## Margill 4.4 Quick Start Guide

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## Installing Margill

Download the Margill installer file (Margill4.4_xyz_Install.exe).
For easy access to Margill you should say "Yes" when the installer prompts you to create a shortcut on the Desktop.
Once installed, choose the Standard Edition:

## -IMargill

Please select the desired version:

## Standard Edition

Law Edition

Margill Standard Edition:
Offers multiple calculations at fixed or variable interest rates including simple and compound interest between two dates, amortization including complex payment situations, arrears, present value calculations, plus many other practical calculations.

## Default settings and Interest table selection

Once Margill is installed, you will be prompted to choose interest tables. The tables include central bank rates, bank rates and legal interest rates. Click on: Add / Change Tables.

If you do not wish to select tables at this point (or ever), click on Cancel $\quad$. You will nevertheless be prompted to choose certain settings.


If you wish to select tables you will then be taken to the Margill web site. Enter your email and the Reference number (usually sent by email or press on $\square$ Send me the reference number In a normal licence you may choose up to 10 tables at no extra cost.

After choosing your tables go back to the Margill software. Press on "Next". If you are using in demo mode, in the next window, press on "Demo Mode"

Margill will use your default Windows currency ( $\$, \ddagger, €, R$, etc.) and date format (to change use Control Panel, Regional settings in Windows).

Press either on "Demo Mode" or if a licence was purchased, press on "Licence Registration".


## Complete User Guide and Examples

The Margill User Guide, available in PDF format may be found in the "Help" tab.

## Margill Calculations

The types of calculations performed by Margill are available through the "Help" tab under "Calculation Descriptions".

| Help |
| :--- |
| Margill User Manual |
| Calculation Descriptions |
| Order... |
| What is Margill? |
| About Margill ... |

The following table provides an overview of the various calculations performed by Margill:

| Mortgages <br> - Regular fixed rate Mortgage <br> - Adjustable-rate Mortgage (ARM) | Line of credit <br> - Line of credit | Asset finance / Leasing <br> - Asset finance / Leasing <br> - Decision to purchase equipment |
| :---: | :---: | :---: |
| - Irregular (complex) Mortgage <br> - Mortgage with unknown future rates <br> - Reverse Mortgage <br> - APR (Annual Percentage Rate) | Bonds <br> - Calculation of bond premium <br> - Calculation of bond discount <br> - Zero-coupon bonds | Present value <br> - Present value of an investment <br> - Quantum in liability cases for rulings |
| Loans <br> - Simple interest calculation <br> - Compound interest calculation <br> - Simple loan with payments (Amortization) <br> - Complex, irregular loan (Amortization) <br> - Successive disbursements / reimbursements <br> - Add-on interest loan <br> - Loan with unknown future rates <br> - APR (Annual Percentage Rate) <br> - Unknown interest rate (simple loan) <br> - Unknown interest rate (complex loan) | Investments <br> - Annual Rate of return <br> - Return on complex investments <br> - Comparison of investment instruments <br> - Future value of investments <br> - Present value of an investment <br> - Decision to purchase equipment / realestate <br> Late payments / Collection <br> - Unpaid accounts receivable <br> - Late / unpaid Income Tax <br> - Late / unpaid Salaries <br> - Late / unpaid Rent <br> - Late / unpaid Alimony |  |

## Most common calculations

All calculations may be accessed through the "Calculations" tab or by the New Calculation button in the middle of the main screen.

- Margill
Eile $\quad$ Calculations Rate Tables Iools Help


## Mortgages, loans and leases

Go to "Calculations" and choose "Recurring Payments". Many amortization types may be done with Margill.

In the US and most countries, mortgages are usually compound interest, compounded monthly. In Canada, compounding is semi-annual.

Use the "Advanced" button including "Day count" and "Short periods" to get precise and accurate totals to match banks and other lenders. If you are unsure of the settings to use, Margill default settings should be used. Then adjust the "Advanced" options by testing various hypotheses to match your calculations you know to be true.


For more information on "Day count" and "Short" and "Long" periods, consult the full User Guide under the Margill "Help" tab.

Below is an example of a standard 30 year mortgage (for a Canadian mortgage simply change compounding to semiannual) with a first payment date one month after the Origination Date.


Data entry window

Detailed client information may be entered with the clientlno button (top right).
By leaving one of four variables "Payment", "Principal", "Number of Payments" or "Annual Nominal Rate (\%)" blank, the fourth will be computed automatically.

