# PP - Dokumentacija za projekat

21-22 zimski semestar (IN)

## Osnovni podaci

Broj indeksa	IN59/2018
Ime i prezime	Ilija Rakočević
Šifra zadatka	PP-05
Kontrolna tačka	1
Operativni sistem	Ubuntu 16.04.4
gcc verzija	5.4.0

### Evidencija implementiranog dela

	Zadatak	S - N	S E M	G K	Test fajlovi
Z1	miniC	+	+	+	/
Z2	komentari	+	+	+	<test-ok-multi-line1>.mc <test-ok-multi-line2>.mc <test-ok-single-line1>.mc <test-ok-single-line2>.mc <test-ok-single-multi>.mc</test-ok-single-multi></test-ok-single-line2></test-ok-single-line1></test-ok-multi-line2></test-ok-multi-line1>
Z3	deklaracija više promenljivih	+	+	+	<test-ok-var1>.mc <test-ok-var2>.mc <test-ok-var3>.mc <test-ok-var4>.mc <test-ok-nas-33>.mc <test-semerr-nas-31>.mc <test-semerr-nas-32>.mc <test-semerr-nas-32>.mc <test-semerr-nas-33>.mc <test-semerr-nas-33>.mc <test-semerr-nas-34>.mc <test-semerr-nas-34>.mc</test-semerr-nas-34></test-semerr-nas-34></test-semerr-nas-33></test-semerr-nas-33></test-semerr-nas-32></test-semerr-nas-32></test-semerr-nas-31></test-ok-nas-33></test-ok-var4></test-ok-var3></test-ok-var2></test-ok-var1>

					<test-semerr-nas-700>.mc <test-synerr-nas-31>.mc <test-synerr-nas-32>.mc <test-synerr-nas-33>.mc <test-synerr-nas-34>.mc <test-synerr-nas-36>.mc <test-synerr-nas-41>.mc</test-synerr-nas-41></test-synerr-nas-36></test-synerr-nas-34></test-synerr-nas-33></test-synerr-nas-32></test-synerr-nas-31></test-semerr-nas-700>
<b>Z4</b>	postinkrement	+	+	+	<test-ok-incr1>.mc <test-ok-incr2>.mc <test-ok-incr3>.mc <test-ok-incr4>.mc <test-ok-incr5>.mc <test-ok-incr6>.mc <test-ok-incr7>.mc <test-ok-incr8>.mc <test-synerr-inas-44>.mc <test-synerr-inas-44>.mc <test-synerr-inas-43>.mc <test-synerr-inas-44>.mc <test-synerr-inas-46>.mc <test-synerr-inas-46>.mc <test-synerr-inas-47>.mc</test-synerr-inas-47></test-synerr-inas-46></test-synerr-inas-46></test-synerr-inas-44></test-synerr-inas-43></test-synerr-inas-44></test-synerr-inas-44></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr8></test-ok-incr7></test-ok-incr6></test-ok-incr5></test-ok-incr4></test-ok-incr3></test-ok-incr2></test-ok-incr1>
<b>Z</b> 5	void, return	+	+	+	<test-ok-nas-81>.mc <test-ok-nas-82>.mc <test-ok-nas-83>.mc <test-ok-nas-84>.mc <test-ok-nas-85>.mc <test-ok-nas-86>.mc <test-ok-nas-86>.mc <test-ok-nas-88>.mc <test-ok-nas-88>.mc <test-ok-nas-89>.mc <test-semerr-nas-81>.mc <test-semerr-nas-81>.mc <test-semerr-nas-81>.mc <test-semerr-nas-81>.mc</test-semerr-nas-81></test-semerr-nas-81></test-semerr-nas-81></test-semerr-nas-81></test-ok-nas-89></test-ok-nas-88></test-ok-nas-88></test-ok-nas-86></test-ok-nas-86></test-ok-nas-85></test-ok-nas-84></test-ok-nas-83></test-ok-nas-82></test-ok-nas-81>
Z6	funkcija sa više parametara	+	+	+	<test-ok-fun1>.mc <test-ok-fun2>.mc <test-ok-fun3>.mc <test-ok-fun4>.mc <test-ok-nas-101>.mc <test-ok-nas-105>.mc <test-ok-nas-105>.mc <test-ok-param-new>.mc</test-ok-param-new></test-ok-nas-105></test-ok-nas-105></test-ok-nas-101></test-ok-fun4></test-ok-fun3></test-ok-fun2></test-ok-fun1>

