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## Sql script to find invalid email addresses

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▲ A data import was done from an access database and there was no validation on the email address field. Does anyone have an sql script that can return a list of invalid email addresses (missing @, etc).

55

▼ Thanks!



14

sql

validation

email

asked Apr 29 '09 at 6:48



campo

969 1 11 19

### 15 Answers

▲ `SELECT * FROM people WHERE email NOT LIKE '%_@_%._%'`

134



Anything more complex will likely return false negatives and run slower.



Validating e-mail addresses in code is virtually impossible.

EDIT: Related questions

- I've answered a similar question some time ago: [TSQL Email Validation \(without regex\)](#)
- [T-SQL: checking for email format](#)
- [Regexp recognition of email address hard?](#)
- [many other Stack Overflow questions](#)

edited May 23 '17 at 12:10



Community ♦

1 1

answered Apr 29 '09 at 6:53



Tomalak

261k 52 434 550

- 
- 4 I've used this one and it has not failed me in years. I consider myself pretty good at regexs but I think a cylon wrote this [ex-parrot.com/~pdw/Mail-RFC822-Address.html](#) – Chad Grant Apr 29 '09 at 7:12
- 
- 1 Already too complex and wrong. foo@bar is a legal email address (providing the ".bar" TLD exists and has either an address or a MX record). – bortzmeyer Jun 16 '09 at 9:43
- 
- 1 Calling this even "unlikely" would be very British already. The expression is not for validating e-mail addresses or checking every corner case. It is a basic sanity check that covers 99.9% of all cases without yielding false negatives, and I did not indicate otherwise. – Tomalak Jun 16 '09 at 11:18
- 
- 2 Comments "too complex and wrong" followed by "Too simple" sums up all email validation nicely. This is a great sanity check expression that is exceptionally helpful in many circumstances. – toxaq Nov 2 '14 at 0:36
- 
- 2 q.com is a popular email provider in the US. Might want to try NOT LIKE '%\_@%\_.\_\_%' (with one character after the @) – jonaz Nov 1 '16 at 1:36
-

19

Here is a quick and easy solution:

```
CREATE FUNCTION dbo.vaValidEmail(@EMAIL varchar(100))
RETURNS bit AS
BEGIN
    DECLARE @bitRetVal AS Bit
    IF (@EMAIL <> '' AND @EMAIL NOT LIKE '%@%.%')
        SET @bitRetVal = 0 -- Invalid
    ELSE
        SET @bitRetVal = 1 -- Valid
    RETURN @bitRetVal
END
```

Then you can find all rows by using the function:

```
SELECT * FROM users WHERE dbo.vaValidEmail(email) = 0
```

If you are not happy with creating a function in your database, you can use the LIKE-clause directly in your query:

```
SELECT * FROM users WHERE email NOT LIKE '%@%.%'
```

[Source](#)

edited Apr 29 '09 at 6:57

answered Apr 29 '09 at 6:51



Espo

34.5k

19

122

150

1 +1 for the UDF. – Tomalak Apr 29 '09 at 7:11

I find this simple T-SQL query useful for returning valid e-mail addresses

5

```
SELECT email
FROM People
WHERE email LIKE '%_@__%.__%'
      AND PATINDEX('%[^a-z,0-9,@,.,_]%', REPLACE(email, '-', 'a')) = 0
```

The PATINDEX bit eliminates all e-mail addresses containing characters that are not in the allowed a-z, 0-9, '@', '.', '\_' & '-' set of characters.