## Special situations

Loans, mortgages or leases may also be worked out to include one of the following payment plans and even a combination of these Payment Methods:

| Normal |
| :--- |
| Interest Only |
| Fixed Principal |
| Rate Adjusted Payments |
| Payments set to 0.00 |

For Rate Adjusted Payments, an interest table must be used. These tables may be chosen on the Margill web site or created through the "Rate Tables" tab (see "Creating an interest table" below).

To choose an interest table, check "Interest Table" on the bottom right of the Data Entry Window.

| Rate Table to Use | US-Fed_Reserve_Fed_Funds | $\square \boxed{x} 9$ |
| :--- | ---: | :--- |
| Use fixed (unique) interest rate at "Origination Date" | $\checkmark$ Interest Table |  |

Margill allows to add or subtract $\mathrm{x} \%$ from the rates in the table.

| Annual Nominal Rate (\%) | Variable |
| :--- | :--- |
| Percentage to Add (Annual) | $0,0000 \%$ |

Multiple payment frequencies may be chosen including payments every x days or totally irregular payments. The payment frequencies may be different from the compounding periods, a feature not always possible in other calculation software.

| Annually |
| :--- |
| Semiannually |
| Quarterly |
| Monthly |
| Twice monthly |
| By day(s) |
| Irregular |

Once the data is entered, press on "Compute" Compue. F5 or F5. The regular schedule is produced and may be completely edited (see example in the "Collection and Lines of credit" section).

This example includes a NSF check on Feb. 1, 2017 and an extra payment on April 12, 2017. Other "events" (missed, late and partial payments, additional principal, fees, interest-only or fixed principal payments) may be added anytime and comments added for each line (see "Right mouse click" section).


Results window (capitalized Simple Interest - green capitalization lines)

The icons to the right of the table allow lines to be:

- added at the end of the schedule
- inserted in between existing lines in the schedule
- taken out
- any operation cancelled (Undo)


See also the "Right mouse click" section.

## Annual Percentage Rate (APR)

The APR may be computed for regular and irregular loans. In the "Recurring Payments" calculation, press on the APR button (top right). Check "Calculate the APR", enter the fees and close.

| $\checkmark$ Calculate the APR |  |  | x |
| :---: | :---: | :---: | :---: |
| Please enter one or many of the following: |  |  |  |
| Origination fees | 500,00 \$ | Financed | $\checkmark$ |
| Insurance | 0,00 \$ | Financed | - |
| Other fees | 0,00 \$ | Financed | $\checkmark$ |
| Commission | 0,0500\% $=250,00 \$$ | Financed | $\checkmark$ |
| Points | $0,0000 \%=0,00 \$$ | Financed | - |
| ```Total Paid up-front = 0,00$ Total Financed = 750,00$ Total Subsequently Paid = 0,00$ Total Fees = 750,00 $``` |  |  |  |
| If the Fees are Financed, these will be added to the Principal and the payments calculated with this total amount. |  |  |  |
| If the Fees are Paid up front or Subsequently Paid, the regular payment amount will not increase, but the APR will increase and will be included in the APR window. |  |  |  |
| For Disclosure information, Paid up-front Fees are subtracted from the Amount Financed from the Total of payments. |  |  |  |

The balance must equal 0.00 in order to compute all finance charges and the APR.

## Collection and Lines of credit

Go to "Calculations" and choose "Recurring Payments". In this example, a first amount of 5000 is borrowed on 05/05/2016 and the following irregular advances and payments are initially made:

- 06/06/2016, 2500 is advanced
- $06 / 10 / 2016,1000$ is refunded
- $06 / 15 / 2016,3000$ is advanced

Enter the data and click on "Add Irregular Payments" once "Irregular" is set in the "Payment frequency".


Partial Data Entry window

This window will appear allowing you to enter irregular payments. Negative payments are advances (additional principal) and positive payments are payments from the borrower.


| Hide/Show Columns Normal (Compound, Effective Rate) Equal Periods - Compounding Monthly |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Line | Pmt Date | Payment | Rate | Principal | Interest | Balance | Comment | 冒 |
|  | 1 2016-06-06 | -2500,00\$ | 10,2500 \% | -2 544,94\$ | 44,94 \$ | 7544,94 \$ |  | $\wedge$ |
|  | 2016-06-10 | 1000,00 \$ | 10,2500 \% | 991,56\$ | 8,44 \$ | 6553,38 \$ |  |  |
|  | 2016-06-15 | $-3000,00$ \$ | 10,2500\% | -3009,17\$ | 9,17\$ | 9562,55 \$ |  |  |

Partial Results window

If there are many irregular payments (or invoices for example), an import can be done via Excel. Press on the Excel icon and choose the file.


