Documento Autogenerado de Estado de Compilación

BLA Compiler

29 de mayo de 2012

1. Descripción de Tipos

```
TYPES:
 * _undefined [size 0][alignment 1]
 * _invalid [size 0][alignment 1]
 * none [size 0][alignment 1]
 * int [size 4][alignment 4]
 * float [size 4][alignment 4]
 * char [size 1][alignment 1]
 * boolean [size 1][alignment 1]
 * string [size 4][alignment 4]
```

2. Constantes String

```
- "hola"
```

3. Árbol Sintáctico Abstracto

```
  5: Declaration: c (int) [offset 0] initialized with
  5:     Constant int: 30
  6: Declaration: d (int) [offset 4] initialized with
  6:     Constant int: 30
 12: Declaration of Function fibRec -> int
 12:     (
 12:     int(n)
 12:     )
 13:     {
 13:         If
                 (
 13:             == [boolean]
 13:                 Identifier: n [int:12:20]
 13:                 Constant int: 0
                 )
 14:             {
 14:                 Return [int]
 14:                     Constant int: 0
 14:             }
 15:         Else If
                 (
 15:             == [boolean]
 15:                 Identifier: n [int:12:20]
```

```
15:                 Constant int: 1
                )
16:             {
16:                 Return [int]
16:                     Constant int: 1
16:             }
18:         Return [int]
18:             + [int]
18:                 fibRec [int:12:9]
                    (
18:                     - [int]
18:                         Identifier: n [int:12:20]
18:                         Constant int: 1
                    )
18:                 fibRec [int:12:9]
                    (
18:                     - [int]
18:                         Identifier: n [int:12:20]
18:                         Constant int: 2
                    )
18:     }
21: Declaration: b (int) [offset 8] initialized with
21:     Constant int: 42
22: Declaration: e (int) [offset 12] initialized with
22:     Constant int: 42
48: Declaration: a (int) [offset 16] initialized with
48:     Constant int: 42
50: Declaration of Function main -> none
50:     (
50:     )
51:     {
51:         Declaration: a (int) [offset 0] unitialized
52:         Read a [int:51:9]
53:         Declaration: fR (int) [offset 4] initialized with
53:             fibRec [int:12:9]
                (
53:                 Identifier: a [int:51:9]
                )
55:         Declaration: salida (string) [offset 8] initialized with
55:             Constant string: hola
55:     }
```

1. Código Intermedio

```
L0: prologue fibRec
L1: if n:S = 0:I goto L3
L2: goto L5
L3: return 0:I L18
L4: goto L8
L5: if n:S = 1:I goto L7
L6: goto L8
L7: return 1:I L18
L8: 1:T := n:S - 1:I
L9: 2:T := 1:T
L10: PARAM  2:T
L11: CALL   3:T, fibRec:S
L12: 4:T := n:S - 2:I
L13: 5:T := 4:T
L14: PARAM  5:T
L15: CALL   6:T, fibRec:S
L16: 7:T := 3:T + 6:T
L17: return 7:T L18
L18: epilogue fibRec
L19: c:S := 30:I
L20: d:S := 30:I
L21: b:S := 42:I
L22: e:S := 42:I
L23: a:S := 42:I
L24: prologue main
L25: INIT   a:S, 4:I, 0:I
L26: READ   a:S
L27: 8:T := a:S
L28: PARAM  8:T
L29: CALL   9:T, fibRec:S
L30: fR:S := 9:T
L31: 10:T := 0:I
L32: salida:S := 10:T
L33: epilogue main
```

2. Bloques Básicos

Los bloques se presentan de la siguiente manera:

```
 Nombre del Bloque:
+-------------------------
| Secuencia de instrucciones del bloque
|
| --> Salida Obligatoria
| [--> Salidas Opcionales]
+-------------------------
```