It can be reversed to do what you want like this:

```
SELECT email
FROM People
WHERE NOT (email LIKE '%_@__%.__%'
      AND PATINDEX('%[^a-z,0-9,@,.,_]%', REPLACE(email, '-', 'a')) = 0)
```

edited Jul 6 '15 at 12:37

answered Jul 6 '15 at 12:32



Jack Allan

8,835 7 30 47

You can eliminate the REPLACE function by escaping the hyphen like this: AND PATINDEX('%[^a-z,0-9,@,.,\_,\-%]', email) = 0 – Splendor Mar 22 '17 at 17:19

MySQL

3

```
SELECT * FROM `emails` WHERE `email`
NOT REGEXP '[-a-z0-9~!$%^&*_=+}{\\'']?]+(\\.[-a-z0-9~!$%^&*_=+}{\\'']?
z0-9_]*)(\\.[-a-z0-9_]+)*\\.
(aero|arpa|biz|com|coop|edu|gov|info|int|mil|museum|name|net|org|pro
[a-z])|([0-9]{1,3}\\.[0-9]{1,3}\\.[0-9]{1,3}\\.[0-9]{1,3}))(:[0-9]{1
```

edited Jan 29 '15 at 10:06

answered Dec 13 '12 at 3:57



Zemistr

1,039 7 10

- 3 This doesn't work on MS SQL Server. Please specify DB vendor, on which the above syntax actually works. – Neolisk Jan 28 '15 at 15:24

2

```
select
email
from loginuser where
patindex ('%[ &'',"":;!=\\/<>]*%', email) > 0 -- Invalid character:
or patindex ('[@.__%]', email) > 0 -- Valid but cannot be starting
or patindex ('[@.__%]', email) > 0 -- Valid but cannot be ending ci
or email not like '%@%.%' -- Must contain at least one @ and one .
or email like '%.%.%' -- Cannot have two periods in a row
or email like '%@%@%' -- Cannot have two @ anywhere
or email like '%.@%' or email like '%@.%' -- Cant have @ and . next :
or email like '%.cm' or email like '%.co' -- Unlikely. Probably typo:
or email like '%.or' or email like '%.ne' -- Missing Last Letter
```

This worked for me. Had to apply rtrim and ltrim to avoid false positives.

Source: <http://sevenwires.blogspot.com/2008/09/sql-how-to-find-invalid-email-in-sql.html>

Postgres version:

```
select user_guid, user_guid email_address, creation_date, email_veri:
from user_data where
length(substring (email_address from '%[ &','";!+=\/( )<>]%' )) > 0
characters
or length(substring (email_address from '[@.-_]%' )) > 0 -- Valid b
starting character
or length(substring (email_address from '%[@.-_]%' )) > 0 -- Valid b
character
or email_address not like '%@%.' -- Must contain at least one @ a
or email_address like '%.%.%' -- Cannot have two periods in a
or email_address like '%@%@%' -- Cannot have two @ anywhere
or email_address like '%.@%' or email_address like '%@.%' -- Cant ha
each other
or email_address like '%.cm' or email_address like '%.co' -- Unlikel
or email_address like '%.or' or email_address like '%.ne' -- Missing
;
```

edited Aug 5 '15 at 7:57



MAXE

4,071 2 34 51

answered Mar 22 '10 at 6:21

Manishm

---

@Manishm try PostgreSQL version with email myname@gmail. . this is why downvote from me - huge complexity but not working. – [1ac0](#) Nov 20 '14 at 7:15 ✎

---

hello+world@gmail.com is a valid mail address – [Nuri Tasdemir](#) Apr 30 '15 at 1:41

---

Be carefule with domain names, because someone@domain.co.nz is valid (note the '.co' part) – [kurdtpage](#) Apr 17 '16 at 8:57

