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Basics of Programming in Python

Strings

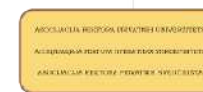**Branimir Jakšić**

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Example 63

What is printed on the screen after executing the following program code.

a)
```
1 #Zadatak 63a
2
3 s='Pozdrav svete'
4 for c in s:
5     print(c)
```

a, b) test program

```
P
o
z
d
r
a
v

s
v
e
t
e
>>>
```

b)
```
1 #Zadatak 63b
2
3 s='Pozdrav svete'
4 for i in range(len(s)):
5     print(s[i])
```

c)
```
1 #Zadatak 63c
2
3 s='Pozdrav svete'
4 if 'svet' in s:
5     print('Da')
6 else:
7     print('Ne')
```

c) test program

```
Da
>>>
```

Example 64

Compose a program that will load a string, reprint it, and determine how many characters it has.

program code

```
1 #Zadatak 64
2
3 s=input("Ucitaj string: ")
4 print("Uneli ste string:",s)
5 print(s,"ima",len(s),"znakova.")
```

test program

```
Ucitaj string: Python programiranje
Uneli ste string: Python programiranje
Python programiranje ima 20 znakova.
>>>
```

Example 65

Compose a program that counts the number of lowercase letters, the number of uppercase letters, and the number of occurrences of a user-supplied character in a loaded string.

test program

```
Ucitaj string: Python Programiranje
Znak za pretragu: r

Znak r se pojavljuje 3 puta u stringu.
Broj malih slova: 17
Broj velikih slova: 2
>>>
```

program code

```
1  #Zadatak 65
2
3  s=input("Ucitaj string: ")
4
5  z=input("Znak za pretragu: ")
6  print()
7  br=0
8  for c in s:
9      if (c==z):
10         br += 1
11 print("Znak", z, "se pojavljuje", br, "puta u stringu.")
12
13 mala=0
14 velika=0
15 slova=list(s)
16 for i in range (len(s)):
17     if (slova[i].islower()):
18         mala+=1
19     if (slova[i].isupper()):
20         velika+=1
21 print ("Broj malih slova:", mala)
22 print ("Broj velikih slova:", velika)
```

Example 65

program code (another way)

```python
1  #Zadatak 65
2
3  n=input("Ucitaj string ")
4  mala=0
5  velika=0
6  for c in s:
7      if (c.islower()):
8          mala+=1
9      if (c.isupper()):
10         velika+=1
11 print ("Broj malih slova:", mala)
12 print ("Broj velikih slova:", velika)
```

Example 66

Compose a program that counts the number of words in a given string.

program code   test program

```
1  #Zadatak 66
2
3  s=input("Ucitaj string: ")
4  print()
5
6  m=0                          # idikator razmaka 0-razamk, 1-nije razmak
7  w=0                          # broj reci
8  for i in s:                  # pregled znakova upisanog stringa
9      if (i==' '):             # razmak
10         m=0                  # indikator razmak ukljucen
11     elif(m==0):              # indikator razmak ukljucen
12         w+=1                 # nova rec
13         m=1                  # indikator razamka iskljucen
14 print ("Broj reci:", w)
15
16
17 '''
18 #II nacin
19 print("Broj reci:", len(s.split()))
20 '''
```

```
Ucitaj string: Ovo je programski jezik Python.

Broj reci: 5
>>>
```

Example 67

Compose a program that removes vowels from words. The user enters words one below the other, and marks the end of the entry with a blank line. The program prints words without vowels one below the other.

program code

```
1 #Zadatak 67
2
3 samoglasnici = 'aeiouAEIOU'
4 rec = input("Unesite rec: ")
5 while rec != '':
6     for samoglasnik in samoglasnici:
7         rec = rec.replace(samoglasnik, '')
8     print(rec)
9     rec = input("Unesite rec: ")
```

test program

```
Unesite rec: Programiranje
Prgrmrnj
Unesite rec: test
tst
Unesite rec: Ovo je programski jezik Pajton.
v j prgrmsk jzk Pjtn.
Unesite rec:
>>>
```

