CS 105
Meet the Asterisk
Meet the Asterisk

No, not that guy

That’s Asterix
Meet the Asterisk

That guy

*
Meet the Asterisk

So what does * mean
Meet the Asterisk

So what does * mean

Anything, really
Meet the Asterisk

So what does * mean

Anything, really

Actually more like Anythings
Anythings? Really?
Anythings? Really?

An * can be any character
Anythings? Really?

An * can be any character

That’s why we call it a wildcard.
Anythings? Really?

An * can be any character

Or any string of such characters
Anythings ? Really ?

An * can be any character

Or any string of such characters

Even one of length zero
So.....
So.....

<table>
<thead>
<tr>
<th></th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>apple</td>
</tr>
<tr>
<td>2</td>
<td>airline</td>
</tr>
<tr>
<td>3</td>
<td>anecdote</td>
</tr>
</tbody>
</table>
So.....

=COUNTIF(A1:A3,"a*e")
So.....

=COUNTIF(A1:A3,"a*e")

3
So.....

=COUNTIF(A1:A3,"a*e")
3

=COUNTIF(A1:A3,"air*ine")
So.....

=COUNTIF(A1:A3,"a*e")

3

=COUNTIF(A1:A3,"air*ine")

1
So.....

=COUNTIF(A1:A3,"a*e")
3

=COUNTIF(A1:A3,"air*ine")
1

=COUNTIF(A1:A3,"appl*e")
So.....

=COUNTIF(A1:A3,"a*e")
3

=COUNTIF(A1:A3,"air*ine")
1

=COUNTIF(A1:A3,"appl*e")
1
One More Wildcard
One More Wildcard
How is ? Different
How is ? Different

It represents exactly one character
So.....

<p>| | |</p>
<table>
<thead>
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</tr>
<tr>
<td>3</td>
<td>anecdote</td>
</tr>
</tbody>
</table>
So.....

=COUNTIF(A1:A3,"a?e")
So.....

=COUNTIF(A1:A3,"a?e")

0
So.....

=COUNTIF(A1:A3,"a?e")

0

=COUNTIF(A1:A3,"air?ine")
So.....

=COUNTIF(A1:A3,"a?e")

0

=COUNTIF(A1:A3,"air?ine")

1
So.....

=COUNTIF(A1:A3,"a?e")

0

=COUNTIF(A1:A3,"air?ine")

1

=COUNTIF(A1:A3,"appl?e")
So.....

=COUNTIF(A1:A3, ”a?e”)
0

=COUNTIF(A1:A3, ”air?ine”)
1

=COUNTIF(A1:A3, ”appl?e”)
0
How Random
How Random

=RAND()
How Random

=RAND()

returns a pseudo-random value
How Random

=RAND()

returns a pseudo-random value

0 <= RAND <= 1
In the Real World
In the Real World
we often need whole numbers
In the Real World

we often need whole numbers

=ROUND(RAND(),0)
In the Real World
we often need whole numbers

=ROUND(RAND(),0)

Either 0 or 1
Sometimes One Isn't Enough
Sometimes One Isn't Enough

What if you have four choices?
Sometimes One Isn't Enough

What if you have four choices?

Like North, East, South or West
Sometimes One Isn't Enough

What if you have four choices?

Like North, East, South or West

=ROUND(3*RAND(),0)
Sometimes One Isn't Enough

What if you have four choices?

Like North, East, South or West

=ROUND(3*RAND(),0)

Uh, .... Why 3?
Sometimes One Isn't Enough

What if you have four choices?
Like North, East, South or West

=ROUND(3*RAND(),0)

Always 0, 1, 2 or 3
What a Hassle!
What a Hassle!

There's got to be an easier way!
What a Hassle!

There's got to be an easier way!

There Is.
What a Hassle!
There's got to be an easier way!
There Is.

=RandBetween(1,4)
What a Hassle!
There's got to be an easier way!
There Is.

=RANDBETWEEN(1,4)
What a Hassle!
There's got to be an easier way!

There Is.

=RANDBETWEEN(1,4)

Always 1, 2, 3 or 4