

Kornjača grafika

Promenljive, serije, ciklusi

Podsećanje - for

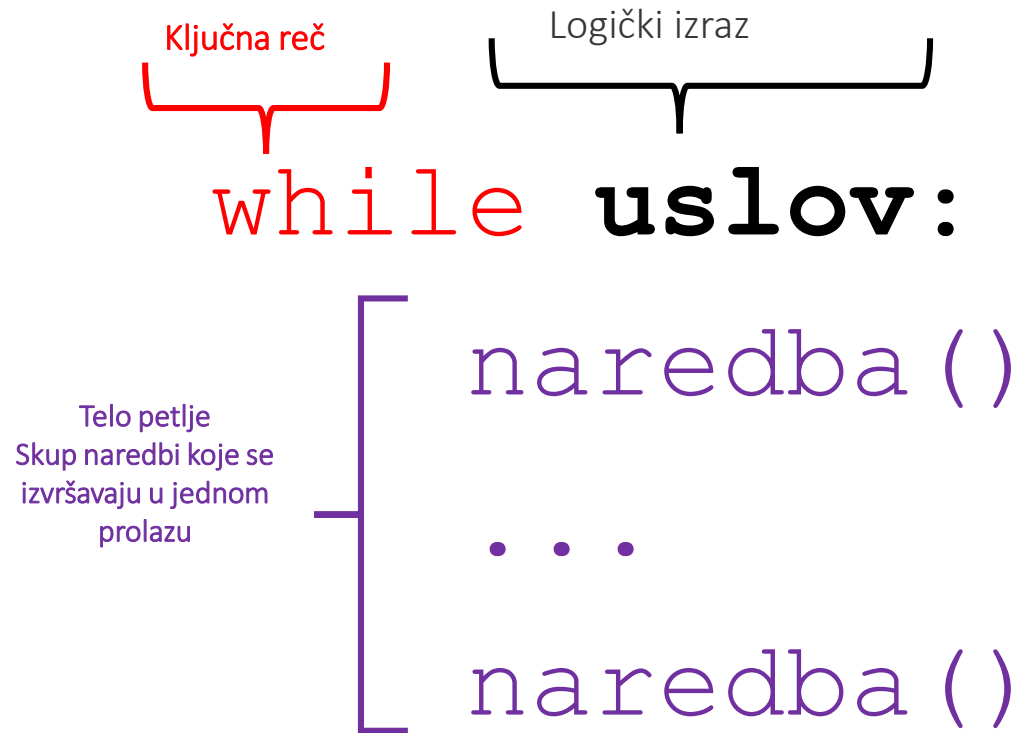
for **i** **in** **range**(**n**) :

naredba()
...
naredba()

Кljučna reč
Brojač uzima vrednosti definisanje funkcijom range
Уграђена функција
Telo petlje
Skup naredbi koje se izvršavaju u jednom prolazu

Наредба	Генерисане вредности
range(10)	0,1,2,3,4,5,6,7,8,9
range(1,10)	1,2,3,4,5,6,7,8,9
range(3,7)	3,4,5,6
range(2,15,3)	2,5,8,11,14
range(9,2,-1)	9,8,7,6,5,4,3

Podsećanje - while



```
while uslov:  
    naredba()  
    ...  
    naredba()
```

The diagram illustrates the syntax of a `while` loop. The word `while` is highlighted in red, with a red bracket above it labeled "Ključna reč" (Key word). The word `uslov:` is in black, with a black bracket above it labeled "Logički izraz" (Logical expression). The body of the loop, consisting of `naredba()`, `...`, and `naredba()`, is enclosed in a large purple bracket on the left. To the left of this bracket is the text "Telo petlje" (Loop body) and "Skup naredbi koje se izvršavaju u jednom prolazu" (Set of commands that are executed in one pass).

Šta će biti rezultat izvršavanja sledećeg programa?

```
import turtle
for i in range(1,5):
    turtle.forward(50)
    turtle.right(90)
```

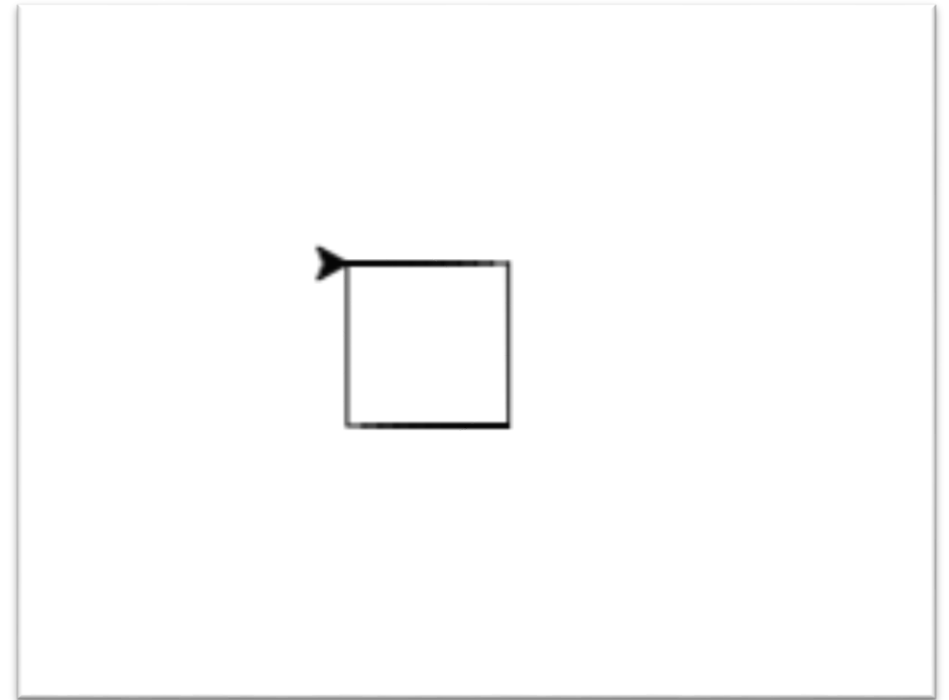
Ekvivaletno sa

```
import turtle
for i in range(1,5):
    turtle.forward(50)
    turtle.right(90)
```

```
import turtle
turtle.forward(50)
turtle.right(90)
turtle.forward(50)
turtle.right(90)
turtle.forward(50)
turtle.right(90)
turtle.forward(50)
turtle.right(90)
```

Šta će biti rezultat izvršavanja sledećeg programa?

```
import turtle  
for i in range(1,5):  
    turtle.forward(50)  
    turtle.right(90)
```



Šta će biti rezultat izvršavanja sledećeg programa?

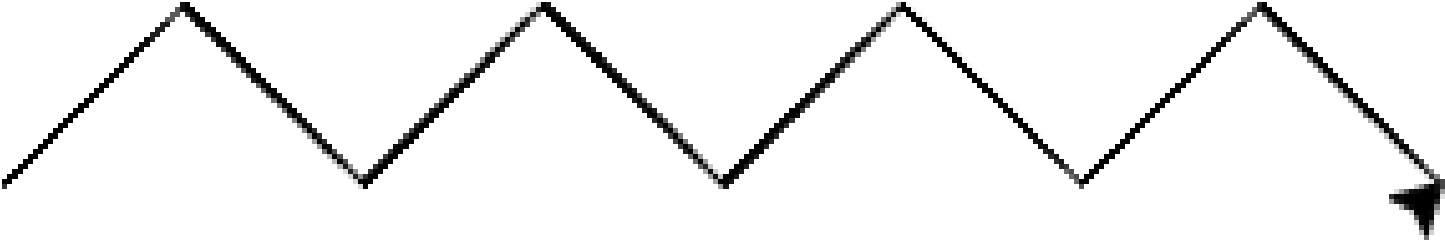
```
import turtle
for i in range(1,5):
    turtle.forward(i*50)
    turtle.right(90)
```

Ekvivalentno sa

```
import turtle
for i in range(1,5):
    turtle.forward(i*50)
    turtle.right(90)
```

```
import turtle
turtle.forward(50) # 1*50
turtle.right(90)
turtle.forward(100) # 2*50
turtle.right(90)
turtle.forward(150) # 3*50
turtle.right(90)
turtle.forward(200) # 4*50
turtle.right(90)
```

Zadatak



Rešenja

```
import turtle
turtle.left(45)
for i in range(2):
    turtle.forward(50)
    turtle.right(90)
    turtle.forward(50)
    turtle.left(90)
```

```
import turtle
turtle.left(45)
turtle.forward(50)
turtle.right(90)
turtle.forward(50)
turtle.left(90)
turtle.forward(50)
turtle.right(90)
turtle.forward(50)
turtle.left(90)
```

Rešenja

```
import turtle
turtle.left(45)
for i in range(4):
    turtle.forward(50)
    if (i % 2 == 0):
        turtle.right(90)
    else:
        turtle.left(90)
```

```
import turtle
turtle.left(45)
turtle.forward(50)
turtle.right(90)
turtle.forward(50)
turtle.left(90)
turtle.forward(50)
turtle.right(90)
turtle.forward(50)
turtle.left(90)
```

Fill

```
import turtle
turtle.color("orange")
turtle.begin_fill()
turtle.forward(50)
turtle.left(90)
turtle.forward(50)
turtle.right(90)
turtle.forward(50)
turtle.left(90)
turtle.forward(50)
turtle.right(90)
turtle.end_fill()
```



Liste boja

```
import turtle
turtle.color("orange")
boje = ["orange", "blue"]
for i in range(2):
    turtle.color(boje[i])
    turtle.forward(50)
```



Zadaci

Napiši program kojim će se iscrtati:

