

Day-2

17/feb/2023

Topics:

- Input/output
- All math operators
- Learn about conditions
  - if
  - else if
  - switch
- Loops
  - for
  - for each
  - while
  - do while
  - Break } Loop control's
  - continue }
- Comments
  - single line comments
  - multi line comments
- Some pattern programming problems,
  - shapes
  - alphabets
  - numbers
  - words,

Input/output :-

for input we will use scanner class object

```
Scanner scanner = new Scanner(System.in); } Input  
int age = scanner.nextInt();  
System.out.println("Hello the world"); } Output
```

Operators :

- , + , \* , / , %

Subtracting (-)  
Addition (+)  
Multiplication (\*)  
Division (/)  
Modulus (%)

Develop calculator project :-

Assignment operator: = += -= \*= /= %= ^= |= <<= >>=

Simple assignment operator (=)

int a = 10  
└─ assignment operator

Compound assignment

└─ Here we can use some more math operators like

(+,-,/,%)

Ex:- int a=20;  
a=a+10;  
↓ ↓ ↓ [a=30]  
20 = 20 + 10

These operators + compound simple assignment operator.

Now using Compounding

int a = 20;  
a = a + 20  
20 = 20 + 20 = 40

a += 20; └─ (+=) mean before (+) variable added to after (=),

Ex:- a -= 0; (a-a) (a=0) → 0

Ex\*:- a = 10  
(a-a)=0  
a = 10 → 10

Like this we can use compounding assignment operator's,

Operator Type	Category	Precedence
Unary postfix	expr+ expr-	
prefix ++expr -expr	+expr -expr	
Arithmetic	multiplicative * /	
additive + -		
Shift shift	<>>>	
Relational comparison	< > <= >= instanceof	
equality == !=		
Bitwise exclusive AND &		
bitwise inclusive OR		
Logical logical AND &&		
logical OR		
Ternary ternary ?:		
Assignment assignment	= += *= /= %= ^=  = <<= >>=	

Operator Type Category Precedence

Unary postfix expr+ expr-

prefix ++expr -expr

Arithmetic multiplicative \* /

additive + -

Shift shift <>>>

Relational comparison < > <= >= instanceof

equality == !=

Bitwise exclusive AND &

bitwise inclusive OR |

Logical logical AND &&

logical OR ||

Ternary ternary ?:

Assignment assignment = += \*= /= %= ^= |= <<= >>=

Conditions :-

if

else if

Switch

if Condition:-

Block started

Block ended

if (condition) {

Block or code

}

else if (condition)

if (2 == 2) {

print("Both age equal");

}

else if (2 != 3) {

print("Both are not equals");

}

else {

print("It is not a number");

}

switch :- we can use case's

switch (expression) {

case 1: {

Block of code

}

Ex:- user input 1 to 3

Entre number : 2

switch (Entre number) {

case 1: "Hello";

case 2: "Bye";

case 3: "Good bye";

}

This is the way to use switch case

loops:-

Looping or Iterating the cycle's, Repeated work.

→ while (loop)

white (condition) {

Block of code

}

2nd step checking condition

i <= 10

o <= 10 → TRUE

Entre to the loop.

executing all the coding

programming lines,

Once executing is finished

Return to the 2nd step

3rd step i++

o++ → 1

i = 1

2nd step checking condition

if it is true go the for loop block executing all the

line of code,

this continue,

pattern programming :

Shapes:-

Square

Triangle

Circle

Diamond

Right angle triangle

Left angle triangle

Upward triangle

Downward triangle

Star

Row

Col

Note:

Cursor not goes/move without character,

use ASCII → char's

If you want to print

\* \* → this pattern

you need to print some spaces

→ move the cursor,

21/2/2023

T: 11:10 pm