---

.-\_ are valid start characters – [gliljas](#) Sep 2 '16 at 7:56

---

## On sql server 2016 and up

1

```

CREATE FUNCTION [DBO].[F_IsEmail] (
    @EmailAddr varchar(360) -- Email address to check
) RETURNS BIT -- 1 if @EmailAddr is a valid email address

AS BEGIN
DECLARE @AlphabetPlus VARCHAR(255)
        , @Max INT -- Length of the address
        , @Pos INT -- Position in @EmailAddr
        , @OK BIT -- Is @EmailAddr OK
-- Check basic conditions
IF @EmailAddr IS NULL
    OR @EmailAddr NOT LIKE '[0-9a-zA-Z]@__%.__%'
    OR @EmailAddr LIKE '%@@@%'
    OR @EmailAddr LIKE '%.%.%'
    OR @EmailAddr LIKE '%. @'
    OR @EmailAddr LIKE '%@. '
    OR @EmailAddr LIKE '%@%.-%'
    OR @EmailAddr LIKE '%@%-.%'
    OR @EmailAddr LIKE '%@-%'
    OR CHARINDEX(' ',LTRIM(RTRIM(@EmailAddr))) > 0
    RETURN(0)

declare @AfterLastDot varchar(360);
declare @AfterArobase varchar(360);
declare @BeforeArobase varchar(360);
declare @HasDomainTooLong bit=0;

--Control des longueurs et autres incoherence
set
@AfterLastDot=REVERSE(SUBSTRING(REVERSE(@EmailAddr),0,CHARINDEX('.',',|

if len(@AfterLastDot) not between 2 and 17
RETURN(0);

set
@AfterArobase=REVERSE(SUBSTRING(REVERSE(@EmailAddr),0,CHARINDEX('@',|

if len(@AfterArobase) not between 2 and 255
RETURN(0);

select top 1 @BeforeArobase=value from string_split(@EmailAddr, '@'
if len(@AfterArobase) not between 2 and 255

```

```
RETURN(0);

--Controle sous-domain pas plus grand que 63
select top 1 @HasDomainTooLong=1 from string_split(@AfterArobase, '.'
LEN(value)>63
if @HasDomainTooLong=1
return(0);

--Control de La partie locale en detail
SELECT @AlphabetPlus = 'abcdefghijklmnopqrstuvwxyz01234567890!#$%&'*.
      , @Max = LEN(@BeforeArobase)
      , @Pos = 0
      , @OK = 1

WHILE @Pos < @Max AND @OK = 1 BEGIN
    SET @Pos = @Pos + 1
    IF @AlphabetPlus NOT LIKE '%' + SUBSTRING(@BeforeArobase, @Pos, 1)
        SET @OK = 0
END

if @OK=0
RETURN(0);

--Control de La partie domaine en detail
SELECT @AlphabetPlus = 'abcdefghijklmnopqrstuvwxyz01234567890-.'
      , @Max = LEN(@AfterArobase)
      , @Pos = 0
      , @OK = 1

WHILE @Pos < @Max AND @OK = 1 BEGIN
    SET @Pos = @Pos + 1
    IF @AlphabetPlus NOT LIKE '%' + SUBSTRING(@AfterArobase, @Pos, 1)
        SET @OK = 0
END

if @OK=0
RETURN(0);

return(1);
```



END

edited Nov 30 '18 at 17:09



Tony Dong

2,322 1 19 25

answered Nov 17 '17 at 12:37



Esperento57

8,729 2 15 27

I find this approach more intuitive:

1

```
CREATE FUNCTION [dbo].[ContainsVailidEmail] (@Input varchar(250))
RETURNS bit
AS
BEGIN
    RETURN CASE
        WHEN @Input LIKE '%_@__%.__%' THEN 1
        ELSE 0
    END
END
```

I call it using the following:

```
SELECT [dbo].[ContainsVailidEmail] (Email) FROM [dbo].[User]
```

OR

If you are only going to use this once then why not it as a Computed Column, with the following specification:

```
(case when [Email] like '%_@_%.__%' then (1) else (0) end)
```

Then you can just use it without needing to call a function.

edited Dec 4 '17 at 11:44

answered Dec 4 '17 at 11:31



CarneyCode

2,800 2 21 40



0



```
SELECT EmailAddress AS ValidEmail
FROM Contacts
WHERE EmailAddress LIKE '%_@_%.__%'
      AND PATINDEX('%[^a-z,0-9,@,.,_,\-%]', EmailAddress) = 0
GO
```

Please check this link:

