# 1.Tujuan

- Mengidentifikasi bagian dasar dari program java
- Membedakan mana yang termasuk ke dalam java literals, tipe data dasar, tipe variabel, pengidentifikasian dan operator.
- Mengembangkan program java sederhana menggunakan konsep pembelajaran pada bab ini.
- Menganalisa program java pertama saya

2. Percobaan

Percobaan 1 : Program Java Pertama

```
public class Hello {
    public Hello() {
    }
    public static void main(String[] args) {
        System.out.println("Hello world!");
    }
}
```

Output Percobaan 1 :
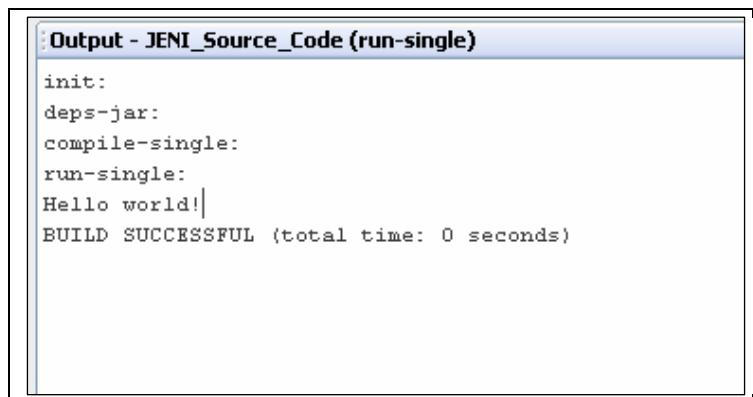
```
Output - JENI_Source_Code (run-single)
init:
deps-jar:
compile-single:
run-single:
Hello world!
BUILD SUCCESSFUL (total time: 0 seconds)
```

Percobaan 2 : Deklarasi dan Inisialisasi Variabel:

```
public class VariableSamples {
public VariableSamples() {
}
public static void main( String[] args ){
boolean      result;
char   option;
option = 'C';
double      grade = 0.0;
}
}
```

Output Percobaan 2 :

```
Output - JENI_Source_Code (run-single)
init:
deps-jar:
compile-single:
run-single:
BUILD SUCCESSFUL (total time: 0 seconds)
```

Percobaan 3 : Menampilkan Data Variabel

```
public class OutputVariable {

public OutputVariable() {
}
public static void main( String[] args ){
int value = 10;
char x;
x = 'A';

System.out.println( value );
System.out.println( "The value of x=" + x );
}
}
```

Output Percobaan 3 :

```
Output - JENI_Source_Code (run-single)

init:
deps-jar:
compile-single:
run-single:
10
The value of x=A
BUILD SUCCESSFUL (total time: 0 seconds)
```

Percobaan 4 : Demo Operator Arithmetic

```
public class ArithmeticDemo {
public ArithmeticDemo() {
}
public static void main(String[] args){
int i = 37;
int j = 42;
double x = 27.475;
double y = 7.22;
System.out.println("Variable values...");
System.out.println("    i = " + i);
System.out.println("    j = " + j);
System.out.println("    x = " + x);
System.out.println("    y = " + y); //adding numbers
System.out.println("Adding...");
System.out.println("    i + j = " + (i + j));
System.out.println("    x + y = " + (x + y));

System.out.println("Subtracting...");
System.out.println("    i - j = " + (i - j));
System.out.println("    x - y = " + (x - y));

System.out.println("Multiplying...");
System.out.println("    i * j = " + (i * j));
System.out.println("    x * y = " + (x * y));

System.out.println("Dividing...");
System.out.println("    i / j = " + (i / j));
System.out.println("    x / y = " + (x / y));

System.out.println("Computing the remainder...");
System.out.println("    i % j = " + (i % j));
System.out.println("    x % y = " + (x % y));

System.out.println("Mixing types...");
System.out.println("    j + y = " + (j + y));
System.out.println("   i * x = " + (i * x));
}
}
```

