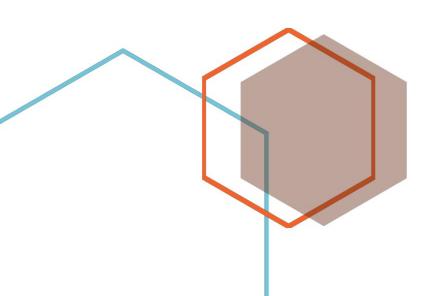


[LANGUAGE SPECIFICATION IN JAVA]



COMPILER CONSTRUCTION 501 SUBMITED MISS ARISHA



GROUP MEMBERS

ALI UMAIR EB19103013 HARIS ALI EB19103033 M. ZANAEN ULLAH EB19103089

Table of Contents

• Data Type	
• Punctuators	
Operators	
• CONDITIONS	
• LOOPS	
• ARRAY	
• Statements	9
Access Modifier	10
OOPS CONCEPTS	12

DATA TYPES

Keywords	Class Part	Value Part	Syntax
digit	Datatype	int	digit myName=33;
point	Datatype	float	point myPointNum=6.99;
char	Datatype	char	char myChar="a";
text	Datatype	String	Text myText="hello world"
bool	Datatype	boolean	bool myBool=True;

Note:-

- Here we use digit instead of int .
- Here we use point instead of float.
- Here we use text instead of String.

PUNCTUATORS

Punctuators	Class Part	Value Part
;	• ,	;
:	:	:
,	,	,
(((
)))
{	{	{
}	}	}
I	[[
1]]

OPERATORS

Punctuators	Class Part	Value Part
	A with no a tip. One a wanta wa	
+	Arithmetic Operators	+
-	Arithmetic Operators	-
*	Arithmetic Operators	*
/	Arithmetic Operators	/
%	Arithmetic Operators	%
==	Relational Operators	==
!=	Relational Operators	!=
>	Relational Operators	>
<	Relational Operators	<
>=	Relational Operators	>=
<=	Relational Operators	<=
&&	Logical Operators	&&
П	Logical Operators	11
++	Unary Operator	++
	Unary Operator	
=	Assignment Operator	=

```
class Main {
    general static void main() {
        digit a = 12, b = 5;

        System.out.println("a + b = " + (a + b));
        System.out.println("a - b = " + (a - b));
        System.out.println("a * b = " + (a * b));
        System.out.println("a / b = " + (a / b));
        System.out.println("a % b = " + (a % b));
    }
}
```

CONDITIONAL

Keywords	Class Part	Value Part	Syntax
if	Condition	if	If(/**condition*/){}
else	Condition	else	<pre>If(/**condition*/){} else{}</pre>

```
class Main {
    general static void main() {
        digit a =0;

    if(digit > 0){
        System.out.println("the number is positive.");
    }

    else if(digit < 0){
        System.out.println("the number is negative."); }

    else{
        System.out.println("the number is Zero.")
        }
}</pre>
```

LOOPS

Keywords	Class Part	Value Part	Syntax
for	loop	for	for(digit i=1:i<=5;i++){}
till	loop	while	till (i < 5){}
do	loop	do	do(i++) till(I <= 10)

Note:-

• Here we use till instead of while loop.

ARRAY

• One dimensional:-

Example:-

• Multi dimensional:-

STATEMENT

Keywords	Class Part	Value Part	Syntax
Case	Statement	case	case 7:
shift	Statement	switch	Shift(digit){ case 6: }
break	Statement	break	Case 7: break ;
continue	Statement	continue	for(digit i=1:i<=5;i++){ If(/**condition*/){ Continue; }

ACCESS MODIFIERS

Keywords Class Part		Value Part	Syntax	
personal	Access Modifier	private	personal class A{}	
general Access Modifier		public	general class A()	
protected	Access Modifier	protected	protected class A()	

Note:-

- Here we use personal instead of private.
- Here we use general instead of public.

OOPS CONCEPTS

- Inheritance
- Abstraction
- Class, constructor, method, object

Keywords	Class Part	Value Part	Syntax
Class	OOPs Concept	Class	class A{}
extend	OOPs Concept	extend	class A()extend class b()
static	Reference	static	static text name="hello"
super	Reference	super	super./*method*/()
this	Reference	this	this./*method*/()
new	OOPs Concept	new	Class A obj = new class B()
Implements	OOPs Concept	Implements	class A() implement class b()

```
class Main {
     digit I;
     personal Main(){
           I=5;
           System.out.println(" constructor is called");
           }
           general static void main() { Main obj =
           new Main(); System.out.println(" value of
           1:" + obj.i");
           }
     }
interface Animal {
     protected void display(){
                System.out.println(" i am an animal ");
           }
     }
class dog implement Animal {
     general static void main() {
           Dog dog = new Dog();
}
```