<https://blog.sqlauthority.com/2017/11/12/validate-email-address-sql-server-interview-question-week-147/>

edited Feb 6 at 12:30



Raduan Santos

769 17 39

answered Feb 6 at 11:16



rino

21 3



```

sel 'unismankur@yahoo#.co.in' as Email,
case
when Email not like '%@xx%'
AND Email like '%@%'
AND CHAR_LENGTH(
oTranslate(
trim( Email),
'._-@0123456789abcdefghijklmnopqrstuvwxyzABCDEFGHIJKLMNOPQRSTUVWXYZ'
))
) = 0
then 'N' else 'Y' end as Invalid_Email_Ind;

```

This works very well for me.

edited Feb 14 at 2:25



Vasyl Moskalov

2,098 12 19

answered Feb 14 at 1:28



Kumar Ankur

1 1

- 
- 1 Hello, and welcome to stack overflow. Thanks for posting this, but could you please format your answer? See [How do I format my code blocks?](#) for how. – [dbc](#) Feb 14 at 1:37
- 



I propose my function :

0

```

CREATE FUNCTION [REC].[F_IsEmail] (
    @EmailAddr varchar(360) -- Email address to check
) RETURNS BIT -- 1 if @EmailAddr is a valid email address

```



```

AS BEGIN
DECLARE @AlphabetPlus VARCHAR(255)
        , @Max INT -- Length of the address
        , @Pos INT -- Position in @EmailAddr
        , @OK BIT -- Is @EmailAddr OK

```

```

-- Check basic conditions
IF @EmailAddr IS NULL
    OR @EmailAddr NOT LIKE '[0-9a-zA-Z]@__%.__%'
    OR @EmailAddr LIKE '%@%@%'
    OR @EmailAddr LIKE '%.%.%'
    OR @EmailAddr LIKE '%.@'
    OR @EmailAddr LIKE '%@.'
    OR @EmailAddr LIKE '%@%.-%'
    OR @EmailAddr LIKE '%@%-.%'
    OR @EmailAddr LIKE '%@-%'
    OR CHARINDEX(' ',LTRIM(RTRIM(@EmailAddr))) > 0
    RETURN(0)

declare @AfterLastDot varchar(360);
declare @AfterArobase varchar(360);
declare @BeforeArobase varchar(360);
declare @HasDomainTooLong bit=0;

--Control des longueurs et autres incoherence
set
@AfterLastDot=REVERSE(SUBSTRING(REVERSE(@EmailAddr),0,CHARINDEX('.',',|

if len(@AfterLastDot) not between 2 and 17
RETURN(0);

set
@AfterArobase=REVERSE(SUBSTRING(REVERSE(@EmailAddr),0,CHARINDEX('@',|

if len(@AfterArobase) not between 2 and 255
RETURN(0);

select top 1 @BeforeArobase=value from string_split(@EmailAddr, '@'
if len(@AfterArobase) not between 2 and 255
RETURN(0);

--Controle sous-domain pas plus grand que 63
select top 1 @HasDomainTooLong=1 from string_split(@AfterArobase, '.
LEN(value)>63
if @HasDomainTooLong=1
return(0);

--Control de la partie locale en detail
SELECT @AlphabetPlus = 'abcdefghijklmnopqrstuvwxyz01234567890!#$%&'*.
, @Max = LEN(@BeforeArobase)
, @Pos = 0

```

```

, @OK = 1

WHILE @Pos < @Max AND @OK = 1 BEGIN
    SET @Pos = @Pos + 1
    IF @AlphabetPlus NOT LIKE '%' + SUBSTRING(@BeforeArobase, @Pos, 1)
        SET @OK = 0
END

if @OK=0
RETURN(0);

--Control de la partie domaine en detail
SELECT @AlphabetPlus = 'abcdefghijklmnopqrstuvwxyz01234567890-.'
, @Max = LEN(@AfterArobase)
, @Pos = 0
, @OK = 1

WHILE @Pos < @Max AND @OK = 1 BEGIN
    SET @Pos = @Pos + 1
    IF @AlphabetPlus NOT LIKE '%' + SUBSTRING(@AfterArobase, @Pos, 1)
        SET @OK = 0
END

if @OK=0
RETURN(0);

return(1);

END

```

answered Dec 31 '17 at 11:29

[Esperento57](#)

