



Speed Exchange Rate Calculator

Gruppe 5

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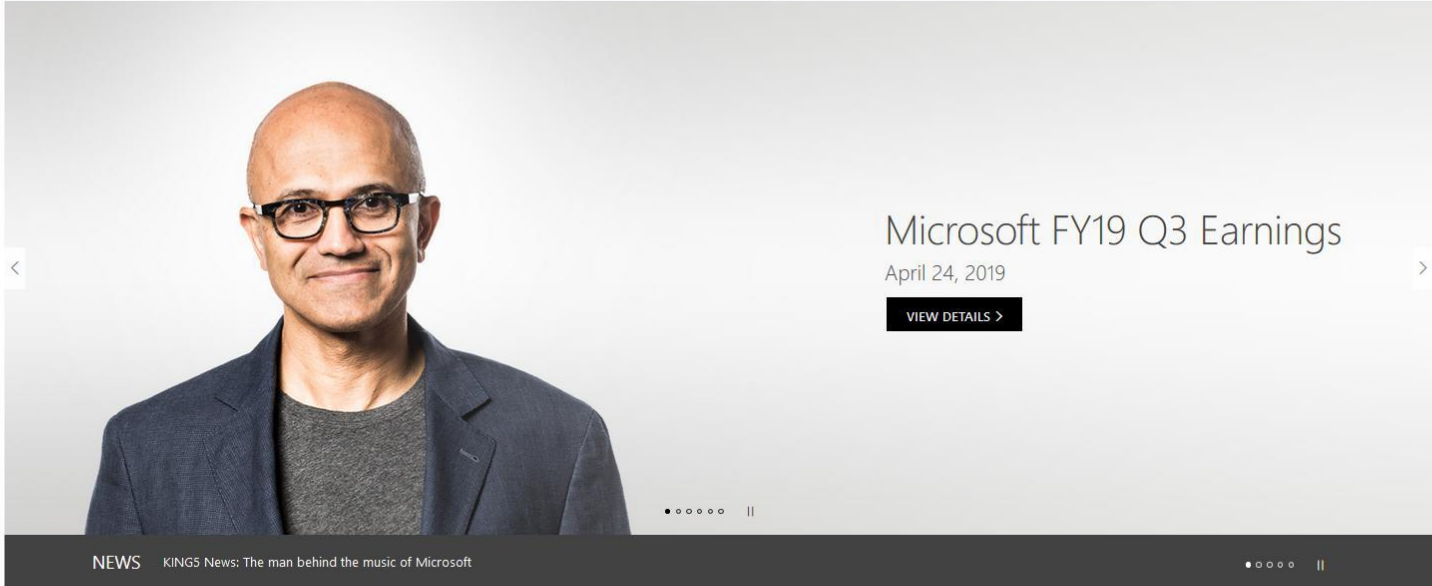


Projektübersicht

- Daten werden von einem Unternehmen beschafft
- Daten werden in Excel gespeichert und in den aktuellen Wechselkurs umgerechnet
- Daten werden in die Datenbank geladen

Schritt 1: Daten beschaffen

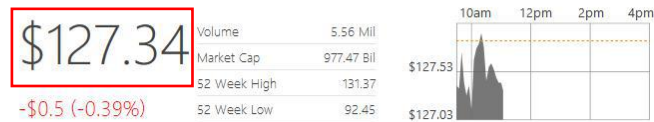
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Microsoft FY19 Q3 Earnings
April 24, 2019
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Microsoft Corp (MSFT)



Quotes delayed by up to 15 minutes. Price Quote as of 5/02/2019 11:00:07 AM - ET. Supplied by Morningstar Inc



2018 ANNUAL REPORT
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Schritt 1: Daten beschaffen

Investor relations

IBM 1Q 2019 Earnings Announcement
Jim Kavanaugh, Senior Vice President and Chief Financial Officer



Learn more



IBM investment information

Stock quote

IBM (NYSE)
\$140.96
10:43 ET on May 2, 2019
Change: 0.40 ↑ (0.28%)
Volume: 516,425

Quick links:

- Stockholder services
- Stock charts
- Investment calculator
- Historical price lookup
- Annual meeting of stockholders

Download files:

- 2018 annual report (4.8 MB)
- Form 8-K (2015 10-K Segment Recast) (2.94 MB)
- Dividends (352 KB)
- Stock splits (113 KB)

Financial metrics

At-a-glance financial information

Financial reporting

- Quarterly earnings
- Annual reports
- SEC filings

Investor relations search

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For:

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Financials:

