**Operators:**

1. Assignment operator:- “=”

Ex: X=10;

Value(right side vlaue) will be assigned to left side.

Left -> operator

Right-> value

1. **Arithmetic operators:**

+ : addition

– : sustraction

* : multiplication

/ : Division

% : modulus

11 % 2 => 1 (reminder)

11/2 => 5 (division)

19%5 => 4 Reminder

Unary operator:

Unary plus : +

Ex: a+ = 5 => +5

Unary Minus:

a-=5 => -5

Increment / decrement operator:

1. Pre increment: ++a => value will be increment first and then assigned.
2. Post Increment : a++ => value first assigned and then incremented

**int** a=20;

System.***out***.println(a);

**int** b=a++; //post increment

System.***out***.println(b);

System.***out***.println(a);

C. Pre-decrement: --a => first decremented and then assigned

d. post decrement: a—

**int** a=20;

System.***out***.println(a); //20

**int** b=a--; //Post decrement

System.***out***.println(b); //20

System.***out***.println(a); //19

A++ => post increment => Assign first and increment

++A Pre increment => first increment and assign

A-- => Post decrement => assign first and decrement

--A => Pre decrement => pre decrement and asign

**Relational operator:**

Out come: true or false

== : equal to -> This is use to check values are equal or not

If values are qual then it will return true

If not then returns false

**!= : Not equal to**

IF values are not equal then return true

21 != 35 => true

1. = 21 => false

‘>’ : Greather than

‘<’ : less than

“>=” : greater than or equal

“<=” : less than or equal

21 <=23 => true

21 <=21 =>ture

21 <=20 => false

Control statement:

1. if
2. if-else
3. else-if
4. nested if
5. switch

If statement:

Syntax:

if(condition){

//action to be performed

}

If condition is true then body part will be printed or executed

If-else

If(condition){

//do this

}

Else

{

}

* Whenever condition form if is true then if block will be executed.
* Whenever if condition is false then else block is executed.
* Else block is not compulsory, it is programmers choice as per requremet he can use.
* If we are not using curly braces then only one statement consider under if and else.
* **Condition is compulsusory with if keyword, but condition is not given with else keyword.**

**Else-if**

=>else if has same functionality as that of if statement but it gets executed when if statement failes

=> it is use for multiple choices.

=> We can use n no. of else if statement.

=>the condition with else is not allowed.

=> there no compulision of using else statement.

=> when we use else statement then it willmexecute when all the condition from “else-if” gets failed.

Assigenment:

Days

Days=29 => feb

Days 30=> Apr, June

31=> January, mar

Else

Invvalin month

1. Identify shape of geometry:

No of side=3, triangle

Side 4=> square

Side 5=> pentagaon

Noside=> circle

> = 65 => distinction

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60 to 65 => First class

Marks >= 60 and marks <65

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50 to 59 => second class

Makrs >=50 and marks <60

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< 50 pass class

**package** variable;

**public** **class** ElseIFClass {

**public** **static** **void** main(String[] args) {

**int** marks=20;

**if**(marks>65) {

System.***out***.println("Distinction");

}**else** **if**(marks>=60 && marks<65) {

System.***out***.println("First Division");

}

**else** **if**(marks>=50 && marks< 60)

{

System.***out***.println("Second Division");

}

**else**

{

System.***out***.println("Invalid input");

}

}

}

Nested if:

* If statement inside another if statement is called as nested if statement.
* We can use else statement also
* Programmer can use multiple if inside if statement.
* When else is used then it will refer to nearest if statement.

**if**(condition) {

**if**(condition) {

}

}**else** {

}

Ex:

String username="abc";

String password="abc@1234";

**if**(username == "abc") //ture

{

System.***out***.println("User name is correct");

**if**(password=="abc@1234") //true

{

System.***out***.println("Login successful");

}

}

**else**

{

System.***out***.println("Invalid User");

}

}

Switch case:

* It is multiple decision making statement.
* It is use to select one out off many statement.

Syntax:

Switch (expression){

Case 1:

Case 2:

}

* Case is option inside switch
* Case must be constant. There is no variable or expression is allowed
* Duplicate case value is not allowed
* If we want to limit case execution, then we need to use break keyword.

**int** day=6;

**switch**(day) { //

**case** 1:

System.***out***.println("Monday");

**break**;

**case** 2:

System.***out***.println("Tuesday");

**break**;

**case** 3:

System.***out***.println("Wednesday");

**break**;

**case** 4:

System.***out***.println("Thuresday");

**break**;

**case** 5:

System.***out***.println("Firday");

**break**;

**case** 6:

System.***out***.println("Saturday");

**break**;

**case** 7:

System.***out***.println("Sunday");

**break**;

**default**:

System.***out***.println("Invalid value");

}

**char** day='B';

**switch**(day) { //

**case** 'A':

System.***out***.println("Monday");

**break**;

**case** 'B':

System.***out***.println("Tuesday");

**break**;

**case** 'C':

System.***out***.println("Wednesday");

**break**;

**case** 'D':

System.***out***.println("Thuresday");

**break**;

**case** 'E':

System.***out***.println("Firday");

**break**;

**case** 'F':

System.***out***.println("Saturday");

**break**;

**case** 'G':

System.***out***.println("Sunday");

**break**;

**default**:

System.***out***.println("Invalid value");

}

String day="FRI";

**switch**(day) { //

**case** "MON":

System.***out***.println("Monday");

**break**;

**case** "TUE":

System.***out***.println("Tuesday");

**break**;

**case** "WED":

System.***out***.println("Wednesday");

**break**;

**case** "THU":

System.***out***.println("Thuresday");

**break**;

**case** "FRI":

System.***out***.println("Firday");

**break**;

**case** "SAT":

System.***out***.println("Saturday");

**break**;

**case** "SUN":

System.***out***.println("Sunday");

**break**;

**default**:

System.***out***.println("Invalid value");

}

if-else (one condtion to if statement)

if(condtion)

{

}

else

{

}

else-if:

if(condtion)

{

}

else-if(condition)

{

}

else-if(condition)

{

}

else-if(condition)

{

}