

TESTES – Compiladores

1. Programa Normal

```
SimpleParser-main > test1.in
1  programa testePrograma1
2      declare x: text;
3      declare a, b, c, d: number;
4      inicio
5      escreva("Teste 1");
6      leia(x);
7      leia(a);
8      leia(b);
9      a := 4;
10     b := 5;
11     c := 3;
12     d := a + b;
13     escreva(x);
14     escreva(a);
15     escreva(b);
16 fim
17 fimprog
18 |
```

PROBLEMS (68) OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

```
DEBUG - a
DEBUG - b
Compilation Successfully - Good Job
Var [id=a, type=NUMBER, initialized=true]
Var [id=b, type=NUMBER, initialized=true]
Var [id=c, type=NUMBER, initialized=true]
Var [id=d, type=NUMBER, initialized=true]
Var [id=x, type=TEXT, initialized=true]
import java.util.Scanner;
public class testePrograma1 {
public static void main(String[] args) {
Scanner _scTrx = new Scanner(System.in);
int a;
int b;
int c;
int d;
String x;
System.out.println("Teste 1");
x = _scTrx.nextLine();
a = _scTrx.nextInt();
b = _scTrx.nextInt();
a = 4;
b = 5;
c = 3;
d = a+b;
System.out.println(x);
System.out.println(a);
System.out.println(b);
}
}
```

2. Variável usada sem valor inicial

```
1 programa semValor
2   declare x: text;
3   declare a, b: number;
4 inicio
5 leia(a);
6 leia(x);
7 escreva(b);
8 fim
9 fimprog
10
```

UFABC Compiler
Error: Variable b has no value assigned

3. Variável já declarada

UFABC Compiler
Error: Undeclared Variable: b

```
SimpleParser-main > teste2_naoDeclarada.in
1 programa testePrograma2
2   declare x: text;
3   declare a: number;
4 inicio
5 leia(a);
6 leia(x);
7 leia(b);
8 escreva("teste");
9 fim
10 fimprog
11
```

4. Operação com tipos Diferentes

```
1 programa tiposDiferentes
2
3 declare x,y: number;
4 declare z: text;
5 inicio
6 leia(x);
7 leia(z);
8 y := x + z;
9 fim
10 fimprog
11
```

UFABC Compiler
Error: Unmatched Types: NUMBER and TEXT
PS D:\compiladores>

5. Warning: Variável declarada e não usada

```
1  programa naoUsada
2
3  declare x,y,z: number;
4  inicio
5  leia(x);
6  leia(y);
7  escreva("Fim do Programa");
8  fim
9  fimprog
10
```

PROBLEMS 68 OUTPUT DEBUG CONSOLE TERMINAL PORTS COM

PS D:\compiladores> d:; cd 'd:\compiladores'; & 'C:\Program F

UFABC Compiler

Compilation Successfully - Good Job

Var [id=x, type=NUMBER, initialized=true]

Var [id=y, type=NUMBER, initialized=true]

Var [id=z, type=NUMBER, initialized=false]

!!!Warning!!! Variable declared but not used:Variable z

```
import java.util.Scanner;
public class naoUsada {
    public static void main(String[] args) {
        Scanner _scTrx = new Scanner(System.in);
        int x;
        int y;
        int z;
        x = _scTrx.nextInt();
        y = _scTrx.nextInt();
        System.out.println("Fim do Programa");
    }
}
```

6. Condicional if...Else

```
1  programa teste5
2      declare a,b: number;
3      declare x,y: text;
4      inicio
5          leia(x);
6          leia(y);
7          leia(a);
8          leia(b);
9      escreva(a);
10     se (a > 5) entao
11         escreva("maior que 5");
12     senao
13         escreva("menor que 5");
14     fimse
15
16     se (b >= 0) entao
17         escreva("b positivo");
18     senao
19         escreva("b negativo");
20     fimse
21 fim
22 fimprog
```

PROBLEMS 68 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

● PS D:\compiladores> d::; cd 'd:\compiladores'; & 'C:\Program Files' UFABC Compiler
Compilation Successfully - Good Job
Var [id=a, type=NUMBER, initialized=true]
Var [id=b, type=NUMBER, initialized=true]
Var [id=x, type=TEXT, initialized=true]
Var [id=y, type=TEXT, initialized=true]
import java.util.Scanner;
public class teste5 {
 public static void main(String[] args) {
 Scanner _scTrx = new Scanner(System.in);
 int a;
 int b;
 String x;
 String y;
 x = _scTrx.nextLine();
 y = _scTrx.nextLine();
 a = _scTrx.nextInt();
 b = _scTrx.nextInt();
 System.out.println(a);
 if (a>5) {
 System.out.println("maior que 5");
 }else {
 System.out.println("menor que 5");
 }
 if (b>=0) {
 System.out.println("b positivo");
 }else {
 System.out.println("b negativo");
 }
 }
}

7. Loop Do...While

```
1  programa teste5
2      declare a,b: number;
3      declare x,y: text;
4      inicio
5          leia(x);
6          leia(y);
7          leia(a);
8          leia(b);
9          escreva(a);
10         se (a > 5) entao
11             escreva("maior que 5");
12         senao
13             escreva("menor que 5");
14         fimse
15
16         se (b >= 0) entao
17             escreva("b positivo");
18         senao
19             escreva("b negativo");
20         fimse
21     fim
22 fimprog
```