All that is needed for the Excel file are two to three columns with headers followed by the data: Date (based on the Windows short date format), Amount (positive or negative depending if payment (+) or amount due (-)) and an optional Comment:

|  | A | B | C |
| :--- | ---: | ---: | :--- |
| 1 | Date | Amount | Comment |
| 2 | $6 / 6 / 2017$ | 75 |  |
| 3 | $7 / 7.123$ |  |  |
| 4 | $9 / 7 / 2017$ | 88.99 |  |
| 5 | $5 / 3 / 2017$ | -5000 | Add. loan - ch 345 |
| 6 | $9 / 8 / 2018$ | 25.63 |  |
| 7 | $3 / 10 / 2018$ | 1250.98 |  |
| 8 |  |  |  |
|  |  |  |  |

Sample import Excel sheet

A payment schedule initially created can be modified and updated over time. Lines may be added at the end of the table with the $\quad+ᄃ$ icon to insert advances and payments and even include interest rate changes. Example:

- $07 / 01 / 2016$, rate is changed to $10.50 \%$ (use right mouse click to insert the rate change):

| Interest Rates | Rates Adjusted for Balance $=\mathrm{X}$ |
| :--- | :--- | :--- |
| Payments | Insert a Rate Change |

- 07/15/2016, 500 refund
- We wish to know the balance owed on 09/01/2016

Our updated Results window:

| Recurring Payments - Irregular |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Line | Start Date | Pmt Date | Payment | Rate | Principal | Interest | Balance | Comment |
| 1 | 1 2016-05-05 | 2016-06-06 | -2500,00\$ | 10,2500 \% | -2 544,94 \$ | 44,94 \$ | 7544,94 \$ |  |
| 2 | 2 2016-06-06 | 2016-06-10 | 1000,00 \$ | 10,2500 \% | 991,56 \$ | 8,44 \$ | 6553,38 \$ |  |
| 3 | 2016-06-10 | 2016-06-15 | $-3000,00 \$$ | 10,2500 \% | -3 009,17\$ | 9,17\$ | 9562,55 \$ |  |
| 4 | 4 2016-06-15 | 2016-07-01 | 0,00\$ | 10,5000 \% | -43,92\$ | 43,92 \$ | 9606,47 \$ | Rate change |
| 5 | 2016-07-01 | 2016-07-15 | 500,00\$ | 10,5000\% | 461,40\$ | $38,60 \$$ | 9145,07 \$ |  |
| 6 | 2016-07-15 | 2016-09-01 | 0,00\$ | 10,5000\% | $-126,60$ \$ | 126,60 \$ | 9271,67 \$ |  |

For collection, invoices should be negative payments and payments by the client positive amounts. The invoice number and other comment may be added:

| Hide/Show Columns |  |  |  | Recurring Payments - Irregular |  |  |  | Comment |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Line | Start Date | Pmt Date | Payment | Rate | Principal | Interest | Balance |  |
| 1 | 2016-05-05 | 2016-06-06 | -2500,00\$ | 10,2500 \% | -2 544,94\$ | 44,94 \$ | 7544,94 \$ | Invoice 12345 |
| 2 | 2016-06-06 | 2016-06-10 | 1000,00 \$ | 10,2500 \% | 991,56 \$ | 8,44 \$ | 6553,38 \$ | Paid ch. 101 |
| 3 | 2016-06-10 | 2016-06-15 | $-3000,00 \$$ | 10,2500 \% | -3 009,17\$ | 9,17 \$ | 9562,55 \$ | Invoice 12346 |
| 4 | 2016-06-15 | 2016-07-01 | 0,00\$ | 10,5000 \% | -43,92 \$ | 43,92 \$ | 9606,47 \$ | Rate change |
| 5 | 2016-07-01 | 2016-07-15 | 500,00\$ | 10,5000 \% | 461,40 \$ | 38,60 \$ | 9145,07 \$ | Paid ch. 109 |
| 6 | 2016-07-15 | 2016-09-01 | 0,00\$ | 10,5000 \% | $-126,60$ \$ | 126,60 \$ | 9271,67 \$ | Balance due |

Schedules may be saved $\stackrel{\text { Save }}{\square}$ and updated over time.