8,729 2 15 27



```

select * from users
WHERE NOT
(
    CHARINDEX(' ',LTRIM(RTRIM([Email]))) = 0
AND LEFT(LTRIM([Email]),1) <> '@'

```

-1

```

AND RIGHT(RTRIM([Email]),1) <> '.'
AND CHARINDEX('.', [Email], CHARINDEX('@', [Email])) - CHARINDEX('@', [Email]) > 1
AND LEN(LTRIM(RTRIM([Email]))) - LEN(REPLACE(LTRIM(RTRIM([Email])), '@', '')) >= 1
AND CHARINDEX('.', REVERSE(LTRIM(RTRIM([Email]))) >= 3
AND (CHARINDEX('@', [Email]) = 0 AND CHARINDEX('..', [Email]) = 0)

```

edited Feb 3 '12 at 23:10



Antony Stubbs

9,479 3 29 33

answered Jun 16 '09 at 5:56

sona

▲

-1

▼

```

select *
from MailList.dbo.tblMailID
where
    patindex ('%[ &','";!+=\/<>]%', mailid) > 0 -- Invalid character
    or patindex ('[@._-]%', mailid) > 0 -- Valid but cannot be used as domain
    or patindex ('%[@._-]', mailid) > 0 -- Valid but cannot be used as domain
    or mid not like '%@%.' -- Must contain at least one dot
    or mid like '%..%' -- Cannot have two periods
    or mid like '%@@%' -- Cannot have two @ anywhere
    or mid like '%.@@%' or mailid like '%@.%' -- Cannot have @ and . next to each other
    or mid like '%.cm' or mailid like '%.co' -- Camaroon or Colombia? (typo)
    or mid like '%.or' or mailid like '%.ne' -- Missing Last Letter

```

edited Sep 2 '14 at 14:08



arserbin3

4,615 7 28 50

answered Sep 2 '14 at 13:49



Shoaib

160 1 9



go

-1

**create proc** GetEmail

@name varchar(22),

@gmail varchar(22)

**as****begin****declare** @a varchar(22)**set select** @a=substring(@gmail,charindex('@',@gmail),len(@gmail)-charindex('@',@gmail)+1)**if** (@a = 'gmail.com')

insert into table\_name values(@name,@gmail)

**else**

print 'please enter valid email address'