Example 68

Compose a program that, for the entered text, prints out which vowel is most often repeated in that text. Assume that there will always be only one winner. The program is not case sensitive.

program code

```
1 #Zadatak 68
2
3 s = 'aeiou'
4 b = [0] * 5
5 tekst = input("Unesite tekst:\n")
6 tekst = tekst.lower()
7 for slovo in tekst:
8     if slovo == 'a':
9         b[0] += 1
10    elif slovo == 'e':
11        b[1] += 1
12    elif slovo == 'i':
13        b[2] += 1
14    elif slovo == 'o':
15        b[3] += 1
16    elif slovo == 'u':
17        b[4] += 1
18 index = b.index(max(b))
19 print("Najvise se pojavljuje samoglasnik:",s[index])
```

test program

```
Unesite tekst:
Popocatepetl je vulkan u centralnom Meksiku. Njegov manji parnjak je vulkan
Iztaccihuatl. Drugi je vulkan Severne Amerike po visini, posle Orizabe. To
je jedan od aktivnijih vulkana u Meksiku. Zabelezeno je vise od 20 velikih
erupcija ovog vulkana od dolaska Spanaca u Meksiko.
Najvise se pojavljuje samoglasnik: e
>>>
```

Example 69

Compose a program that finds and prints the word that contains the most letters in one line for the entered text. The word is written in lowercase letters. If several words have the same and largest number of letters, they are written one below the other in the order in which they appeared in the sentence, also in lowercase letters.

program code

test program

```
1  #Zadatak 69
2
3  tekst = input("Unesite tekst:\n")
4  reci = tekst.lower().split()
5  ciste_reci = []
6  maks = 0
7  for r in reci:
8      rec = r.strip('.,!?- ')
9      ciste_reci.append(rec)
10     if len(rec) > maks:
11         maks = len(rec)
12 print("Najduze reci")
13 for r in ciste_reci:
14     if len(r) == maks:
15         print(r)
```

```
Unesite tekst:
Popocatepetl je vulkan u centralnom Meksiku. Njegov manji parnjak je vulkan
Iztaccihuatl. Drugi je vulkan Severne Amerike po visini, posle Orizabe. To
je jedan od aktivnijih vulkana u Meksiku. Zabelezeno je vise od 20 velikih
erupcija ovog vulkana od dolaska Spanaca u Meksiko.
Najduze reci
popocatepetl
iztaccihuatl
>>>
```

Example 70

Write a program that will load two strings. The first string contains the words to be censored. Words are separated by a comma and a blank space. After that, a longer string is entered, which contains the text to be censored. The program prints another string replacing all letters of the word to be censored with asterisks. The program differentiates between uppercase and lowercase letters, ie. censors only words that match exactly. Also, the program censors words that are part of a longer word.

For example if the word to be censored is „sam" then the word „samostalan" will be written as "***ostalan".

Example 70

program code

```
1  #Zadatak 70
2
3  reci = input("Unesite reci za cenzuru: ").split(', ')
4  tekst = input("Unesite tekst:\n")
5  for rec in reci:
6      tekst = tekst.replace(rec, '*' * len(rec))
7  print("\nCENZURISAN TEKST:")
8  print(tekst)
```

test program

```
Unesite reci za cenzuru: program, racunar
Unesite tekst:
Programiranje je pisanje uputstva racunaru sta i kako da ucini, a izvodi se
u nekom od programskih jezika. Programiranje je umetnost i umece u stvaranju
programa za racunare. Stvaranje programa sadrzi u sebi elemente dizajna, ume
tnosti, nauke, matematike kao i inzenjeringa. Osoba koja stvara program zove
se programer.

CENZURISAN TEKST:
Programiranje je pisanje uputstva *******u sta i kako da ucini, a izvodi se
u nekom od *******skih jezika. Programiranje je umetnost i umece u stvaranju
*******a za *******e. Stvaranje *******a sadrzi u sebi elemente dizajna, ume
tnosti, nauke, matematike kao i inzenjeringa. Osoba koja stvara ******* zove
se *******er.
>>>
```

Questions & Answers

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