**[Valid Number](https://leetcode.com/problems/valid-number/)**

**package** leetcodeHard;

**public** **class** ValidNumber {

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

// **TODO** Auto-generated method stub

System.***out***.println(*isNumber*("2e3"));

}

**public** **static** **boolean** isNumber(String s) {

**if**(s == **null** || s.length() == 0) {

**return** **true**;

}

s = s.trim();

**boolean** numSeen = **false**;

**boolean** dotSeen = **false**;

**boolean** eSeen = **false**;

**boolean** numAfterE = **true**;

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

**char** c = s.charAt(i);

**if**(c >= '0' && c <= '9') {

numSeen = **true**;

numAfterE = **true**;

}

**else** **if**(c == 'e') {

**if**(eSeen || !numSeen) {

**return** **false**;

}

numAfterE = **false**;

eSeen = **true**;

}

**else** **if**(c == '.') {

**if**(dotSeen || eSeen) {

**return** **false**;

}

dotSeen = **true**;

}

**else** **if**(c == '+' || c == '-') {

**if**(i != 0 && s.charAt(i - 1) != 'e') {

**return** **false**;

}

}

**else** {

**return** **false**;

}

}

**return** numSeen && numAfterE;

}

}

Time Complexity : O(n) where n is length of string

Space Complexity : O(1) constant space