PROBLEMS 68 OUTPUT DEBUG CONSOLE TERMINAL PORTS COMMENTS

● PS D:\compiladores> d:; cd 'd:\compiladores'; & 'C:\Program Files' UFABC Compiler
Compilation Successfully - Good Job
Var [id=a, type=NUMBER, initialized=true]
Var [id=b, type=NUMBER, initialized=true]
Var [id=x, type=TEXT, initialized=true]
Var [id=y, type=TEXT, initialized=true]
import java.util.Scanner;
public class teste5 {
 public static void main(String[] args) {
 Scanner _scTrx = new Scanner(System.in);
 int a;
 int b;
 String x;
 String y;
 x = _scTrx.nextLine();
 y = _scTrx.nextLine();
 a = _scTrx.nextInt();
 b = _scTrx.nextInt();
 System.out.println(a);
 if (a>5) {
 System.out.println("maior que 5");
 }else {
 System.out.println("menor que 5");
 }
 if (b>=0) {
 System.out.println("b positivo");
 }else {
 System.out.println("b negativo");
 }
 }
}

8. Variável tipo real + Operações aritméticas

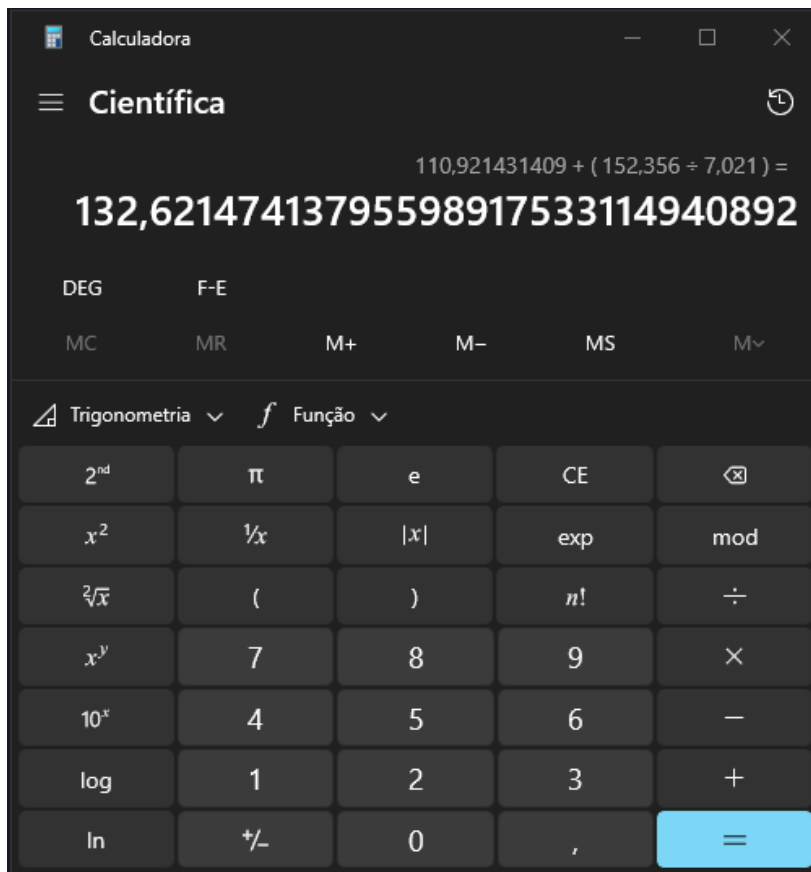
```
1  programa testeDecimal
2
3  declare a, b: number;
4  declare x, y: text;
5  declare i, j: real;
6  inicio
7  leia(a);
8  leia(x);
9  i := 3.123;
10 j := i * 13.321 * i + 152.356 / 7.021 - 19;
11 escreva(j);
12
13 fim
14 fimprog
```

Compilation Successfully - Good Job

```
Var [id=a, type=NUMBER, initialized=true]
Var [id=b, type=NUMBER, initialized=false]
Var [id=x, type=TEXT, initialized=true]
Var [id=y, type=TEXT, initialized=false]
Var [id=i, type=REALNUMBER, initialized=true]
Var [id=j, type=REALNUMBER, initialized=true]
!!!Warning!!! Variable declared but not used:Variable b
Variable y
```

```
import java.util.Scanner;
public class testeDecimal {
    public static void main(String[] args) {
        Scanner _scTrx = new Scanner(System.in);
        int a;
        int b;
        String x;
        String y;
        double i;
        double j;
        a = _scTrx.nextInt();
        x = _scTrx.nextLine();
        i = 3.123;
        j = i*13.321*i+152.356/7.021-19;
        System.out.println(j);
    }
}
```

PS D:\compiladores>



```
PS D:\Facul\Projeto_Compiladores> & 'C:\Program Files\Java\bin\java.exe' -cp .\bin\classes;.\bin\classes\*.class 1 a
132.621474137956
```

9. Loop While

```
1  programa testeWhileprog
2      declare x: text;
3      declare a, b: number;
4      inicio
5          a := 1;
6          b := 10;
7          enquanto(a < b)
8
9              {
10                 a := a + 1;
11                 escreva(a);
12                 b := b- 1;
13             }
14             escreva(a);
15             escreva(b);
16 fim
17 fimprog
```

● UFABC Compiler

Compilation Successfully - Good Job

Var [id=a, type=NUMBER, initialized=true]

Var [id=b, type=NUMBER, initialized=true]

Var [id=x, type=TEXT, initialized=false]

!!!Warning!!! Variable declared but not used:Variable x

```
import java.util.Scanner;
public class testWhileprog {
    public static void main(String[] args) {
        Scanner _scTrx = new Scanner(System.in);
        int a;
        int b;
        String x;
        a = 1;
        b = 10;
        while (a<b) {
            a = a+1;
            System.out.println(a);
            b = b-1;
        }System.out.println(a);
        System.out.println(b);
    }
}
```

○ PS D:\compiladores> █