

# Finance Dash App

747 Developments



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# 1 Prerequisites

Finance Dash App by 747 Development is a python based application. Before you can run this application you need to download Python language interpreter and few dependencies. You will find manual for Python and dependencies installation in this section. Finance Dash App by 747 Developments is designed and optimized for Python 3.7.x.

## 1.1 Python installation

- Download Python 3.7.x: <https://www.python.org/downloads/release/python-376/>
- Install Python 3.7.x
- Verify that python path was added to Environment variables:
  - Open command prompt window and type: "python --version"
  - If python 3 command not found you need to add python to Environment variables

## 1.2 Dependencies installation

- Open Command Prompt (or PowerShell) and verify that you have "python pip"
  - Type "pip --version"
- Install following packages with pip:
  - "pip install dash"
  - "pip install dash-html-components"
  - "pip install dash-core-components"
  - "pip install plotly"
  - "pip install pandas"
  - "pip install xlrd"

## 2 Managing your finance data

All the finance data can be stored in one excel file (“\_AllFinanceData.xlsx”) or in 4 csv files (“\_Expenses.csv”, “\_Incomes.csv”, “\_Initial.csv”, “\_Transfers.csv”). The excel file has 4 sheets like 4 csv files. It is just easier to maintain and you can choose if you want to use excel format file or separate csv files.

### 2.1 Setting up initial balance

Let's say that you want to start your analysis from actual day. You have several banks or money storages in different currencies and you need to do a list of all your so called accounts. Go to “\_AllFinanceData.xlsx” – tab “Initial” (or “\_Initial.csv”) and put there all your accounts (you can just modify the example).

Column “Initial Balance” should be your balance on that account – if you start today just put your balance, type currency (“USD”, “EUR”, “CZK”, or whatever your currency is) and write “Yes” if your account is still active or “No” if the account is inactive.

You can have as many accounts as you want.

Now you have set the Initial Finance data. **Please keep in mind that if you modify the predefined files you must keep the files header (“Account,Initial Balance,Currency,Active”).**

### 2.2 Incomes and Expenses

Incomes and Expenses has the same header structure. In “\_AllFinanceData.xlsx” – tab “Incomes” (or “\_Incomes.csv”) you track your incomes. In “\_AllFinanceData.xlsx” – tab “Expenses” (or “\_Expenses.csv”) you track your expenses.

- The “Transaction” field is the amount in account's currency that you received or spent. For expenses you write the transaction amount with negative sign.
- The “Account” field is the field you received money to or you paid something from this account.
- The “Category” field is the transaction category. It is your own category so you can have as many Incomes/Expense categories as you want.
- The “Date” field is transaction date in format “YYYY-MM-DD”.
- The “Rate” field is the exchange rate of the account currency. Let's say that your main currency which you want to track your balance in is CZK but you have received few USD to your USD account. And exchange rate of the USDCZK is 23.0 so you put there 23.0 and in dashboard it will be also tracked in your currency equivalent
- The “Comment” field is just for your additional comment to the transaction

### 2.3 Transfers

Sometimes you need to transfer the money from one account to another. In “\_AllFinanceData.xlsx” – tab “Transfers” (or “\_Transfers.csv”) you track your transfers.

- The “Transfer from” field is the name of account you are transferring money from
- The “Transfer to” field is the name of account you are transferring money to
- The “Amount” field is amount of money you are transferring between accounts
- The “Date” field is transfer date in format “YYYY-MM-DD”
- The “Note” field is just your note for that transfer

- The “Rate” field is the exchange rate between account you are transferring from and account you are transferring to. If the currency of the two account is the same you put there 1.0 or leave it empty

### 3 Initialize the Finance Dash App

In some file text editor open the “FinanceDashConfig.py” and set up your preferences:

- **DATA\_SOURCE** = 'XLS' if you want to use excel data file (\_AllFinanceData.xlsx) or **DATA\_SOURCE** = 'CSV' if you want to use csv data files
- **INITIAL\_DATE** = '2019-01-01' – Put any day in the past up to today’s day in format “YYYY-MM-DD” instead of '2019-01-01'. It is the day from which the analysis dashboard will show the data when the dashboard opens at the beginning.
- **YOUR\_NAME** = '747 Developments' – put your own name instead of 747 Developments
- **THEME\_DARK** = True – if you want dark theme dashboard or **THEME\_DARK** = False – if you want light theme dashboard
- **EXCHANGE\_RATES** = {  
    'CZK': 1.0,  
    'USD': 23.0,  
    'EUR': 25.0,  
}