Late or unpaid rent or salaries (Arrears) (for law-type calculations, Margill Law Edition is recommended)
In this example, a landlord is owed 1000 a month for 3 months and one month's rent was 20 days late. How much is owed on May 31,2016 if the interest rate is $12 \%$ per year?
First rent was payable on May 1, 2015 ("Origination Date" and "Date of first Due Arrear"). For "End of Period" in order for Margill to automatically determine the right date, right click with the mouse and input 4 installments. The end of period date will be 08/02/2015 which we can change in the schedule thereafter to 05/31/2016.
Use either simple interest, simple interest capitalized or compound interest.


Press Compute-F5 or "F5" to produce the following results that can be edited (lines added, amounts changed, etc.). The rent due 07/01/2015 was paid 20 days late ( +1000 when rent was due and -1000 when rent paid).

Change the last date to 06/01/2016 since we want to know the interest up to end of May 2016:


The "Int. generated" column (scroll to the right) calculates the interest generated by each arrear from the date at which the arrear becomes due up to the last date in the schedule. We can also insert a comment to the right. However, these two columns are not printed in the regular report. To obtain this data in a report, use the right mouse click and export the schedule to Excel or other software.

## Interest on one amount, between two dates

I simply want to calculate the amount of interest between $06 / 06 / 2012$ and $08 / 08 / 2016$. To make it more interesting let's have the interest rate change over time.

Go to "Calculations" and choose "Interest on one amount, between Two (2) Dates". Simple or compound interest may be used. In this example the US Fed funds rate plus $2.25 \%$ was used so check "Interest Table" (bottom right).


The final date is always excluded from the calculation. In this example, to include interest up to and including 08/08/2016, enter 08/09/2016 (add one day).


Once the data is entered, press on "Compute" Compute-F5 or F5.
The results:

| Results - Interest between 2 Dates (Simple or Compound Interest) |  |  |  |  |  | $\square$ |  | $\times$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\underset{\text { Ext }}{\downarrow}$ | ${\underset{C l i e n t ~ l i n t o ~}{i l}}_{i}$ | Amount owed |  |  |  |  |
| Principal |  |  | 50000,00 \$ | Total Interest |  | 5709,25 \$ |  |  |
| Days |  |  | 1555 |  |  |  |  |  |
| Daily Interest starting September 8, 2016 |  |  | 4,24 \$ Grand Total |  |  | 55 709,25 \$ |  |  |
| Hide/Show Columns Interest between 2 dates - Monthly - Normal (Compound, Effective Rate) Exact Days |  |  |  |  |  |  |  |  |
| Start Date | End Date | Rate | Days | Total Interest | Total |  |  |  |
| 2015-08-01 | 2015-09-01 | 2,5000 \% | 31 | 114,86 \$ |  | 54 209,64 \$ $\boldsymbol{\Delta}$ |  |  |
| 2015-09-01 | 2015-10-01 | 2,5000 \% | 30 | 111,39 \$ |  | 54 321,03\$ |  |  |
| 2015-10-01 | 2015-11-01 | 2,5000 \% | 31 | 115,34 \$ |  | 54 436,37\$ |  |  |
| 2015-11-01 | 2015-12-01 | 2,5000 \% | 30 | 111,85 \$ |  | 54 548,22 \$ |  |  |
| 2015-12-01 | 2015-12-17 | 2,5000 \% | 16 | 59,75 \$ |  | 54 607,97\$ |  |  |
| 2015-12-17 | 2016-01-01 | 2,7500 \% | 15 | 61,68 \$ |  | 54 669,65 \$ |  |  |
| 2016-01-01 | 2016-02-01 | 2,7500 \% | 31 | 127,34 \$ |  | 54 796,99 \$ |  |  |
| 2016-02-01 | 2016-03-01 | 2,7500 \% | 29 | 119,39 \$ |  | 54916,38 \$ |  |  |
| 2016-03-01 | 2016-04-01 | 2,7500 \% | 31 | 127,92 \$ |  | 55044,30 \$ |  |  |
| 2016-04-01 | 2016-05-01 | 2,7500 \% | 30 | 124,07 \$ |  | 55168,37 \$ |  |  |
| 2016-05-01 | 2016-06-01 | 2,7500 \% | 31 | 128,50 \$ |  | 55296,87 \$ |  |  |
| 2016-06-01 | 2016-07-01 | 2,7500 \% | 30 | 124,64 \$ |  | 55421,51 \$ |  |  |
| 2016-07-01 | 2016-08-01 | 2,7500 \% | 31 | 129,09 \$ |  | 55550,60 \$ |  |  |
| 2016-08-01 | 2016-09-01 | 2,7500 \% | 31 | 129,39 \$ |  | 55679,99 \$ |  |  |
| 2016-09-01 | 2016-09-08 | 2,7500 \% | 7 | 29,26 \$ |  | 55709,25 \$ | T | T |

The report (and all other reports) may be printed or exported to Word, Excel, HTML, PDF (best results) or XML.


