

JAVA

PROGRAMMING

ASSIGNMENT

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1) Precedence rules and associativity in java

Operator precedence determines the grouping of terms in an expression. This affects how an expression is evaluated. Certain operators have higher precedence than others.

Eg: $y = x + 1 + 2 * 3$

Here y is assigned as 7, but not 9 because multiplication operator has higher precedence than addition.

Here, according to the table, the operators will be evaluated in an expression.

operator.	Precedence	Associativity
Postfix	$> () []$	Left to right
unary	$> ++ -- ! ~$	Right to left
Multiplicative	$> * /$	Left to Right
Additive	$> + -$	Left to Right
shift	$> > > < <$	Left to Right
Relational	$> > > = < =$	Left to Right
Equality	$> == !=$	Left to Right
Bitwise	$> \& \> \wedge \> $	Left to Right
Logical AND	$> \& \&$	Left to Right
Logical OR	$> $	Left to Right
conditional	$> ? : ;$	Right to left
Assignment	$> + > = = * = \% = > > =$	Right to Left

Implementation

In an priority queue, an element with high priority is served before an element with low priority. If two elements with the same priority, they are served according to their order in the queue.

Eg: class MyClass {
public static void main (String[] args) {
int a = 1
int b = 2
int c = 3
System.out.println (" a + b = " + a + b);
System.out.println (" a + b = " + (a + b));
System.out.println (" c = " + a + b);
System.out.println (" c = " + (a + b));
}

O/P:

a + b = 12

a + b = 3

c = 12

c = 3

Here, both of the operands of + operator are same the other is automatically cast to string. String concatenation & addition have same precedence. But parenthesis in 2 and 4 statements + operation performed instead of string concatenation.

```
public class Bankaccount
```

```
{
```

```
    private string name;
```

```
    private double balance;
```

```
    public Bankaccount()
```

```
    {
```

```
        name = " ";
```

```
        balance = 0;
```

```
    }
```

```
    public Bankaccount(string name, double balance)
```

```
    {
```

```
        name = " ";
```

```
        balance = initial balance;
```

```
    }
```

```
    public void deposit(double amount)
```

```
    {
```

```
        balance = balance + amount;
```

```
    }
```

```
    public void withdraw(double amount)
```

```
    {
```

```
        balance = balance - amount;
```

```
    }
```

```
    public double getBalance()
```

```
    {
```

```
        return balance;
```

```
    }
```

Public class ~~Bank~~ Bankaccount

{

public static void main (String[] args)

{

Bankaccount SC = new Bankaccount ("Sai", 1000);

SC.withdraw(250);

SC.deposit(400);

System.out.println("my SC.getBalance()");

}

}

O/p:-

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```
import java.util.Scanner;
import java.io.*;

class ElectricBill {
    String n;
    int units;
    double bill;

    void accept() {
        Scanner sc = new Scanner(System.in);

        System.out.println("Name of the customer = ");
        n = reader.readLine();

        System.out.println("Number of units consumed = ");
        String n = reader.readLine();
        units = Integer.parseInt(n);
    }

    void print() {
        System.out.println("Name of the customer = " + n);
        System.out.println("Number of units consumed = " + units);
        System.out.println("Bill = " + bill);
    }

    void calculate() {
        if (units <= 100)
            bill = 2.00 * units;
        else if (units > 100 && units <= 300)
            bill = 3.00 * units;
    }
}
```

```
if (units > 300) {
```

```
    bill = 5.00 * units
```

```
    bill = bill * (2.5/100)
```

```
}
```

```
void print() {
```

```
    System.out.println("Name of customer:" + n);
```

```
    System.out.println("Name of units consumed:" + units);
```

```
    System.out.println("Bill amount:" + bill);
```

```
}
```

```
class charVowel;
```

```
public void (check str, char ch) {
```

```
int c=0, code, i, s;
```

```
str = str.toLowerCase();
```

```
int len = str.length();
```

```
for (code = 97; code < 122; code++) {
```

```
    c = 0;
```

```
    for (i = 0; i < len; i++) {
```

```
        ch = str.charAt(i);
```

```
        s = (int)ch;
```

```
        if (s == code)
```

```
            c = c + 1;
```

```
    }
```

```
    ch = (char)code;
```

```
    if (c != 0)
```

```
        System.out.println("Frequency of " + ch + " is " + c);
```

```
}
```

```
}
```

```
public void check (string s) {
```

```
int i;
```

```
char ch = 0, chr = 0;
```

```
for (i = 0; i < s.length(); i++) {
```



```
ch = s1.charAt(i);
```

```
if (Character.isUpperCase(ch))
```

```
    chr = Character.toLowerCase(ch);
```

```
if ((s1.charAt(i) == 'a') || (s1.charAt(i) == 'e') ||
```

```
    (s1.charAt(i) == 'o') || (s1.charAt(i) == 'u') ||
```

```
    (s1.charAt(i) == 'i'))
```

```
    System.out.println(s1.charAt(i));
```

```
}
```

```
}
```

```
}
```


VASIREDDY VENKATADRI INSTITUTE OF TECHNOLOGY, NAMBUR

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