**end**

edited Jul 3 '17 at 15:23

**Bugs**

4,159 9 26 37

answered Jul 3 '17 at 10:31

**B. VENKA REDDY**

1

Please format your code and add some description!! – Div Jul 3 '17 at 11:00

-2

I know the post is old but after a 3 months time and with various email combinations I came across, able to make this sql for validating Email IDs.

```

CREATE FUNCTION [dbo].[isValidEmailFormat]
(
    @EmailAddress varchar(500)
)
RETURNS bit
AS
BEGIN
    DECLARE @Result bit

    SET @EmailAddress = LTRIM(RTRIM(@EmailAddress));
    SELECT @Result =
    CASE WHEN
        CHARINDEX(' ',LTRIM(RTRIM(@EmailAddress))) = 0
        AND LEFT(LTRIM(@EmailAddress),1) <> '@'
        AND RIGHT(RTRIM(@EmailAddress),1) <> '.'
        AND LEFT(LTRIM(@EmailAddress),1) <> '-'
        AND CHARINDEX('.',@EmailAddress,CHARINDEX('@',@EmailAddress)) -
        CHARINDEX('@',@EmailAddress) > 2
        AND LEN(LTRIM(RTRIM(@EmailAddress))) -
        LEN(REPLACE(LTRIM(RTRIM(@EmailAddress)),'@','')) = 1
        AND CHARINDEX('.',REVERSE(LTRIM(RTRIM(@EmailAddress)))) >= 3
        AND (CHARINDEX('@',@EmailAddress) = 0 AND CHARINDEX('..',@Email
        AND (CHARINDEX('-@',@EmailAddress) = 0 AND CHARINDEX('..',@Email
        AND (CHARINDEX('_@',@EmailAddress) = 0 AND CHARINDEX('..',@Email
        AND ISNUMERIC(SUBSTRING(@EmailAddress, 1, 1)) = 0
        AND CHARINDEX(',', @EmailAddress) = 0
        AND CHARINDEX('!', @EmailAddress) = 0
        AND CHARINDEX('-.', @EmailAddress)=0
        AND CHARINDEX('%', @EmailAddress)=0
        AND CHARINDEX('#', @EmailAddress)=0
        AND CHARINDEX('$', @EmailAddress)=0
        AND CHARINDEX('&', @EmailAddress)=0
        AND CHARINDEX('^', @EmailAddress)=0
        AND CHARINDEX('''', @EmailAddress)=0
        AND CHARINDEX('\', @EmailAddress)=0
        AND CHARINDEX('/', @EmailAddress)=0
        AND CHARINDEX('*', @EmailAddress)=0
        AND CHARINDEX('+', @EmailAddress)=0
        AND CHARINDEX('(', @EmailAddress)=0
        AND CHARINDEX(')', @EmailAddress)=0
    
```



```

AND CHARINDEX('[', @EmailAddress)=0
AND CHARINDEX(']', @EmailAddress)=0
AND CHARINDEX('{', @EmailAddress)=0
AND CHARINDEX('}', @EmailAddress)=0
AND CHARINDEX('?', @EmailAddress)=0
AND CHARINDEX('<', @EmailAddress)=0
AND CHARINDEX('>', @EmailAddress)=0
AND CHARINDEX('=', @EmailAddress)=0
AND CHARINDEX('~', @EmailAddress)=0
AND CHARINDEX('`', @EmailAddress)=0
AND CHARINDEX('.', SUBSTRING(@EmailAddress, CHARINDEX('@', @Email
AND CHARINDEX('.', SUBSTRING(@EmailAddress, CHARINDEX('@', @Email
AND LEN(SUBSTRING(@EmailAddress, 0, CHARINDEX('@', @EmailAddress
AND CHARINDEX('.', REVERSE(@EmailAddress)) > 2
AND CHARINDEX('.', REVERSE(@EmailAddress)) < 5
THEN 1 ELSE 0 END

```

```

RETURN @Result
END

```

Any suggestions are welcomed!

answered Oct 28 '14 at 14:46



[anurag\\_it](#)

17 1 4



-7



```

DELETE
FROM `contatti`
WHERE `Email` NOT LIKE "%.it"
AND `Email` NOT LIKE "%.com"
AND `Email` NOT LIKE "%.fr"
AND `Email` NOT LIKE "%.net"
AND `Email` NOT LIKE "%.ru"
AND `Email` NOT LIKE "%.eu"
AND `Email` NOT LIKE "%.org"
AND `Email` NOT LIKE "%.edu"
AND `Email` NOT LIKE "%.uk"
AND `Email` NOT LIKE "%.de"
AND `Email` NOT LIKE "%.biz"

```

```
AND `EMail` NOT LIKE "%.ch"
AND `EMail` NOT LIKE "%.bg"
AND `EMail` NOT LIKE "%.info"
AND `EMail` NOT LIKE "%.br"
AND `EMail` NOT LIKE "%.pt"
AND `EMail` NOT LIKE "%.za"
AND `EMail` NOT LIKE "%.vn"
AND `EMail` NOT LIKE "%.es"
AND `EMail` NOT LIKE "%.in"
AND `EMail` NOT LIKE "%.dk"
AND `EMail` NOT LIKE "%.ni"
AND `EMail` NOT LIKE "%.ar"
```

and put all extension you want

edited Mar 22 '13 at 13:10



Taryn ♦

192k 47 293 356

answered Mar 22 '13 at 12:51



user2199272

1 1

---

Please edit your answer and format the code to make it readable. –  
[kleopatra](#) Mar 22 '13 at 13:09

---

- 1 Great. This would remove all valid email addresses from Austria, Liechtenstein or other valid TLDs. (Can't downvote, don't have enough reputation). – [urbanhusky](#) Feb 19 '15 at 9:30
-