					<test-semerr-nas-102>.mc <test-semerr-nas-103>.mc <test-semerr-nas-104>.mc <test-semerr-nas-105>.mc <test-semerr-param-new>.mc <test-synerr-nas-101>.mc <test-synerr-nas-102>.mc <test-synerr-nas-102>.mc <test-synerr-nas-103>.mc</test-synerr-nas-103></test-synerr-nas-102></test-synerr-nas-102></test-synerr-nas-101></test-semerr-param-new></test-semerr-nas-105></test-semerr-nas-104></test-semerr-nas-103></test-semerr-nas-102>
<b>Z</b> 7	globalne promenljive	+	+	+	<test-ok-glob1>.mc <test-ok-glob2>.mc <test-ok-nas-001>.mc <test-ok-nas-002>.mc <test-semerr-nas-344>.mc <test-synerr-nas-003>.mc <test-synerr-nas-004>.mc</test-synerr-nas-004></test-synerr-nas-003></test-semerr-nas-344></test-ok-nas-002></test-ok-nas-001></test-ok-glob2></test-ok-glob1>
Z8	ternarni uslovni operator	+	+	+	<test-ok-ternary1>.mc <test-ok-ternary2>.mc <test-ok-ternary3>.mc <test-ok-ternary4>.mc <test-ok-ternary5>.mc <test-ok-ternary5>.mc <test-semerr-ternary1>.mc <test-synerr-ternary1>.mc <test-synerr-ternary2>.mc</test-synerr-ternary2></test-synerr-ternary1></test-semerr-ternary1></test-ok-ternary5></test-ok-ternary5></test-ok-ternary4></test-ok-ternary3></test-ok-ternary2></test-ok-ternary1>
P1	AND i OR logicki operatori	+	+	+	<test-ok-if1>.mc <test-ok-if2>.mc <test-ok-if3>.mc <test-ok-if4>.mc <test-ok-if5>.mc <test-ok-if5>.mc <test-ok-if6>.mc <test-semerr-if1>.mc <test-semerr-if2>.mc <test-semerr-if3>.mc <test-synerr-if1>.mc <test-synerr-if3>.mc <test-synerr-if3>.mc <test-synerr-if3>.mc <test-synerr-if3>.mc <test-synerr-if3>.mc <test-synerr-if3>.mc <test-synerr-if4>.mc <test-synerr-if5>.mc <test-synerr-if5>.mc <test-synerr-if5>.mc <test-synerr-if6>.mc <test-synerr-if7>.mc</test-synerr-if7>.mc</test-synerr-if6></test-synerr-if5></test-synerr-if5></test-synerr-if5></test-synerr-if4></test-synerr-if3></test-synerr-if3></test-synerr-if3></test-synerr-if3></test-synerr-if3></test-synerr-if3></test-synerr-if1></test-semerr-if3></test-semerr-if2></test-semerr-if1></test-ok-if6></test-ok-if5></test-ok-if5></test-ok-if4></test-ok-if3></test-ok-if2></test-ok-if1>
P2	FOR iskaz	+	+	+	<test-ok-for1>.mc <test-ok-for2>.mc <test-ok-for3>.mc <test-semerr-for1>.mc <test-semerr-for2>.mc <test-semerr-for3>.mc <test-semerr-for3>.mc <test-semerr-for4>.mc</test-semerr-for4></test-semerr-for3></test-semerr-for3></test-semerr-for2></test-semerr-for1></test-ok-for3></test-ok-for2></test-ok-for1>