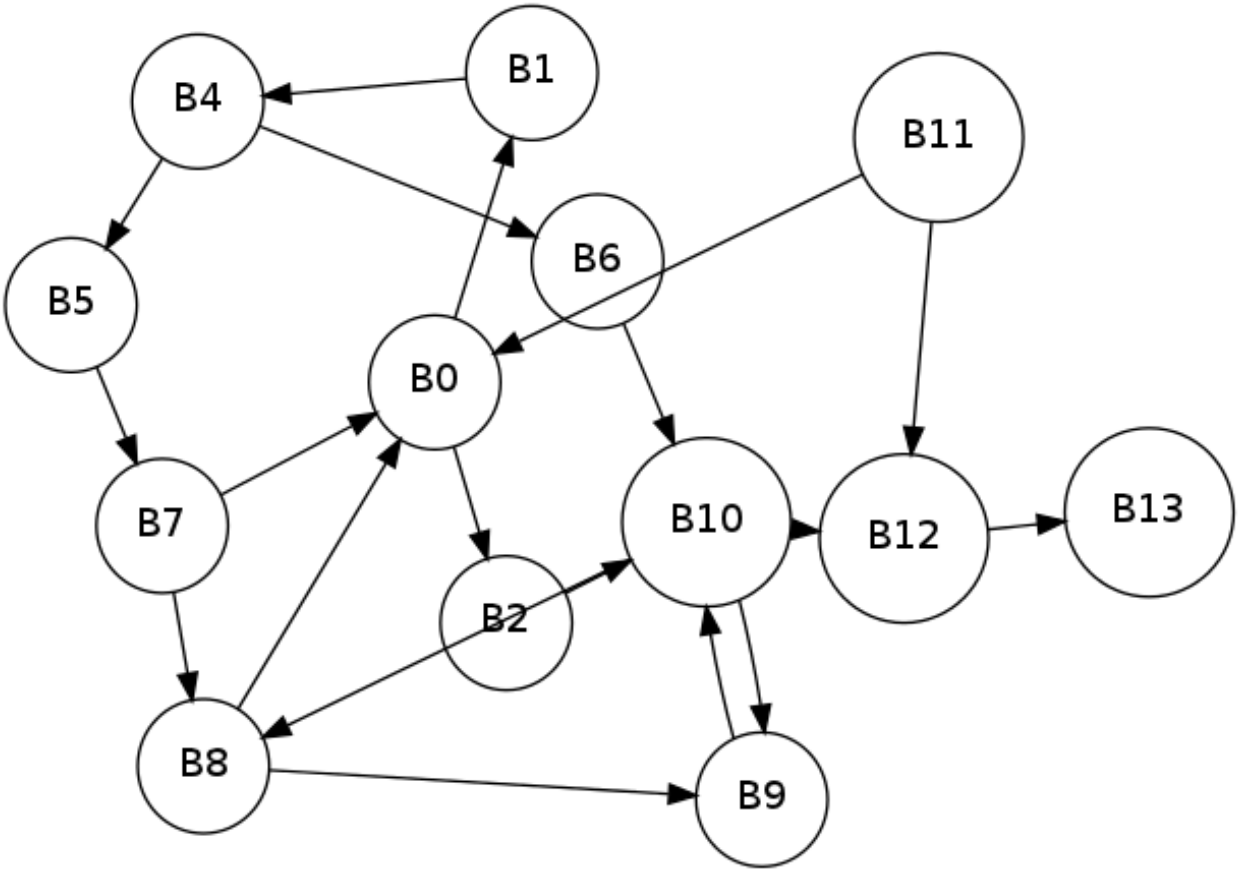
A continuación se muestran los bloques generados:

```
 B0:
+-------------------------
| L0: prologue fibRec
| L1: if n:S = 0:I goto L3
+-------------------------
| --> B1
| --> B2
+-------------------------

 B1:
+-------------------------
| L2: goto L5
+-------------------------
| --> B4
+-------------------------

 B2:
+-------------------------
| L3: return 0:I L18
+-------------------------
| --> B10
+-------------------------

 B4:
+-------------------------
| L5: if n:S = 1:I goto L7
+-------------------------
| --> B5
| --> B6
+-------------------------
```

```
 B5:
+-------------------------
| L6: goto L8
+-------------------------
| --> B7
+-------------------------

 B6:
+-------------------------
| L7: return 1:I L18
+-------------------------
| --> B10
+-------------------------

 B7:
+-------------------------
| L8: 1:T := n:S - 1:I
| L9: 2:T := 1:T
| L10: PARAM  2:T
| L11: CALL   3:T, fibRec:S
+-------------------------
| --> B8
| --> B0
+-------------------------

 B8:
+-------------------------
| L12: 4:T := n:S - 2:I
| L13: 5:T := 4:T
| L14: PARAM  5:T
| L15: CALL   6:T, fibRec:S
+-------------------------
| --> B9
| --> B0
+-------------------------

 B9:
+-------------------------
| L16: 7:T := 3:T + 6:T
| L17: return 7:T L18
+-------------------------
| --> B10
+-------------------------

 B10:
+-------------------------
| L18: epilogue fibRec
+-------------------------
| -->
| --> B8 B9 B12
+-------------------------

 B11:
+-------------------------
| L19: c:S := 30:I
| L20: d:S := 30:I
| L21: b:S := 42:I
| L22: e:S := 42:I
| L23: a:S := 42:I
| L24: prologue main
| L25: INIT   a:S, 4:I, 0:I
| L26: READ   a:S
| L27: 8:T := a:S
| L28: PARAM  8:T
| L29: CALL   9:T, fibRec:S
+-------------------------
| --> B12
| --> B0
+-------------------------

 B12:
+-------------------------
| L30: fR:S := 9:T
+-------------------------
| --> B13
+-------------------------

 B13:
+-------------------------
| L31: 10:T := 0:I
| L32: salida:S := 10:T
| L33: epilogue main
+-------------------------
```

```
| -->
+-------------------------
```

3. Grafo de Bloques Básicos



Grafo de Bloques Basicos