PYTHON 3.8

CODEBREW HACKATON

NAMING

- Properly named variables
- Commit names

LAST LESSON

REPETITION

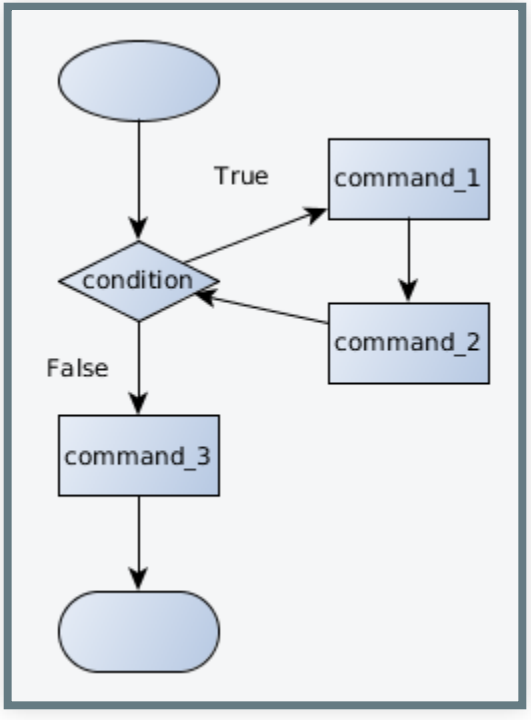
```
cart = []
item1 = float(input('Enter the price: '))
item2 = float(input('Enter the price: '))
item3 = float(input('Enter the price: '))

cart.append(item1)
cart.append(item2)
cart.append(item3)

total_price = cart[0] + cart[1] + cart[2]
print('CART: ' + str(cart))
print('Total Price: ' + str(total_price))
```

DON'T REPEAT YOURSELF!

WHILE

Zatímco platí podmínka, prováděj kód

```
while condition:
        command_1
        command_2
command_3
```



WHILE - EXAMPLE

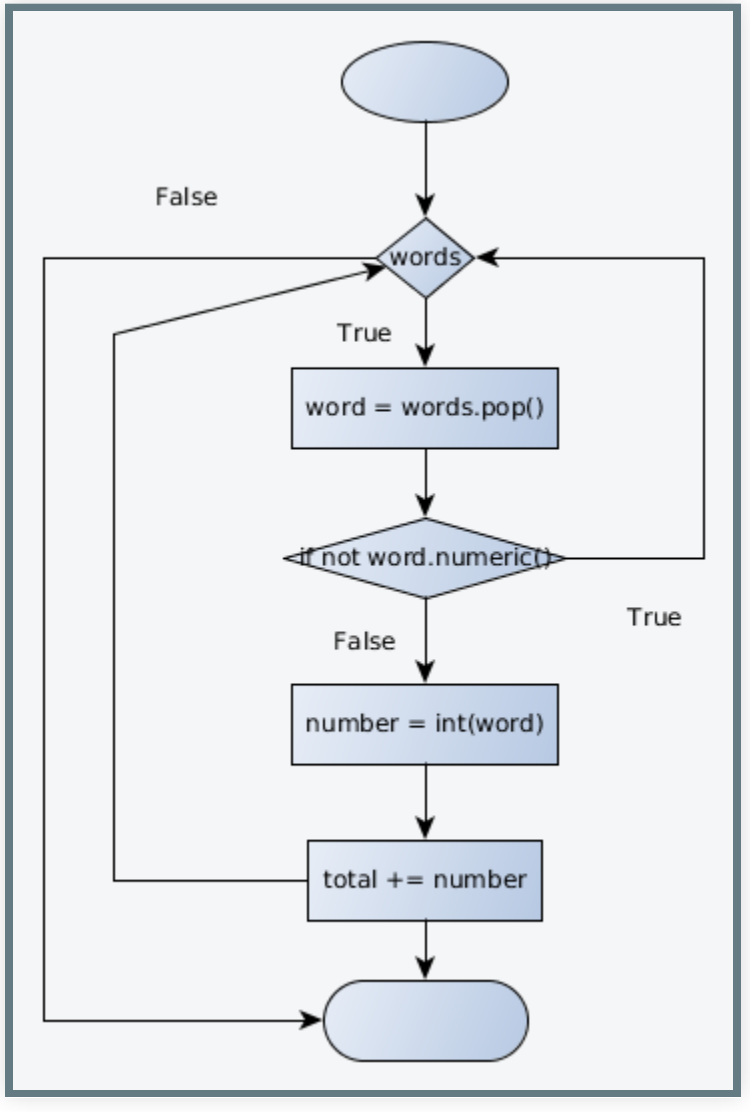
```
i = 0
total = 0
while i < 4:
        total += i
        i += 1
print(total)
```

