**Tutorial 03 (Program)**

**Exercise 3.1 Declaration and Initialization**

1. public class Main {

public static void main(String []args) {

int num\_1= 25;

int num\_2= 25;

System.out.println (num\_1 + num\_2 + num\_3);

}

}

**Error is:**

Main.java:5: error: cannot find symbol

System.out.println (num\_1 + num\_2 + num\_3);

^

symbol: variable num\_3

location: class Main

1. err
2. Yes it is a syntax error.
3. public class Main {

public static void main(String[] args) {

int num\_1;

int num\_2;

System.out.println (num\_1 + num\_2);

}

}

**Error is:**

Main.java:6: error: variable num\_1 might not have been initialized

System.out.println (num\_1 + num\_2);

^

Main.java:6: error: variable num\_2 might not have been initialized

System.out.println (num\_1 + num\_2);

^

errors

**Exercise 3.2 The effect of assignments**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **x** | **y** | **z** |
| int x= 0; | 0 |  |  |
| double y, z =3.0; |  | 3.0 | 3.0 |
| y =0.5\*z; |  | 1.5 | 3.0 |
| X=0.5\*z; | 1.5 |  | 3.0 |
| X = 15; | 15 |  |  |
| Y =4; |  | 4 |  |
| Z=x%y; | 15 | 4 | 3 |
| X++; | 15 |  |  |
| X+= y; | 20 |  | 4 |
| Z \*=3; |  |  | 9.0 |
| Y=x++ \*2; | 15 | 30 |  |

**Exercise 3.4 Time Clock Calculation**

a.

START

PROMPT “Enter ClockInHour,ClockInMin, ClockOutHour, ClocckOutMin”

READ ClockInHour, ClockInMin, ClockOutHour, ClockOutMIn

CALCULATE totalClockInInMinutes = clockInHour \*60 + clockInMin

CALCULATE totalClockOutInMinutes = clockOutHour \*60 + clockOutMin

CALCULATE totalTime = totalClockOutInMinutes - totalClockInInMinutes

CALCULATE inHour = totalTime / 60

CALCULATE inMin = totalTime% 60

DISPLAY “Enter Data:” ,inHour “h”, inMin

END

b.

1. ClockInHour
2. ClockInMin
3. ClockOutHour
4. ClockOutMin

c. Desk Checking

d.

|  |  |  |  |
| --- | --- | --- | --- |
| No | 1 | 2 | 3 |
| ClockInHour | 12 | 01 | 09 |
| ClockInMin | 30 | 15 | 23 |
| ClockOutHour | 16 | 17 | 15 |
| ClockOutMIn | 45 | 00 | 57 |
| Expected Output | 4h15 | 15h45 | 6h34 |