2019 Q1	2018 Q4	2018 Q3	2018 Q2

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Schritt 1: Daten beschaffen

```
myIE = .OLEObject~New("InternetExplorer.Application")

myIE~Width=1500
myIE~Height=1500

myIE~Visible=.True
myIE~Navigate("https://www.microsoft.com/en-us/investor")
Call SysSleep 3

doc = myIE~document
body=doc~body
textrange=body~CreateTextRange
text=textrange~Text

parse var text . "Microsoft Corp (MSFT)" stockpriceMS "%" x .
if stockpriceMS = "" then stockpriceMS = "error 404: stock price not found"
myIE~quit

stockpriceMS2 = stockpriceMS"."
parse var stockpriceMS2 "$" MS_Aktienkurs var2
say "Aktienkurs von Microsoft= "MS_Aktienkurs"$."
```

Schritt 1: Daten beschaffen

ATX 3 181 -1,1% DAX 12 368 0,2% Dow 26 392 -0,1% EStoxx50 3 497 -0,5% Nasdaq 7 760 0,1% Öl 70,1 -2,7% Euro 1,1180 -0,2% CHF 1,1393 0,0% Gold 1 270 -0,5%

Anmelden Registrieren? Fan werden

finanzen.at 50 € Trade-guthaben geschenkt ¹

Name, WKN, Text

Börse News & Analysen myfinanzen **Depot eröffnen**

Aktien Indizes Zertifikate Hebelprodukte Fonds ETF Anleihen Rohstoffe Devisen Zinsen CFDs Trading Forum Broker-Vergleich

News Währungsrechner Realtimekurse Kryptowährungen

Dollarkurs

1,1183 USD -0,0016 -0,14 % 17:36:40 FXR

(EUR - USD)

[transferwise](#) **Günstig mit TransferWise überweisen** (Anzeige) [Gefällt mir 1](#)

DOLLARKURS (EUR-USD) (EURO DOLLAR)