Output Percobaan 4 :

```
Output - JENI_Source_Code (run-single)
init:
deps-jar:
compile-single:
run-single:
Variable values...
    i = 37
    j = 42
    x = 27.475
    y = 7.22
Adding...
    i + j = 79
    x + y = 34.695
Subtracting...
    i - j = -5
    x - y = 20.255000000000003
Multiplying...
    i * j = 1554
    x * y = 198.36950000000002
Dividing...
    i / j = 0
    x / y = 3.805401662049862
Computing the remainder...
    i % j = 37
    x % y = 5.815000000000002
Mixing types...
    j + y = 49.22
    i * x = 1016.575
BUILD SUCCESSFUL (total time: 0 seconds)
```

Percobaan 5 : Demo Operator Relasi

```java
public class RelationalDemo {
public RelationalDemo() {
}
public static void main(String[] args) {

int i = 37;
int j = 42;
int k = 42;
System.out.println("Variable values...");
System.out.println("    i = " + i);
System.out.println("    j = " + j);
System.out.println("    k = " + k);

System.out.println("Greater than...");
System.out.println("    i > j = " + (i > j)); //false
System.out.println("    j > i = " + (j > i)); //true
System.out.println("    k > j = " + (k > j)); //false

System.out.println("Greater than or equal to...");
System.out.println("    i >= j = " + (i >= j)); //false
System.out.println("    j >= i = " + (j >= i)); //true
System.out.println("    k >= j = " + (k >= j)); //true

System.out.println("Less than...");
System.out.println("    i < j = " + (i < j)); //true
System.out.println("    j < i = " + (j < i)); //false
System.out.println("    k < j = " + (k < j)); //false

System.out.println("Less than or equal to...");
System.out.println("    i <= j = " + (i <= j)); //true
System.out.println("    j <= i = " + (j <= i)); //false
System.out.println("    k <= j = " + (k <= j)); //true

System.out.println("Equal to...");
System.out.println("    i == j = " + (i == j)); //false
System.out.println("    k == j = " + (k == j)); //true

System.out.println("Not equal to...");
System.out.println("    i != j = " + (i != j)); //true
System.out.println("    k != j = " + (k != j)); //false
}
}
```

Output Percobaan 5 :

```
Output - JENI_Source_Code (run-single)
compile-single:
run-single:
Variable values...
    i = 37
    j = 42
    k = 42
Greater than...
    i > j = false
    j > i = true
    k > j = false
Greater than or equal to...
    i >= j = false
    j >= i = true
    k >= j = true
Less than...
    i < j = true
    j < i = false
    k < j = false
Less than or equal to...
    i <= j = true
    j <= i = false
    k <= j = true
Equal to...
    i == j = false
    k == j = true
Not equal to...
    i != j = true
    k != j = false
BUILD SUCCESSFUL (total time: 0 seconds)
```

Percobaan 6 : Logika Boolean AND

```
public class TestAND {
public TestAND() {
}

public static void main( String[] args ){
int    i = 0;
int    j = 10;
boolean test= false;

test = (i > 10) && (j++ > 9);
System.out.println(i);
System.out.println(j);
System.out.println(test);

test = (i > 10) & (j++ > 9);
System.out.println(i);
System.out.println(j);
System.out.println(test);
}
}
```
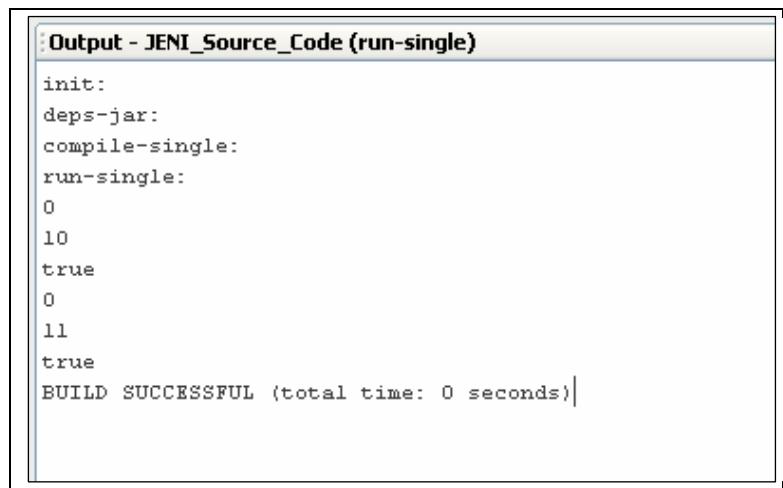
Output Percobaan 6 :

```
Output - JENI_Source_Code (run-single)
init:
deps-jar:
compile-single:
run-single:
0
10
false
0
11
false
BUILD SUCCESSFUL (total time: 0 seconds)
```