It is the dictionary for currency rates. Your main currency must have value 1.0. For other currencies put actual exchange rate.

```
#DATA_SOURCE = 'CSV'
DATA_SOURCE = 'XLS'
INITIAL_DATE = '2019-01-01'
YOUR_NAME = '747 Developments'
THEME_DARK = True # "True" if theme dark, "False" if theme light

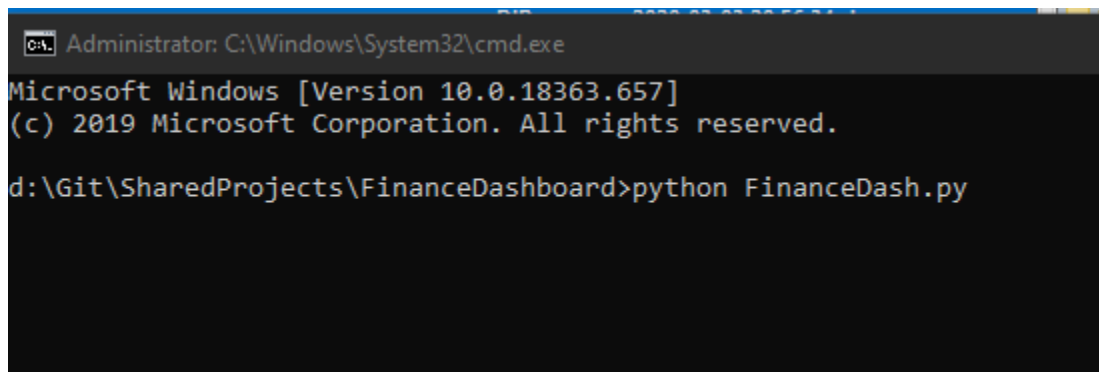
EXCHANGE_RATES = {
    'CZK': 1.0,
    'USD': 23.0,
    'EUR': 25.0,
}
```

## 4 Run the Finance Dash App

- Go to the directory where you have the Finance Dash App files (In this case it is the “d:\Git\SharedProjects\FinanceDashboard\”)

d:\Git\SharedProjects\FinanceDashboard				
↑ Name	Ext	Size	Date	Attr
↑ ..			<DIR> 2020-03-03 20:56:34	d-----
assets			<DIR> 2020-03-03 18:49:18	d-----
FinanceData			<DIR> 2020-03-03 20:40:09	d-----
StyleSheets			<DIR> 2020-03-03 19:45:22	d-----
_Manual	docx	17 947	2020-03-03 21:05:43	--a-----
dev_747_DashDatatableFunc	py	3 069	2019-08-04 17:17:56	--a-----
dev_747_DashGraphFunc	py	1 735	2020-03-03 18:47:45	--a-----
dev_747_styles	py	2 617	2019-05-30 21:01:40	--a-----
FinanceDash	py	29 395	2020-03-03 20:58:04	--a-----
FinanceDashConfig	py	266	2020-03-03 20:57:06	--a-----
FinanceDashFunctions	py	6 258	2020-03-03 17:32:13	--a-----

- Open command Prompt (or PowerShell) window here.
- Type here: “python FinanceDash.py” and press enter



```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.18363.657]
(c) 2019 Microsoft Corporation. All rights reserved.

d:\Git\SharedProjects\FinanceDashboard>python FinanceDash.py
```

- Wait few second and it should start printing in something like in the picture below:

```
Administrator: C:\Windows\System32\cmd.exe - python FinanceDash.py
Microsoft Windows [Version 10.0.18363.657]
(c) 2019 Microsoft Corporation. All rights reserved.

d:\Git\SharedProjects\FinanceDashboard>python FinanceDash.py
* Serving Flask app "FinanceDash" (lazy loading)
* Environment: production
  WARNING: This is a development server. Do not use it in a production deployment.
  Use a production WSGI server instead.
* Debug mode: off
* Running on http://127.0.0.1:8050/ (Press CTRL+C to quit)
127.0.0.1 - - [03/Mar/2020 21:12:04] "[37mGET / HTTP/1.1[0m" 200 -
127.0.0.1 - - [03/Mar/2020 21:12:04] "[37mGET /assets/StyleSheet.css?m=1583266324.264285 HTTP/1.1[0m" 200 -
127.0.0.1 - - [03/Mar/2020 21:12:05] "[37mGET /_dash-dependencies HTTP/1.1[0m" 200 -
127.0.0.1 - - [03/Mar/2020 21:12:05] "[37mGET /_dash-layout HTTP/1.1[0m" 200 -
127.0.0.1 - - [03/Mar/2020 21:12:05] "[37mPOST /_dash-update-component HTTP/1.1[0m" 200 -
127.0.0.1 - - [03/Mar/2020 21:12:05] "[37mPOST /_dash-update-component HTTP/1.1[0m" 200 -
127.0.0.1 - - [03/Mar/2020 21:12:05] "[37mPOST /_dash-update-component HTTP/1.1[0m" 200 -
127.0.0.1 - - [03/Mar/2020 21:12:05] "[37mPOST /_dash-update-component HTTP/1.1[0m" 200 -
127.0.0.1 - - [03/Mar/2020 21:12:05] "[37mPOST /_dash-update-component HTTP/1.1[0m" 200 -
127.0.0.1 - - [03/Mar/2020 21:12:06] "[37mPOST /_dash-update-component HTTP/1.1[0m" 200 -
```

- You web browser should automatically start and should open the Finance Dashboard