					<test-semerr-for5>.mc <test-semerr-for6>.mc <test-semerr-for7>.mc <test-semerr-for8>.mc <test-synerr-for1>.mc <test-synerr-for2>.mc <test-synerr-for3>.mc <test-synerr-for4>.mc <test-synerr-for6>.mc <test-synerr-for6>.mc <test-synerr-for6>.mc <test-synerr-for7>.mc</test-synerr-for7>.mc</test-synerr-for6></test-synerr-for6></test-synerr-for6></test-synerr-for4></test-synerr-for3></test-synerr-for2></test-synerr-for1></test-semerr-for8></test-semerr-for7></test-semerr-for6></test-semerr-for5>
P3	BRANCH iskaz	+	+	+	<test-ok-branch1>.mc <test-ok-branch2>.mc <test-ok-branch3>.mc <test-ok-branch4>.mc <test-ok-branch4>.mc <test-semerr-branch1>.mc <test-semerr-branch2>.mc <test-semerr-branch3>.mc <test-semerr-branch3>.mc <test-synerr-branch1>.mc <test-synerr-branch3>.mc <test-synerr-branch3>.mc <test-synerr-branch3>.mc <test-synerr-branch3>.mc <test-synerr-branch3>.mc <test-synerr-branch5>.mc <test-synerr-branch5>.mc <test-synerr-branch6>.mc <test-synerr-branch7>.mc <test-synerr-branch9>.mc <test-synerr-branch9>.mc <test-synerr-branch9>.mc <test-synerr-branch10>.mc</test-synerr-branch10></test-synerr-branch9></test-synerr-branch9></test-synerr-branch9></test-synerr-branch7></test-synerr-branch6></test-synerr-branch5></test-synerr-branch5></test-synerr-branch3></test-synerr-branch3></test-synerr-branch3></test-synerr-branch3></test-synerr-branch3></test-synerr-branch1></test-semerr-branch3></test-semerr-branch3></test-semerr-branch2></test-semerr-branch1></test-ok-branch4></test-ok-branch4></test-ok-branch3></test-ok-branch2></test-ok-branch1>
D1	LOOP iskaz	+	+	+	<test-ok-loop1>.mc <test-ok-loop2>.mc <test-ok-loop3>.mc <test-ok-loop4>.mc <test-ok-loop5>.mc <test-ok-loop6>.mc <test-semerr-loop2>.mc <test-semerr-loop3>.mc <test-semerr-loop5>.mc <test-semerr-loop5>.mc <test-semerr-loop5>.mc <test-synerr-loop5>.mc <test-synerr-loop5>.mc <test-synerr-loop3>.mc <test-synerr-loop6>.mc <test-synerr-loop5>.mc <test-synerr-loop6>.mc <test-synerr-loop6>.mc <test-synerr-loop6>.mc <test-synerr-loop7>.mc</test-synerr-loop7>.mc&lt;</test-synerr-loop6></test-synerr-loop6></test-synerr-loop6></test-synerr-loop5></test-synerr-loop6></test-synerr-loop3></test-synerr-loop5></test-synerr-loop5></test-semerr-loop5></test-semerr-loop5></test-semerr-loop5></test-semerr-loop3></test-semerr-loop2></test-ok-loop6></test-ok-loop5></test-ok-loop4></test-ok-loop3></test-ok-loop2></test-ok-loop1>
D2					


### Detalji implementacije

Navesti u tabeli ukoliko su neke komponente projekta izmenjene, a ispod detaljnije opisati izmene.

prevodilac makefile	NE
hipsim fajlovi	NE
tabela simbola	NE

#### **Z**6

Provera za funkciju sa više parametara je implementirana na sledeći način:

Formirana je matrica NxM. U prvoj koloni matrice su smešteni indexi funkcija iz tabele simbola, a red u kojem je neki index funkcije je ispunjen vrednostima 0,1 ili 2. Vrednost 1 predstavlja tip int, vrednost 2 predstavlja tip uint, dok 0 znači da nema parametara. Drugim rečima, kada imamo red u matrici koji ovako izgleda:

znači da imamo funkciju sa indexom 17 u tabeli simbola, koja ima 4 parametra od kojih su prvi i drugi tipa int, a treći i četvrti tipa uint.

#### **D1**

Realizacija LOOP iskaza koji je definisan sledećim izrazom:

```
"loop" "type" <var> "in" "(" <lit1> ":" <lit2> "step" <lit3> ")" <statement>
```

#### Gde:

- <var> predstavlja promenljivu, iterator petlje
- , predstavljaju granice iteracije
- lit3> predstavlja vrednost koraka
- <statement> predstavlja iskaz

#### Realizovati semantičke provere:

- 1. 1. it1>, it2>, it3> moraju biti istog tipa kao i <var>.
- 2. Na iteracije ne bi trebalo da utiče redosled literala lit1> i i lit2>.
- 3. Iterator ne sme biti tipa VOID.

#### Izvršavanje:

- Inicijalizacija iteratora se vrši samo jednom, pre prvog izvršavanja petlje. Iterator se inicijalizuje na vrednost prvog literala (<lit1>).
- Na početku svake petlje potrebno je proveriti da li je doslo do promene u odnosu između granica ( manja granica inkrementovanjem postala veća od gornje ili veća granica dekrementovanjem postala manja od donje).
- Nakon izvršavanja tela petlje, iterator se menja za vrednost koraka (<lit3>).