Kurse + Charts + Realtime

Snapshot Chart (groß) Nachrichten Tools Invertiert

Historisch Realtimekurs Nachrichten Währungsrechner USD/EUR

CHART - DOLLARKURS

Intraday 1W 3M **1J** 3J 5J MAX



DOLLARKURS (EUR-USD) - AKTUELLER KURS

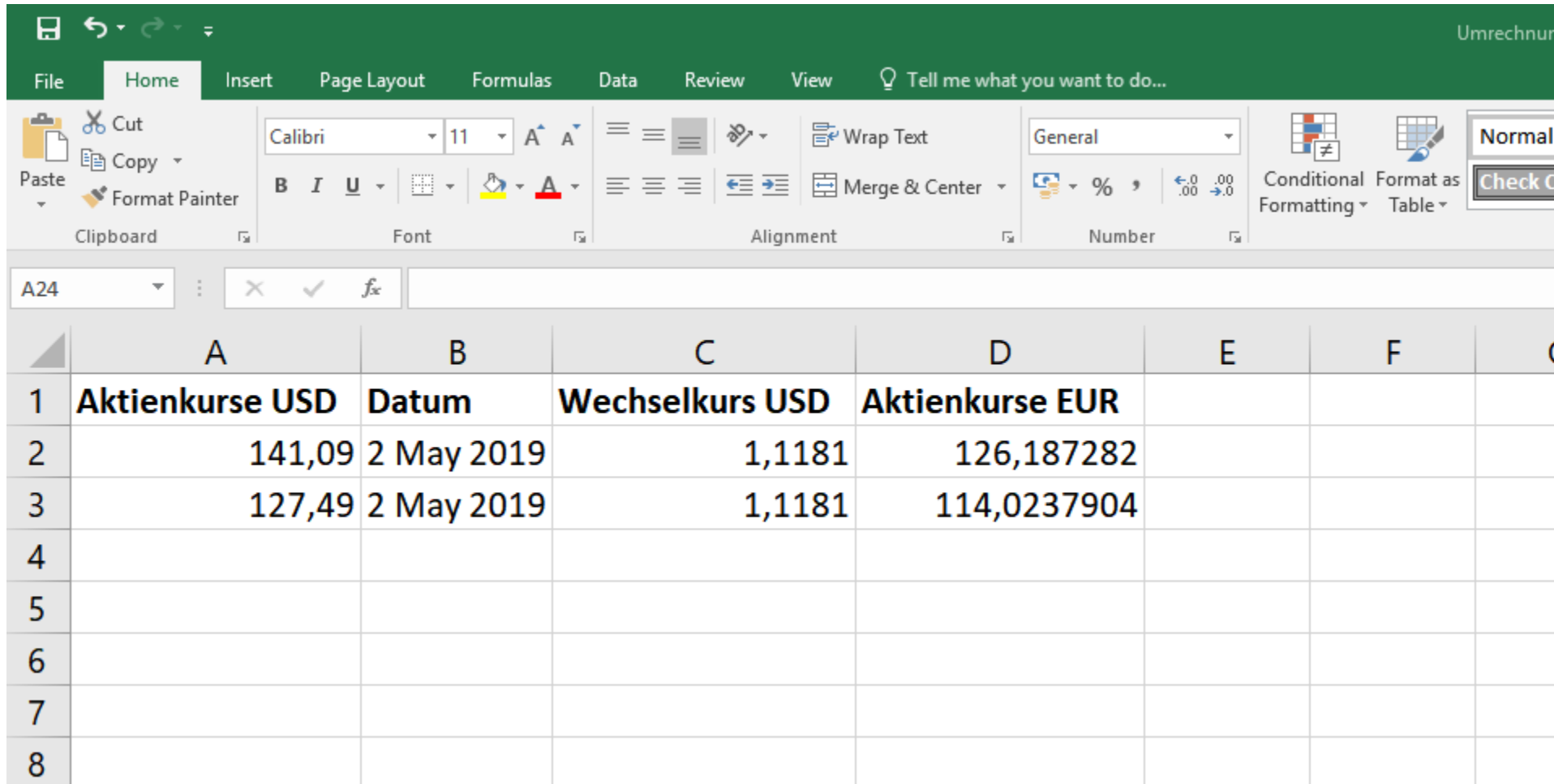
1,1182 **-0,0018** **-0,16**

USD +/- %

Kurszeit	02.05.2019 17:34:00
Eröffnung/Vortag	1,1199 / 1,1199
Tagestief/Tageshoch	1,1172 / 1,1219
52 W. Tief/Hoch	1,1112 / 1,2033
Marktkap.	-
Volumen	-

- weitere Devisenkurse
- Realtimekurs
- USD - EUR Wechselkurs
- Währungsrechner: Euro - US-Dollar

Schritt 2: In Excel umrechnen

A screenshot of the Microsoft Excel interface. The ribbon is set to "Home" and shows various formatting options like font, alignment, and number. The spreadsheet area contains a table with columns for stock prices in USD and EUR, dates, and exchange rates. The data is as follows:

	A	B	C	D	E	F	G
1	Aktienkurse USD	Datum	Wechselkurs USD	Aktienkurse EUR			
2	141,09	2 May 2019	1,1181	126,187282			
3	127,49	2 May 2019	1,1181	114,0237904			
4							
5							
6							
7							
8							