## Present Value

In this example, 1500 is to be owed monthly for the next 30 years. What is the value of this amount today?


Each of the instalments may be changed to reflect the exact situation - for example amounts that increase over time (highlight the lines and right mouse click). The amounts may even be indexed to include the Consumer Price Index (CPI) or other index.

To do the opposite, thus compute the monthly instalment knowing the present value is $\$ 250,000$ in this example, simply leave the "Installment Amount" at 0.00 and it will be computed automatically.


## Other calculations

Go to "Calculations" and choose "Other Calculations":
Annual Rate of Return
Amount Indexation
Payment / Indexation (\%) Converter
Nominal / Effective Rate Converter
Date Calculation
Sales Iax Calculation

The other calculations available include: annual rate of return, indexation of an amount (based on the Consumer price index, stock market returns or other indexation scheme), converting a variable payment plan to a percentage basis (indexation), conversion of a nominal interest rate to an effective interest rate and vice versa.

## Right mouse click

The right mouse click provides many powerful options. This is particularly useful in the "Recurring Payments" calculation. It allows you to meet just about any payment scenario.

|  | For "Number of Payments" in the data entry window: | Specific date <br> Number of Years |
| :---: | :---: | :---: |
| Recurring Payments | In the Results table: | Modify Rate - Selected Lines |
|  | Delete - Selected Lines | Rates Adjusted for Balance $=\mathrm{X}$ |
|  | Interest Rates * | Modify Payment - Selected Lines |
|  | Payments | Payments Adjusted for Balance $=\mathrm{X}$ |
|  | Calculation Method | Refund Interest Only |
|  | Payments, Principal and Interest - Selected Lines | Refund Fixed Principal |
|  | Copy | Same as calculation |
|  | Copy All | Simple Interest Capitalized - Actual/366 |
|  |  | Simple Interest Capitalized - Actual/365 |
|  | Export Table to Excel... | Simple Interest Capitalized - Actual/360 |
|  | Export Table to Word... | Simple Interest Capitalized - 30/360 |
|  | Export Table to XML... |  |

In the Results table:

## Arrears

```
Add
    Insert
    Delete
    Arrears and Interest - Accumulated
    Copy
    Copy All
    Export Table to Excel...
    Export Table to Word...
    Export Table to XMML...
```

|  | In the Results table: |
| :--- | :--- |
|  | Modify the Installments |
|  | Inverse $+/-$ |
| Present Value | Copy |
|  | Copy All |
|  | Export Table to Excel... |
|  | Export Table to Word... |
|  | Export Table to XML... |

## Creating a variable rate interest table

Go to the "Rate Table" tab, then to "Interest tables". Clear the default table and enter the dates and rates with the icons on the right. Then save under an appropriate name.


Margill interest or indexation tables may also easily be created with an existing spreadsheet (text format as follows: Date TAB Rate - we can create tables for you).

The Margill web site also contains over 150 interest rate tables for the US, Canada, Europe, Australia and some Asian and African countries. See: www.margill.com/tables/interest-rate-tables-en.shtml

## Also available:

## Margill Loan Manager

Loan, mortgage, lease, accounts receivable, line of credit, judgment and investment portfolio management including paid, unpaid, partial \& late payments reporting; amortization computations (payment schedules); automatic fees; electronic payments (ACH and credit card); client mailing and e-mailing; alerts and much more.

www.margill.com/mlm

## Margill Law Edition

Same features as the Standard Edition but includes a very powerful module for the collection of judgments including Court fees, Prejudgment and Post judgment interest and Other fees bearing interest or not.

## www.margill.com/law

Interested in interest? Consult our White Paper on Interest - The Lost Art of Interest Calculation: www.margill.com/en/interest-calculation-white-paper.

For further information on Margill Standard Edition, consult the User Guide in Margill or call us at 1-877-683-1815.

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