```
-- SQL FUNCTION
1
2
 3
       -- SQL functions are generally divided into:
       -- Type
                                  Description
       -- Scalar Functions -->
                                  Operate on a single value and return a single value.
       -- Aggregate Functions -->
                                  Operate on a set of values and return a single value.
8
9
       -- STRING FUNCTION
10
11 •
       use urban_insights;
10
```

```
11 •
       use urban_insights;
12
13
        -- 1. CHAR_LENGTH() / LENGTH()
14 •
       SELECT district , char_length(district) as district_length
15
       from dataset1;
        -- Example: If District = 'New Delhi', output = 9.
16
17
18
Result Grid Filter Rows:
                                      Export: Wrap Cell Content: IA
  district
                      district_length
 South Andaman
                      13
  North And Middle Andaman
                      24
  Nicobars
  Rangareddy
                      10
  East Godavari
                      13
  Guntur
```

Krishna

Chittoor Anantapur

Kurnool

Visakhapatnam

Mahbubnagar

Hyderabad

7

13

9

7

11

```
21
22  -- 2. LOCATE(substring, string)
23  -- Finds the position of a substring in a string (SQL Server style).
24 • SELECT District, locate('a', District) AS position_of_a
25  FROM dataset1;
26  -- 'a' is located at 7th index in 'South Andaman'
```

Export: Wrap Cell Content: \$\overline{A}\$

Re	sult Grid 🔢 🙌 Fi	lter Row	s:
	District		position_of_a
	South Andaman	South	Andaman
	North And Middle Anda	man	7
	Nicobars		6
	Rangareddy		2
	East Godavari		2
	Guntur		0
	Krishna		7
	Visakhapatnam		4
	Chittoor		0
	Anantapur		1
	Kurnool		0
	Mahbubnagar		2
	Hyderabad		6
	West Godavari		9

```
-- 3. CONCAT(str1, str2, ...)
-- Joins two or more strings.

SELECT district , state , concat(district,',',state)
from dataset1;
-- E.g., Agra, Uttar Pradesh

4
```

Re	sult Grid 🔢 🙌 Filter Rov	vs: Export:	Wrap Cell Content: TA
	district	state	concat(district,',',state)
٠	South Andaman	Andaman And Nicobar Islands	South Andaman, Andaman And Nicobar Islands
	North And Middle Andaman	Andaman And Nicobar Islands	North And Middle Andaman, Andaman And Nicob
	Nicobars	Andaman And Nicobar Islands	Nicobars, Andaman And Nicobar Islands
	Rangareddy	Andhra Pradesh	Rangareddy, Andhra Pradesh
	East Godavari	Andhra Pradesh	East Godavari, Andhra Pradesh
	Guntur	Andhra Pradesh	Guntur, Andhra Pradesh
	Krishna	Andhra Pradesh	Krishna, Andhra Pradesh
	Visakhapatnam	Andhra Pradesh	Visakhapatnam, Andhra Pradesh
	Chittoor	Andhra Pradesh	Chittoor, Andhra Pradesh
	Anantapur	Andhra Pradesh	Anantapur, Andhra Pradesh
	Kurnool	Andhra Pradesh	Kurnool, Andhra Pradesh
	Mahbubnagar	Andhra Pradesh	Mahbubnagar, Andhra Pradesh
	Hyderabad	Andhra Pradesh	Hyderabad, Andhra Pradesh
	West Godavari	Andhra Pradesh	West Godavari, Andhra Pradesh
	Karimnagar	Andhra Pradesh	Karimnagar, Andhra Pradesh

```
-- 4. LEFT(string, n) & RIGHT(string, n)
37
38 • select district,
        left(district,3) as first_3_chars
39
        from dataset1;
40
41
42
43
Export: Wrap Cell Content: TA
  district
                      first_3_chars
  South Andaman
                      Sou
  North And Middle Andaman
                      Nor
  Nicobars
                      Nic
  Rangareddy
                      Rani
  East Godavari
                      Eas
  Guntur
                      Gun
  Krishna.
                      Kri
  Visakhapatnam
                      Vis
  Chittoor
                      Chi
  Anantapur
                      Ana
  Kurnool
                      Kur
  Mahbubnagar
                      Mah
  Hyderabad
                      Hyd
  West Godavari
                      Wes
  Karimnagar.
                      Kar
```

```
43 -- RIGHT(string, n)
44 • select district,
        right(district,3) as last_3_chars
45
        from dataset1;
46
47
48
Export: Wrap Cell Content: IA
   district.
                      last 3 chars
  South Andaman
                      man
  North And Middle Andaman
                      man
  Nicobars :
                      ars
  Rangareddy
                      ddy
  East Godavari
                      ari
  Guntur
                      tur
  Krishna.
                      hna
  Visakhapatnam
                      nam
  Chittoor
                      oor
  Anantapur
                      pur
  Kurnool
                      00
  Mahbubnagar
                      gar
  Hyderabad
                      bad
  West Godavari
                      ari
```

```
50 -- 5. REPLACE(string, search, replace)
51 • SELECT District,
                     REPLACE(District, ' ', '_') AS formatted_distri
52
        FROM dataset1;
53
54
55
Result Grid | Filter Rows:
                                       Export: Wrap Cell Content: $\overline{A}$
   District
                       formatted district
   South Andaman
                       South Andaman
   North And Middle Andaman
                      North And Middle Andaman
   Nicobars.
                      Nicobars.
   Rangareddy
                      Rangareddy
   East Godavari
                       East Godavari
   Guntur
                       Guntur.
   Krishna.
                       Krishna
   Visakhapatnam.
                       Visakhapatnam
   Chittoor
                       Chittoor
                       Anantapur
   Anantapur
```