Schritt 2: In Excel umrechnen

```
excelObjekt = .OLEObject~new("Excel.Application")
excelObjekt~visible = .true
tabellenBlatt = excelObjekt~workbooks~add~worksheets[1]

titel = tabellenBlatt~range("A1")
titel_2 = tabellenBlatt~range("B1")
titel_3 = tabellenBlatt~range("C1")
titel_4 = tabellenBlatt~range("D1")

titel~font~bold = .true
titel_2~font~bold = .true
titel_3~font~bold = .true
titel_4~font~bold = .true

titel~value = "Aktienkurse USD"
titel_2~value = "Datum"
titel_3~value = "Wechselkurs USD"
titel_4~value = "Aktienkurse EUR"

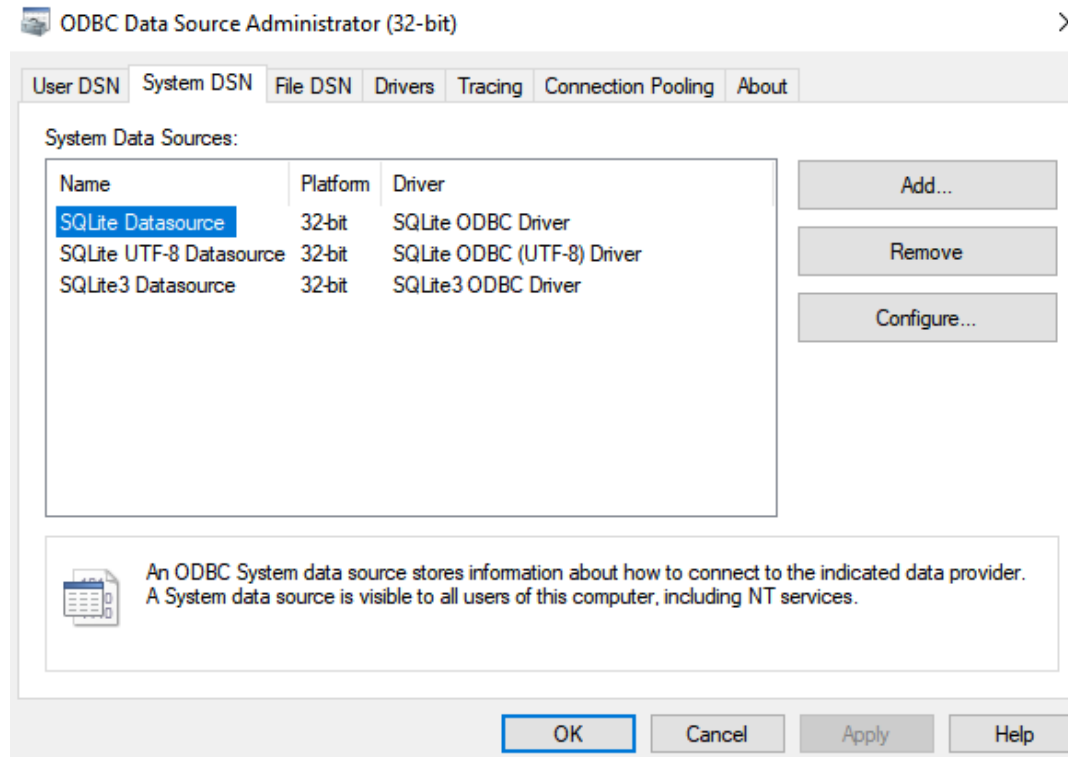
tabellenBlatt~cells(2,1)~value = IBM_Aktienkurs
tabellenBlatt~cells(3,1)~value = MS_Aktienkurs
tabellenBlatt~cells(2,2)~value = date()
tabellenBlatt~cells(3,2)~value = date()
tabellenBlatt~cells(2,3)~value = Wechselkurs
tabellenBlatt~cells(3,3)~value = Wechselkurs
tabellenBlatt~cells(2,4)~value = "= A2/C2 "
tabellenBlatt~cells(3,4)~value = "= A3/C2 "

tabellenBlatt~saveAs(directory() "\Umrechnung.xls")
```


Schritt 3: SQLite

1. SQLite ODBC Driver

2. DSN erstellt





Schritt 3: SQLite

3. Connection versucht aufzubauen

- https://www.easysoft.com/developer/languages/rexx/rexx_sql_odbc.html
- <http://rexysql.sourceforge.net/>
- <https://sourceforge.net/projects/oorex/files/ooSQLite/>
- http://wi.wu.ac.at:8002/rgf/diplomarbeiten/Seminararbeiten/2016/20160204_Kirisits_BSF4ooRexx-SQLCookbook.pdf
- <https://developer.rhino3d.com/guides/rhinoscript/accessing-databases/>
- C:\Program Files (x86)\ooRexx\samples\ole\apps\MSAccessDemo.rexx

4. Alternative mit Access



Schritt 3: Datenbank und Tabelle erstellen

A screenshot of the Microsoft Access application window. The title bar reads "test : Database- C:\Users\Administrator\Desktop\test.mdb (Access 2007 - 2016 file format) - Access". The ribbon is set to "Table Tools" with the "Table" tab selected. The ribbon includes sections for "Filter", "Sort & Filter", "Records", "Find", and "Text Formatting". The main workspace shows a table named "Aktienkurse in Euro" with three columns: "Aktienkurse", "Datum", and "Unternehm". The first row is highlighted in blue and contains an asterisk (*), indicating it is a new record. The left-hand pane shows the "All Access Objects" task pane with "Tables" selected and "Aktienkurse in Euro" listed below it.

Aktienkurse	Datum	Unternehm
*		



Schritt 3: Datenbank und Tabelle erstellen

```
appAccess = .OLEObject~new("Access.Application")

-- Open database in Microsoft Access window.
appAccess~NewCurrentDatabase(strDB)

-- Get Database object variable.
dbs = appAccess~CurrentDb

-- Create new table.
tdf = dbs~CreateTableDef("Aktienkurse in Euro")

-- Create field in new table.

fld = tdf~CreateField("Aktienkurse in Euro", appAccess~getConstant("db_text"), 40)
fld2 =tdf~CreateField("Datum", appAccess~getConstant("db_text"), 40)
fld3 =tdf~CreateField("Unternehmen", appAccess~getConstant("db_text"), 40)

-- Append Field and TableDef objects.
tdf~Fields~Append(fld)
tdf~Fields~Append(fld2)
tdf~Fields~Append(fld3)
dbs~TableDefs~Append(tdf)

appAccess~quit
exit
```