# Przygotowanie środowiska do pracy w DS

**Piotr Hudaszek**
**nr albumu 402035**
**grupa 2B piątek 10:45**
**AiBD**

## Zadanie 3

**Funkcja** $f(x) = x^2 + 5$

**x>-1 oraz x<1**

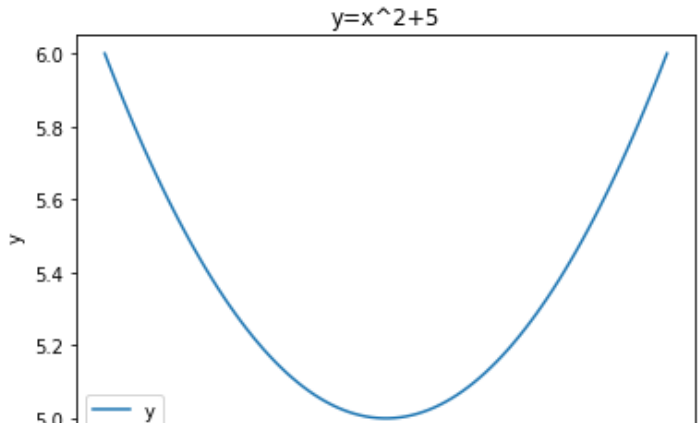
**x>-6 oraz x<6**

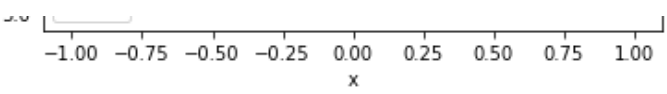
**x>0 oraz x<5**

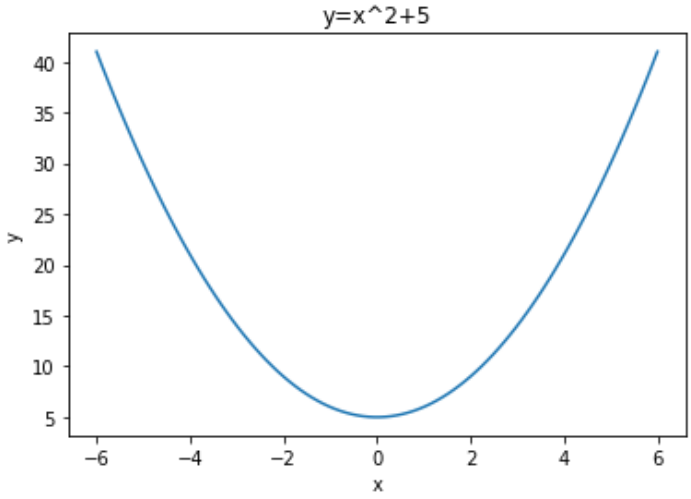
**Zapoznanie się z Matplotlib**

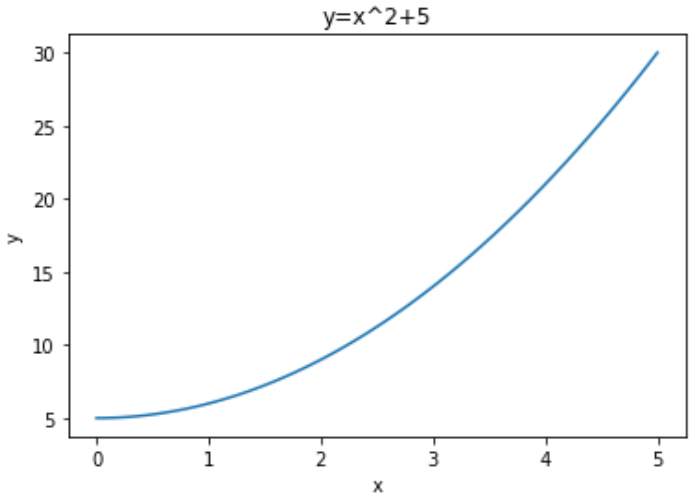
In [10]:

```
import matplotlib.pyplot as plt
import numpy as np


def fun(x):
    return x**2+5

x = np.linspace(-1,1,100)
plt.plot(x,fun(x))
plt.title("y=x^2+5")
plt.xlabel("x")
plt.ylabel("y")
plt.legend("y")
plt.show()

x = np.linspace(-6,6,100)
plt.plot(x,fun(x))
plt.title("y=x^2+5")
plt.xlabel("x")
plt.ylabel("y")
plt.show()

x = np.linspace(0,5,100)
plt.title("y=x^2+5")
plt.xlabel("x")
plt.ylabel("y")
plt.plot(x,fun(x))
plt.show()
```






# Zadanie 4

**Zapoznianie się z pakietem pandas.DataFrame**

In [21]:

```
import pandas as pd

d = {'name': ["piotr", "karolina", "maciek", "piotr", "magda"], 'surname': ["qdsds", "aa
ss","cvbn","uu","dsdlsd",], 'age': [3, 4, 4, 5, 6], 'sex':['m', 'f','m','m', 'f'] }

df = pd.DataFrame(data=d)
df.info(verbose=True)
print()
print(df.describe(),"\n")
print(df.head(3))
```

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 5 entries, 0 to 4
Data columns (total 4 columns):
name       5 non-null object
surname    5 non-null object
age        5 non-null int64
sex        5 non-null object
dtypes: int64(1), object(3)
memory usage: 240.0+ bytes

            age
count  5.000000
mean   4.400000
std    1.140175
min    3.000000
```

```
25%    4.000000
50%    4.000000
75%    5.000000
max    6.000000
```

| | name | surname | age | sex |
|---|---|---|---|---|
| 0 | piotr | qdsds | 3 | m |
| 1 | karolina | aass | 4 | f |
| 2 | maciek | cvbn | 4 | m |

In [ ]: