



FAKULTET INŽENJERSKIH NAUKA UNIVERZITET U KRAGUJEVCU

Tema: Programiranje aplikacija IOS sistema
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Profesor: Nenad Grujović

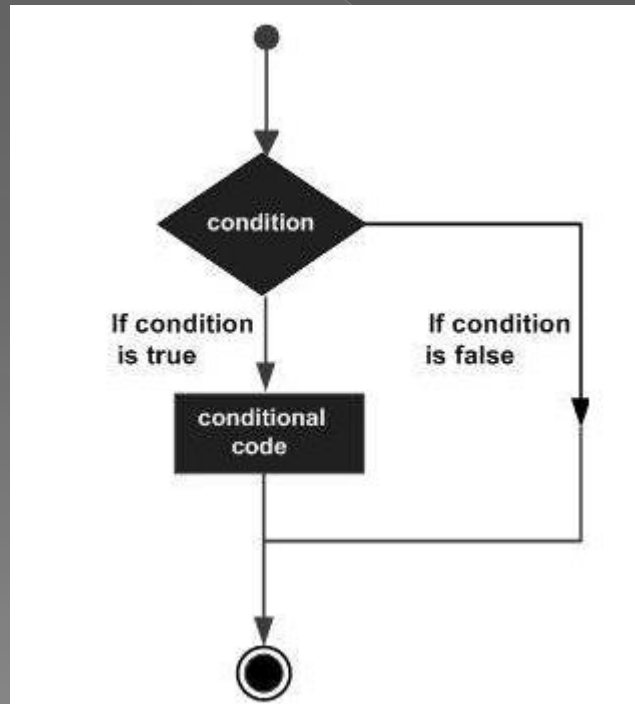
Kragujevac, 2019. godine

Sadržaj:

- ◉ Donošenje odluka
- ◉ If uslov
- ◉ If – else uslov
- ◉ Switch – case uslov
- ◉ Petlje
- ◉ For – in petlja
- ◉ While petlja

Donošenje odluka






Struktura donošenja odluka zahteva da programer odredi jedan ili više uslova koje će program testirati i proveriti, zajedno sa akcijom ili akcijama koje treba izvršiti ako je uslov ispunjen i opcionalno, druge akcije koje treba izvršiti ako uslov nije ispunjen. Na slici ispod je opšti prikaz tipične strukture odlučivanja, odnosno donošenja odluka, koja se nalazi u većini programskih jezika.



Slika 1 – Struktura odlučivanja

Donošenje odluka

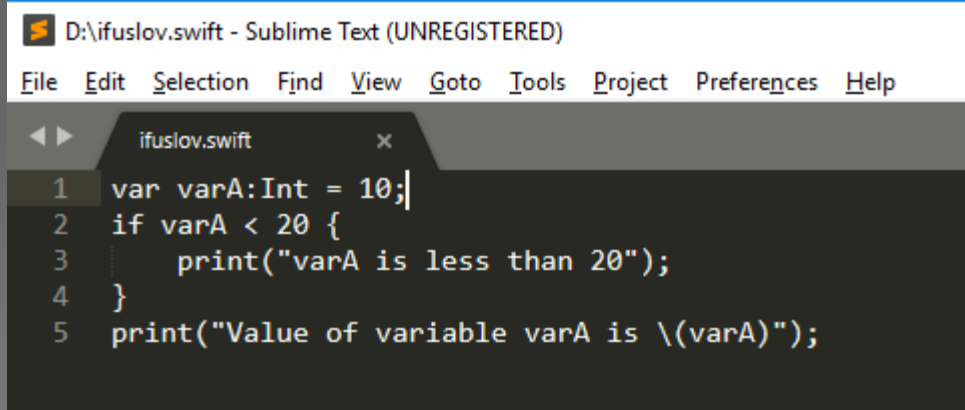
Swift 4 pruža sledeće vrste uslova kod donošenja odluka:

Sr.No	Statement & Description
1	if statement  An if statement consists of a Boolean expression followed by one or more statements.
2	if...else statement  An if statement can be followed by an optional else statement, which executes when the Boolean expression is false.
3	if...else if...else Statement  An if statement can be followed by an optional else if...else statement, which is very useful to test various conditions using single if...else if statement.
4	nested if statements  You can use one if or else if statement inside another if or else if statement(s).
5	switch statement  A switch statement allows a variable to be tested for equality against a list of values.

Slika 2 – Uslovi koji se koriste kod donošenja odluka

If uslov

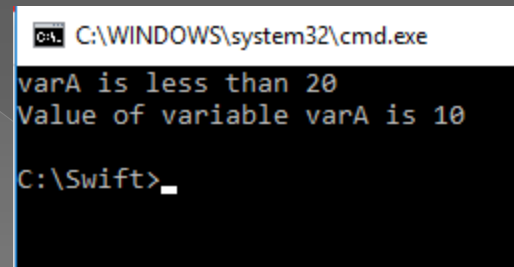
- If uslov se sastoji od Boolovog izraza praćenog jednom ili više naredbi.
- Sintaksa if uslova biće prikazana kroz primer na slici 3, ispod.



```
D:\ifuslov.swift - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

ifuslov.swift
1 var varA:Int = 10;
2 if varA < 20 {
3     print("varA is less than 20");
4 }
5 print("Value of variable varA is \(varA)");
```

Slika 3 - Kod



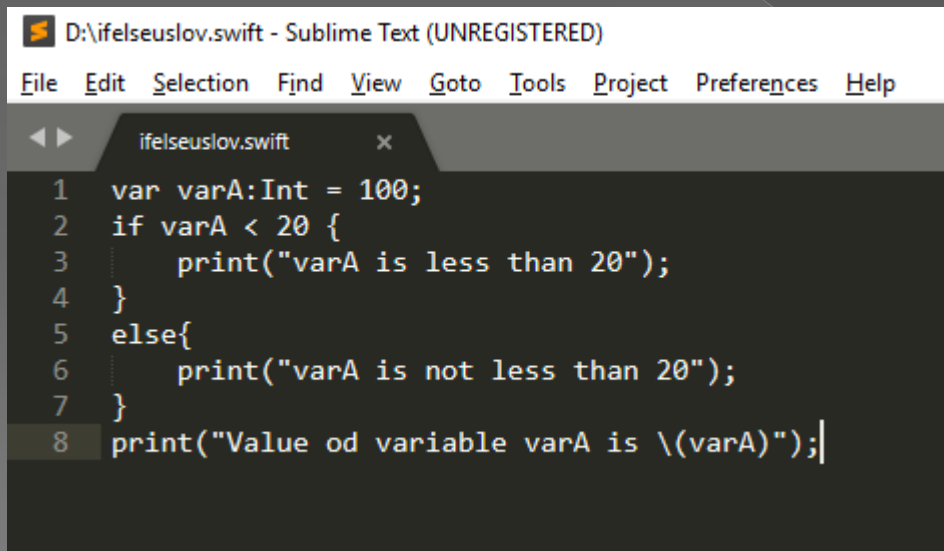
```
C:\WINDOWS\system32\cmd.exe
varA is less than 20
Value of variable varA is 10

C:\Swift>
```

Slika 4 – Startovan program

If – else uslov

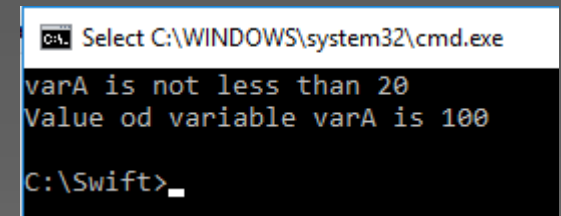
- Sintaksa je prikazana kroz primer na slici 5, ispod.



The screenshot shows a Sublime Text editor window titled "D:\ifelseuslov.swift - Sublime Text (UNREGISTERED)". The menu bar includes File, Edit, Selection, Find, View, Goto, Tools, Project, Preferences, and Help. The code in the editor is as follows:

```
1 var varA:Int = 100;  
2 if varA < 20 {  
3     print("varA is less than 20");  
4 }  
5 else{  
6     print("varA is not less than 20");  
7 }  
8 print("Value od variable varA is \(varA)");|
```

Slika 5 - Kod



The screenshot shows a command prompt window titled "Select C:\WINDOWS\system32\cmd.exe". The output of the program is:

```
varA is not less than 20  
Value od variable varA is 100  
C:\Swift>|
```

Slika 6 – Startovan program

Switch – case uslov

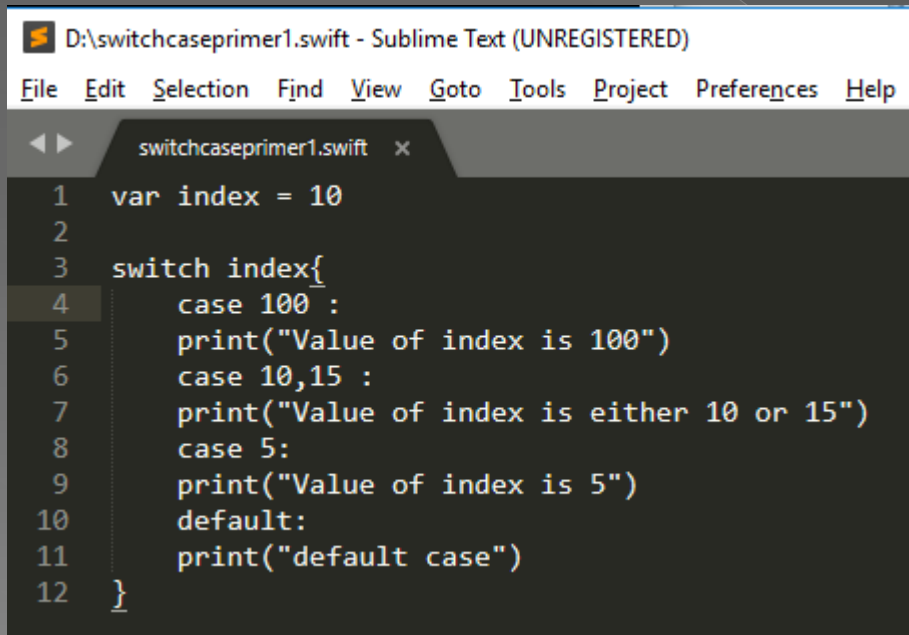
- Switch uslov u Swift 4 programskom jeziku, završava izvršenje čim se završi prvi slučaj koji je tačan, umesto da padne na dno sledećih slučajeva, kao što se to dešava u C i C++ programskim jezicima.
- U nastavku sledi generička sintaksa switch uslova.

```
switch expression {  
    case expression1 :  
        statement(s)  
        fallthrough /* optional */  
    case expression2, expression3 :  
        statement(s)  
        fallthrough /* optional */  
    default : /* Optional */  
        statement(s);  
}
```

Slika 7 – Sintaksa switch – case uslova

Switch – case uslov

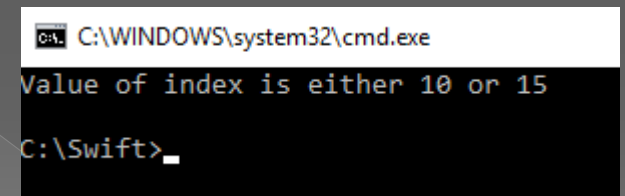
- Ako ne koristimo naredbu fallthrough, program će izaći iz naredbe switch nakon izvršavanja odgovarajućeg izraza case. Bolje pojašnjenje se može videti na primerima na slikama u nastavku:



```
D:\switchcaseprimer1.swift - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

switchcaseprimer1.swift x
1 var index = 10
2
3 switch index{
4     case 100 :
5         print("Value of index is 100")
6     case 10,15 :
7         print("Value of index is either 10 or 15")
8     case 5:
9         print("Value of index is 5")
10    default:
11        print("default case")
12 }
```

Slika 8 – Kod primera 1

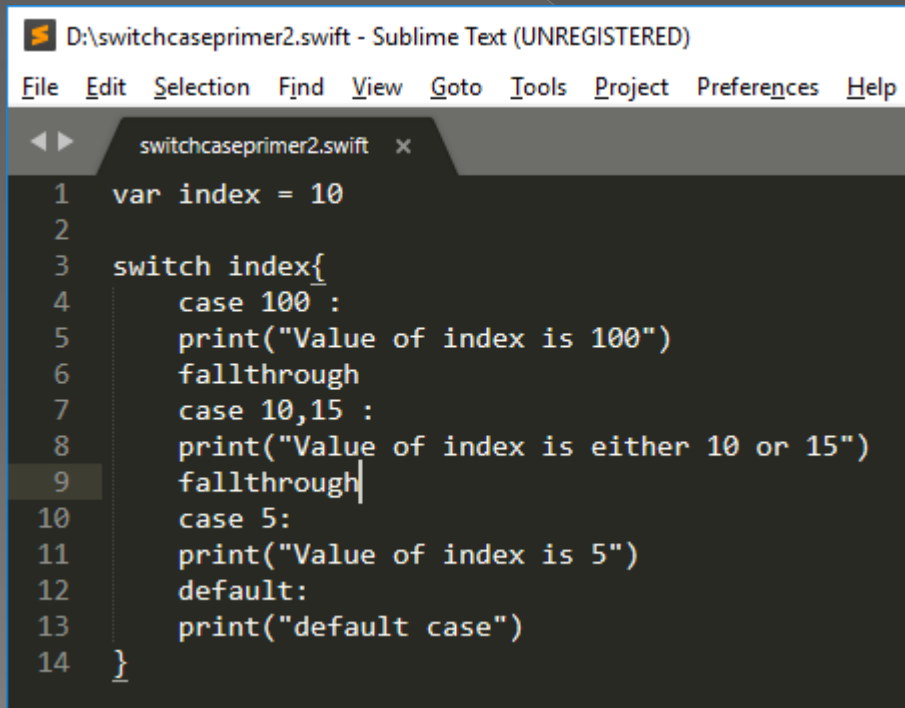


```
C:\WINDOWS\system32\cmd.exe
Value of index is either 10 or 15
C:\Swift>
```

Slika 9 – Startovan program

Switch – case uslov

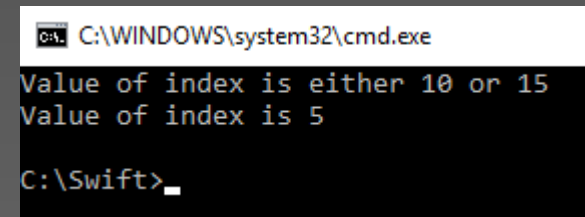
Primer 2:



The screenshot shows a Swift code editor window titled "D:\switchcaseprimer2.swift - Sublime Text (UNREGISTERED)". The code defines a variable 'index' with the value 10 and a switch statement that prints different messages based on the value of 'index'.

```
1 var index = 10
2
3 switch index{
4     case 100 :
5         print("Value of index is 100")
6         fallthrough
7     case 10,15 :
8         print("Value of index is either 10 or 15")
9         fallthrough
10    case 5:
11        print("Value of index is 5")
12    default:
13        print("default case")
14 }
```

Slika 11 – Kod primera 2



The screenshot shows a Windows command prompt window titled "C:\WINDOWS\system32\cmd.exe". It displays the output of the Swift program, which prints two lines of text: "Value of index is either 10 or 15" and "Value of index is 5". The prompt is currently at "C:\Swift>".

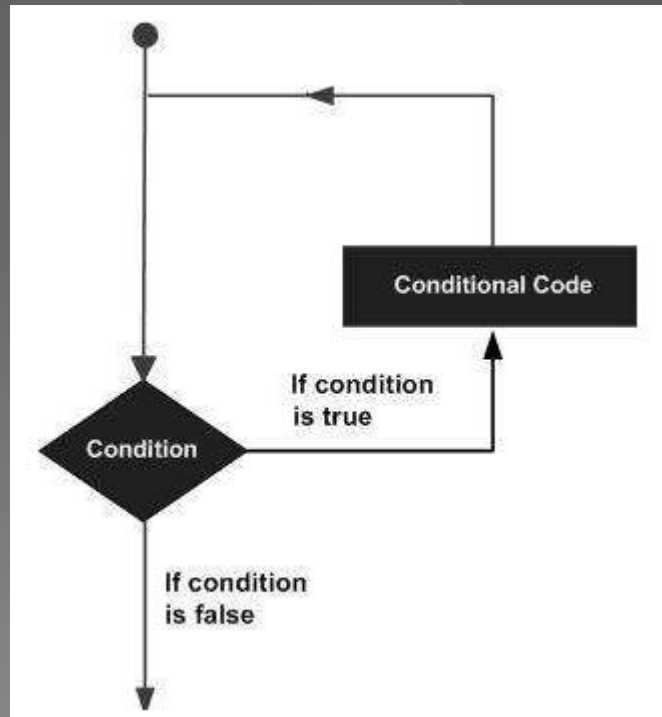
```
C:\WINDOWS\system32\cmd.exe
Value of index is either 10 or 15
Value of index is 5

C:\Swift>
```

Slika 12 – Startovan program

Petlje




- Petlje nam omogućavaju da izvršimo naredbu ili grupu naredbi više puta. Ispod je prikazana opšta struktura petlji u većini programskih jezika.



Slika 13 – Struktura petlje

Petlje

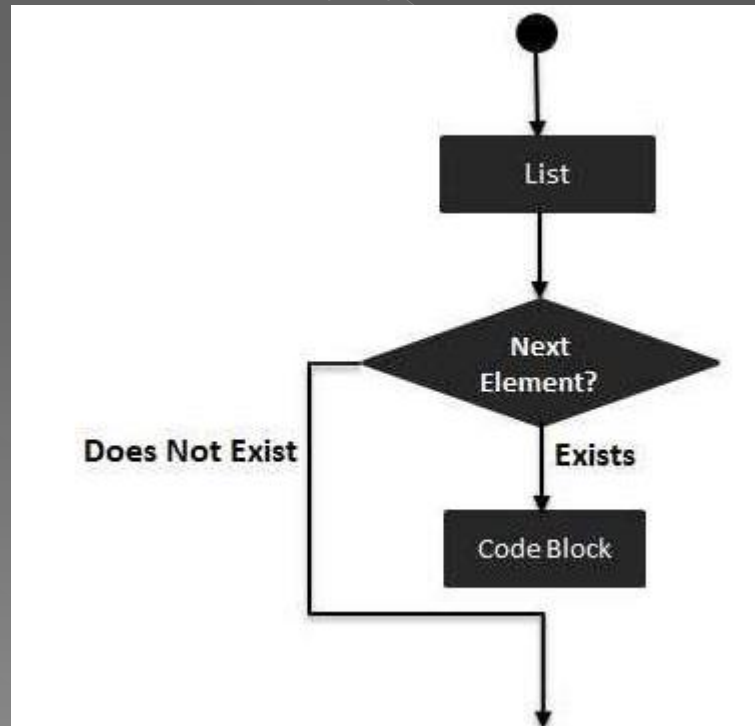
- Swift 4 programski jezik obezbeđuje sledeće vrste petlji:

Sr.No	Loop Type & Description
1	for-in  This loop performs a set of statements for each item in a range, sequence, collection, or progression.
2	while loop  Repeats a statement or group of statements while a given condition is true. It tests the condition before executing the loop body.
3	repeat...while loop  Like a while statement, except that it tests the condition at the end of the loop body.

Slika 14 – Vrste petlji u Swift programskom jeziku

For – in petlja

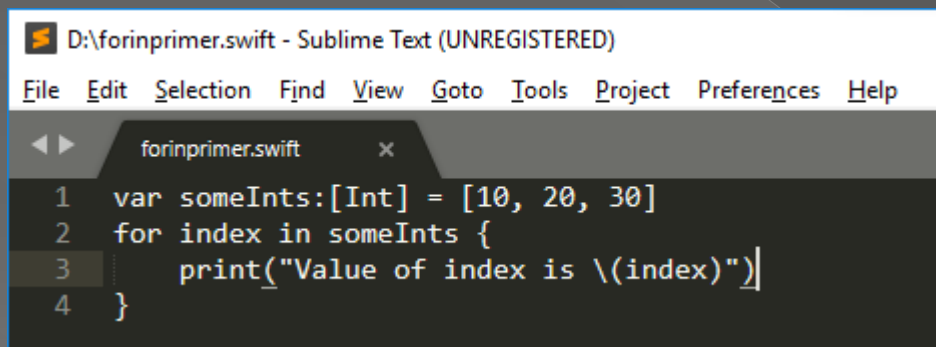
- For - in petlja ponavlja zbirke stavki, kao što su opsezi brojeva, stavke u nizu ili znakovi u nizu.
- Struktura for – in petlje je prikazana na slici 15 ispod:



Slika 15 – Struktura for – in petlje

For – in petlja

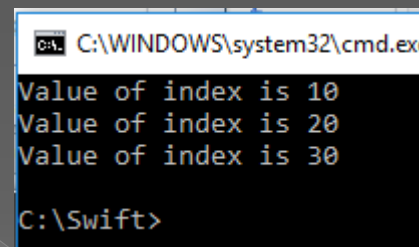
- Primer korišćenja for – in petlje je prikazan na slici ispod:



The screenshot shows a Sublime Text editor window titled "D:\forinprimer.swift - Sublime Text (UNREGISTERED)". The menu bar includes File, Edit, Selection, Find, View, Goto, Tools, Project, Preferences, and Help. The code in the editor is as follows:

```
1 var someInts:[Int] = [10, 20, 30]
2 for index in someInts {
3     print("Value of index is \(index)")
4 }
```

