_num FROM gb_main;

db_result = [['NPC1','NPC1R',..., 'pseudoNPC1a'],
              ['desmoglein 1','desmoglein 4',..., 'myelin'],
              ['AF485254','U49845', ..., 'Z27420']]

```



```

(4,'B',4)

SELECT prot_name, acc_num FROM gb_main;

db_result = [['desmoglein 1','desmoglein 4',...,'myelin'],
              ['AF485254','U49845', ..., 'Z27420']]

(5,'B',4) NA
(6,'B',4) NA
(7,'B',4) NA
(8,'B',4) NA

```

#### LOCUS DNA SEQUENCE

```

(1,'B',5) NA          (2,'B',5) NA
(3,'B',5) NA          (4,'B',5) NA
(5,'B',5) NA          (6,'B',5) NA
(7,'B',5) NA          (8,'B',5) NA

```

#### CDS MAP

```

(1,'B',6)

SELECT gb_main.acc_num,cds_map,start_cod,gene_span
FROM gb_main INNER JOIN gb_cds_map ON gb_main.acc_num = gb_cds_map.acc_num;

db_result = [['AF485254','U49845',...,'Z27420'],
              ['179..5187,6619..7050','64..676,24..8876',...,'NF'],
              ['start=3','start=1',...,'start=2'],
              ['24..8876','64..676',...,'24..8876']]

(2,'B',6)

SELECT chrom_loc,cds_map,start_cod,gene_span,gb_main.acc_num
FROM gb_main INNER JOIN gb_cds_map ON gb_main.acc_num = gb_cds_map.acc_num;

db_result = [['18q24.3','18q24', ..., '18q24.6'],
              ['179..5187,6619..7050','64..676,24..8876',...,'NF'],
              ['start=3','start=1',...,'start=2'],/
              ['24..8876','64..676',...,'24..8876'],
              ['AF485254','U49845',...,'Z27420']]

(3,'B',6)

SELECT gene_id,cds_map,start_cod,gene_span,gb_main.acc_num
FROM gb_main INNER JOIN gb_cds_map ON gb_main.acc_num = gb_cds_map.acc_num;

db_result = [['NPC1','NPC1R',...,'pseudoNPC1a'],
              ['179..5187,6619..7050','64..676,24..8876',...,'NF'],
              ['start=3','start=1',...,'start=2'],
              ['24..8876','64..676',...,'24..8876'],
              ['AF485254','U49845',...,'Z27420']]

```

```

(4, 'B', 6)

SELECT prot_name, cds_map, start_cod, gene_span, gb_main.acc_num
FROM gb_main INNER JOIN gb_cds_map ON gb_main.acc_num = gb_cds_map.acc_num;

db_result = [['desmoglein 1', 'desmoglein 4', ..., 'myelin'],
              ['179..5187, 6619..7050', '64..676, 24..8876', ..., 'NF'],
              ['start=3', 'start=1', ..., 'start=2'],
              ['24..8876', '64..676', ..., '24..8876'],
              ['AF485254', 'U49845', ..., 'Z27420']]

(5, 'B', 6) NA

(6, 'B', 6)

SELECT cds_map, start_cod, gene_span, gb_main.acc_num
FROM gb_main INNER JOIN gb_cds_map ON gb_main.acc_num = gb_cds_map.acc_num;

db_result = [['179..5187, 6619..7050', '64..676, 24..8876', ..., 'NF'],
              ['start=3', 'start=1', ..., 'start=2'],
              ['24..8876', '64..676', ..., '24..8876'],
              ['AF485254', 'U49845', ..., 'Z27420']]

(7, 'B', 6) NA

(8, 'B', 6) NA

```

#### LIST, SHORT

```

(1, 'B', 7) NA
(2, 'B', 7) NA
(3, 'B', 7) NA
(4, 'B', 7) NA
(5, 'B', 7) NA
(6, 'B', 7) NA
(7, 'B', 7)

SELECT acc_num, chrom_loc, gene_id, prot_name FROM gb_main;

db_result = [['AF485254', 'U49845', ..., 'Z27420'],
              ['18q24.3', '18q24', ..., '18q24.6'],
              ['NPC1', 'NPC1R', ..., 'pseudoNPC1a'],
              ['desmoglein 1', 'desmoglein 4', ..., 'myelin']]

(8, 'B', 7) NA

```

#### LIST, LONG

```

(1, 'B', 8) NA      (2, 'B', 8) NA
(3, 'B', 8) NA      (4, 'B', 8) NA
(5, 'B', 8) NA      (6, 'B', 8) NA
(7, 'B', 8) NA      (8, 'B', 8) NA

```