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Percobaan 7 : Operator Logika Boolean OR

```
public class TestOR {
public TestOR() {
}
public static void main( String[] args ){
int    i      = 0;
int    j      = 10;
boolean test= false;

test = (i < 10) || (j++ > 9);
System.out.println(i);
System.out.println(j);
System.out.println(test);

test = (i < 10) | (j++ > 9);
System.out.println(i);
System.out.println(j);
System.out.println(test);
}
}
```

Output Percobaan :

```
Output - JENI_Source_Code (run-single)
init:
deps-jar:
compile-single:
run-single:
0
10
true
0
11
true
BUILD SUCCESSFUL (total time: 0 seconds)
```

Percobaan 8 : Operator Logika XOR

```java
public class TestXOR {
public TestXOR() {
}

public static void main( String[] args ){
boolean val1 = true;
boolean val2 = true;
System.out.println(val1 ^ val2);

val1 = false;
val2 = true;
System.out.println(val1 ^ val2);

val1 = false;
val2 = false;
System.out.println(val1 ^ val2);

val1 = true;
val2 = false;
System.out.println(val1 ^ val2);
}
}
```
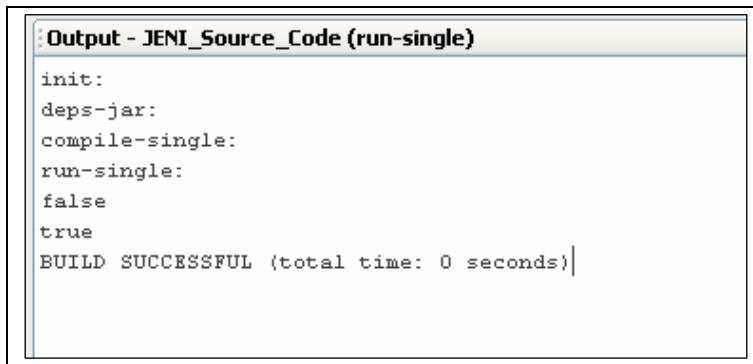
Output Percobaan :

```
Output - JENI_Source_Code (run-single)
init:
deps-jar:
compile-single:
run-single:
false
true
false
true
BUILD SUCCESSFUL (total time: 0 seconds)
```

Percobaan 9 : Operator Logika NOT

```java
public class TestNOT {

public TestNOT() {
}
public static void main( String[] args ){

boolean val1 = true;
boolean val2 = false;
System.out.println(!val1);
System.out.println(!val2);
}
}
```

Output Percobaan :

```
Output - JENI_Source_Code (run-single)
init:
deps-jar:
compile-single:
run-single:
false
true
BUILD SUCCESSFUL (total time: 0 seconds)
```

Percobaan 10 : Conditional Operator

```
public class ConditionalOperator {
public ConditionalOperator() {
}
public static void main( String[] args ){

String     status = "";
int    grade = 80;

status = (grade >= 60)?"Passed":"Fail";

System.out.println( status );
}
}
```

Output Percobaan :

```
Output - JENI_Source_Code (run-single)

init:
deps-jar:
compile-single:
run-single:
Passed
BUILD SUCCESSFUL (total time: 0 seconds)
```

Percobaan 11 : Conditional Operator 2

```java
public class ConditionalOperator2 {

public ConditionalOperator2() {
}
public static void main( String[] args ){

int    score = 0;
char   answer = 'a';

score = (answer == 'a') ? 10 : 0;
System.out.println("Score = " + score );
}
}
```

Output Percobaan :

```
Output - JENI_Source_Code (run-single)
init:
deps-jar:
compile-single:
run-single:
Score = 10
BUILD SUCCESSFUL (total time: 0 seconds)
```