Slika 16 - Kod



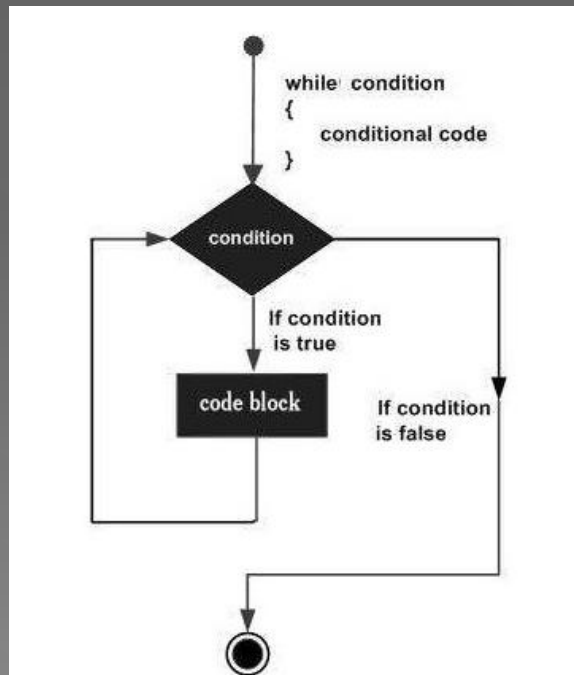
The screenshot shows a Windows command prompt window titled "C:\WINDOWS\system32\cmd.exe". The output of the program is displayed as follows:

```
Value of index is 10
Value of index is 20
Value of index is 30
C:\Swift>
```

Slika 17 – Startovani program

While petlja

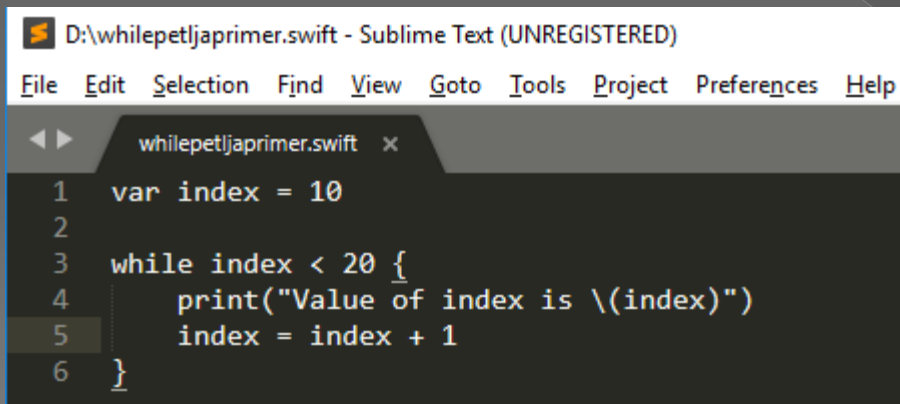
- While petlja u programskom jeziku Swift 4 izvršava ciljnu izjavu sve dok je zadato stanje istinito.
- Uslov može biti bilo koji izraz. Petlja se ponavlja dok je uslov istinit. Kada uslov postane lažan, programska kontrola, prelazi na liniju koja neposredno prati petlju.
- Struktura while petlje je prikazana na slici ispod:



Slika 18 – Struktura while petlje

While petlja

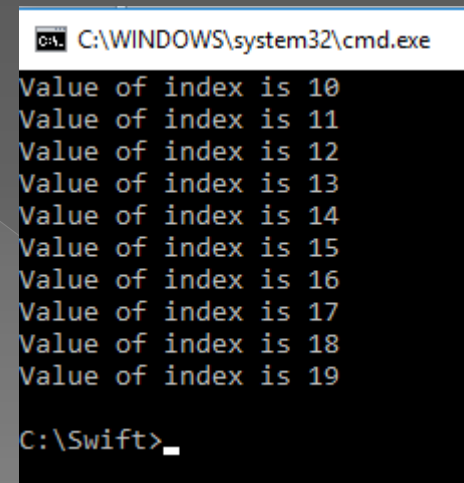
- Primer korišćenja while petlje je prikazan na slici ispod:



```
D:\whilepetljaprimer.swift - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help

whilepetljaprimer.swift x
1 var index = 10
2
3 while index < 20 {
4     print("Value of index is \(index)")
5     index = index + 1
6 }
```

Slika 19 - Kod



```
C:\WINDOWS\system32\cmd.exe
Value of index is 10
Value of index is 11
Value of index is 12
Value of index is 13
Value of index is 14
Value of index is 15
Value of index is 16
Value of index is 17
Value of index is 18
Value of index is 19
C:\Swift>
```

Slika 20 – Startovan program