Kurnool

Mahbubnagar

West Godavari

Hyderabad

Kurnool

Mahbubnagar

West_Godavari

Hyderabad

```
57 -- 6. REVERSE(string)
58 • select district,
       reverse(district) as reversed_string
59
       from dataset1;
60
61
62
Export: Wrap Cell Content: IA
                    formatted district
   District
  South Andaman
                    South Andaman
  North And Middle Andaman
                    North And Middle Andaman
  Nicobars.
                    Nicobars.
                    Rangareddy
  Rangareddy
  East Godavari
                    East Godavari
  Guntur
                    Guntur
```

Krishna.

Chittoor.

Kurnool

Anantapur

Mahbubnagar

West Godavari.

Hvderabad

Visakhapatnam

Krishna

Chittoor

Kurnool

Anantapur

Mahbubnagar

West Godavari

Hvderabad

Visakhapatnam

```
-- SUBSTR(string, start, length) / SUBSTRING()
-- Extract part of string starting at start, for length characters.
select district,
substring(district,2,4) as partial_name
from dataset1; -- started from 2nd char till 4th character.
```

Result Grid 1 1 1 1 Filter Rows:				
	district	partial_name		
•	South Andaman	outh		
	North And Middle Andaman	orth		
	Nicobars	icob		
	Rangareddy	anga		
	East Godavari	ast		
	Guntur	untu		
	Krishna	rish		
	Visakhapatnam	isak		
	Chittoor	hitt		
	Anantapur	nant		
	Kurnool	urno		
	Mahbubnagar	ahbu		
	Hyderabad	yder		
	West Godavari	est		

68

```
-- 8. TRIM() / LTRIM() / RTRIM()
69
       -- Removes extra spaces if present.
70
71 • SELECT district,
       trim(district) as trimmed,
72
       ltrim(district) as Left trimmed,
73
       rtrim(district) as Right trimmed
74
       FROM dataset1;
75
Export: Wrap Cell Content:
  district
                     partial name
  South Andaman
                     outh
  North And Middle Andaman
                     orth
  Nicobars
                     icob.
  Rangareddy
                     anga
  East Godavari
                     ast
  Guntur
                    untu
  Krishna
                    rish
  Visakhapatnam
                    isak
  Chittoor
                     hitt
  Anantapur
                    nant
  Kurnool
                     urno
  Mahbubnagar
                     ahbu
  Hyderabad
                     yder
```

est

West Godavari

```
78 -- 9. UPPER() / LOWER()
         -- Converts string to uppercase or lowercase.
79
80 • SELECT District,
                   UPPER(District) AS district upper,
81
                   LOWER(District) AS district lower
82
         FROM dataset1;
83
84
Result Grid
                                           Export: Wrap Cell Content: $\overline{A}$
             Filter Rows:
   District
                                                   district lower
                         district upper
  South Andaman
                                                  south andaman.
                         SOUTH AND AMAN
  North And Middle Andaman
                        NORTH AND MIDDLE ANDAMAN
                                                  north and middle andaman
                                                  nicobars.
  Nicobars
                         NICOBARS
  Rangareddy
                         RANGAREDDY
                                                  rangareddy
  East Godavari
                         FAST GODAVARI
                                                  east godavari
  Guntur
                         GUNTUR
                                                  auntur
  Krishna
                                                  krishna.
                         KRISHNA
  Visakhapatnam.
                         VISAKHAPATNAM
                                                  visakhapatnam
  Chittoor
                         CHITTOOR
                                                  chittoor
  Anantapur
                         ANANTAPUR
                                                  anantapur
  Kurnool
                         KURNOOL
                                                  kurnool
  Mahbubnagar
                         MAHBUBNAGAR
                                                  mahbubnagar
  Hyderabad
                         HYDER ABAD
                                                  hyderabad
                                                  west godavari
  West Godavari
                         WEST GODAVARI
```