WHILE - TO INFINITY AND BEYOND

```
i = 0
total = 0
while i < 4:
        total += i
        print(total)
```

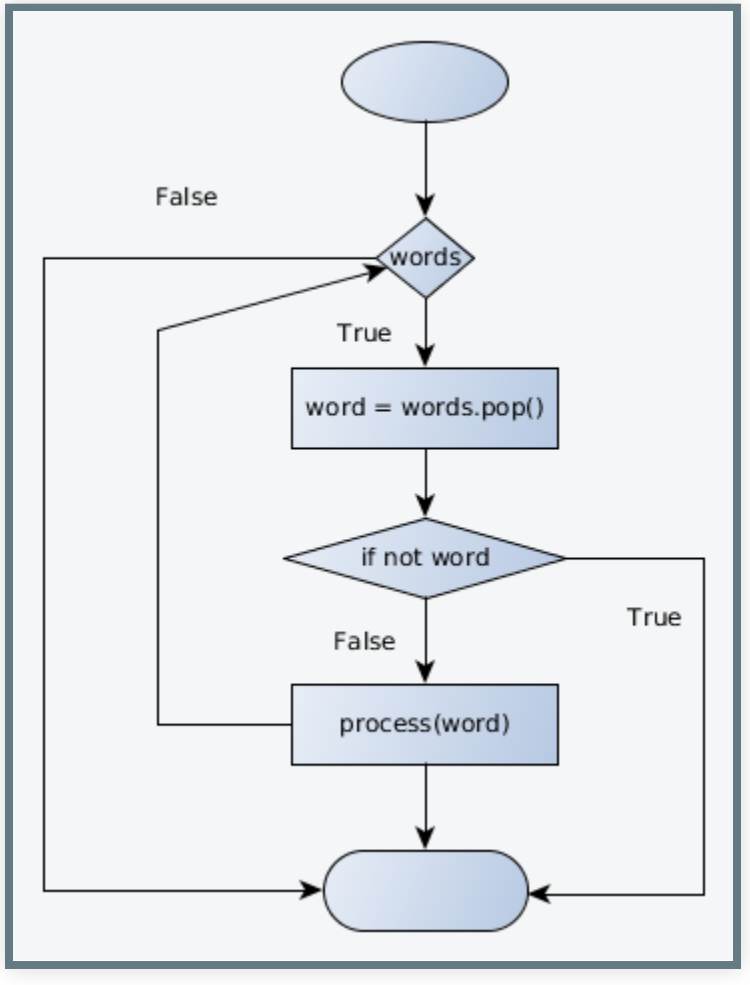
CONTINUE

```
words = [...]
while words:
        word = words.pop()
        if not word.numeric():
                continue
        number = int(word)
        total += number
        ...
```



BREAK

```
words = [...]
while words:
        word = words.pop()
        if not word:
                break
        process(word)
```



TODAY'S LESSON

FOR

Pro každý prvek x z collection prováděj kód

```
for x in collection:
        process(x)
```

FOR EXAMPLE

```
>>> for x in ('alfa', 'beta', 'gamma'):
...     print(x)
...
alfa
beta
gamma
```

FOR

```
for x in 'abc':
```

```
for x in ['alfa', 'beta', 'gamma']:
```

```
for x in {'alfa', 'beta', 'gamma'}:
```

```
for x in {'alfa': 0, 'beta': 1, 'gamma': 2}:
```

RANGE

```
for x in (0, 1, 2, 4, 5, 6, 7, 8, 9):
        print(x)
```

```
for x in range(10):
        print(x)
```

RANGE

```
range(stop)
range(start, stop)
range(start, stop, step)
```

```
range(5)
```

```
0, 1, 2, 3, 4
```

```
range(5, 10)
```

```
5, 6, 7, 8, 9
```

```
range(5, 10, 2)
```

```
5, 7, 9
```

```
range(10, 5, -1)
```

```
10, 9, 8, 7, 6
```

END?

LIST COMPREHENSION

```
powers = []
for x in range(10):
        powers.append(x ** 2)
```

```
[0, 1, 4, 9, 16, 25, 36, 49, 64, 81]
```

```
powers = [x ** 2 for x in range(10)]
```

DICT COMPREHENSION

```
powers = {}
for x in range(10):
        powers[x] = x ** 2
```

```
{0: 0, 1: 1, 2: 4, 3: 9, 4: 16, 5: 25, 6: 36, 7: 49, 8: 64, 9: 81
```

```
powers = {x: x ** 2 for x in range(10)}
```