How to check if a character in a string is a digit or letter

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I have the user entering a single character into the program and it is stored as a string. I would like to know how I could check to see if the character that was entered is a letter or a digit. I have an if statement, so if a letter its prints that it's a letter, and the same for a digit. The code I have so far doesn't work but I feel I'm close. Any help you can offer is appreciated.

```
System.out.println("Please enter a single character: ");
String character = in.next();

System.out.println(character);

if (character.isLetter());{
  System.out.println("The character entered is a letter.");
} else if (character.isDigit()){
  System.out.println("The character entered is a digit.");
```

11 votes

java

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edited Oct 3 '12 at 19:14 — MityD — 111k • 20 • 210 • 240

asked Oct 3 '12 at 19:13 — user1701504 — 414 • 3 • 8 • 13

2 You need `else if` not `else` for that to compile. – Duncan Jones Oct 3 '12 at 19:15

the else statement has two compile errors, insert assignment operator expression. – user1701504 Oct 3 '12 at 19:16

And change `Syste` to `System` – DNA Oct 3 '12 at 19:16

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11 Answers

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You could use:

```
    if (Character.isLetter(character,charAt(0)){
      ....
```

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answered Oct 3 '12 at 19:15 — Reimeus — 158k • 10 • 143 • 210

it says this method is undefined – user1701504 Oct 3 '12 at 19:18

See the docs – Reimeus Oct 3 '12 at 19:20

@Reimeus - Do variables of type `char` have a `.charAt(0)` method? – Richard JP Le Guen Oct 3 '12 at 19:21

No. `character` is actually a string in the question. – Reimeus Oct 3 '12 at 19:22

@RichardJPLeGuen. OP has defined character as String. – Rohit Jain Oct 3 '12 at 19:22

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You could use the existing methods from the Character class. Take a look at the docs:

http://download.java.net/jdk7/archive/b123/docs/api/java/lang/Character.html#isDigit(char)

So, you could do something like this...

```
String character = in.next();
char c = character.charAt(0);
...
if (Character.isDigit(c) {
  ...
} else if (Character.isLetter(c)) {
  ...
}
```

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edited Oct 3 '12 at 19:22

answered Oct 3 '12 at 19:17 — Hristo — 22.8k • 11 • 140 • 215

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11 votes

Ummm, you guys are forgetting the `Character.isLetterOrDigit` method:

```
boolean x;
String character = in.next();
char c = character.charAt(0);
if(Character.isLetterOrDigit(charAt(c)))
{
  x = true;
}
```

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edited Sep 9 '16 at 15:29 — Nick Roth — 2.87k • 2 • 10 • 15

answered Oct 27 '14 at 23:43 — Fluffie — 122 • 1 • • 5

1 If there's `isLetterOrDigit()` – Raven Dec 21 '15 at 18:57

This doesn't tell you which of the two it is. It only verifies that it is at least a number or digit. It would return true for "A" or "2". – C Lattimer Dec 8 '16 at 16:11

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By using regular expressions:

```
boolean isChar = character.matches("[a-zA-z]{1}");
boolean isDigit = character.matches("\\d{1}");
```

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answered Oct 3 '12 at 19:21 — Michael — 867 • 8 • • 24

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4 votes

This is a little tricky, the value you enter at keyboard, is a String value, so you have to pitch the first character with method `line.charAt(0)` where. 0 is the index of the first character, and store this value in a char variable as an `char c= line.charAt(0)`. now with the use of method `isDigit()` and `isLetter()` from class `Character` you can differentiate between a Digit and Letter.

here is a code from your Program.

```
import java.util.Scanner;

class Practice
{
  public static void main(String[] args)
  {
    Scanner in = new Scanner(System.in);
    System.out.println("Input a letter");
    String line = in.next();
    char c = line.charAt(0);
    if (c.isDigit(c) ...
    System.out.printf("%c is a digit",c);
    else if (Character.isLetter(c)) ...
    System.out.printf("%c%c Is a Letter",c);
    }

}
```

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answered Oct 3 '12 at 19:59 — Bhanuai Khan — 53 • 1 • 7

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2 votes

```
    char temp = yourString.charAt(0);
    if(Character.isDigit(temp))
    {
      .........
    }else if (Character.isLetter(temp))
    {
      ......
    }else
    {
      ....
    }
```

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answered Oct 3 '12 at 19:16 — Kosa — 58.2k • 7 • 102 • 137

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2 votes

```
char charInTocharacter.charAt(0);
if(Character>=48 && charInt<=57){
  System.out.println("not character");
}
else
  System.out.println("Character");
```

Look for ASCII table to see how the int value are hardcoded .

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edited Oct 3 '12 at 19:23 — Bez — 29.9k • 11 • 56 • 76

answered Oct 3 '12 at 19:23 — Jimmy — 1,809 • 14 • • 25

@vandey. Why would you want to re-invent the wheel?? There already are predefined method to do this task for you. – Rohit Jain Oct 3 '12 at 19:26

It is just that if the OP wants to learn, he can understand what actually is going on when he calls those method. – Jimmy Oct 3 '12 at 19:28

@RohitJain. `Character.isDigit` checks for digit in any digit system, and this solution will ignore anything except arabic digits – mseangel May 30 '14 at 16:52

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1 votes

You could do this by Regular Expression as follows you could use this code

```
EditText et = (EditText) findViewById(R.id.editText);
String NumberPattern = "[0-9]+";
String Number = et.getText().toString();

if (Number.matches(NumberPattern) && s.length() > 0)
{
  //code for number
}
else
{
  //code for incorrect number pattern
}
```

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edited Feb 2 '16 at 4:58

answered Jan 28 '16 at 12:50 — Jeffy — 147 • 1 • • 9

Always explain your code. Welcome to SO – NSNoob Jan 28 '16 at 13:09

et is of editText. + sign is for the occurances of digits from 0 to 9 – Jeffy Jan 28 '16 at 13:42

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1 votes

```
import java.util.*;

public class String_char
{

  public static void main(String arg[]){

      Scanner in = new Scanner(System.in);
      System.out.println("Enter the value");
      String data;
      data = in.next();

      int len = data.length();
      for (int i = 0 ; i < len ; i++){
          char ch = data.charAt(i);

          if ((ch >= '8' && ch <= '9')){
              System.out.println("Number ");
          }
          else if((ch >= 'a' && ch <= 'z') || (ch >= 'A' && ch <= 'Z')){
          System.out.println("Character");
          }
          else{
              System.out.println("Symbol");
          }
      }
  }
}
```

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edited Mar 15 '17 at 11:34 — KarelG — 3,668 • 2 • 21 • 41

answered Mar 15 '17 at 11:17 — Jan Austin — 11 • • 2

1 While this code snippet may solve the question, including an explanation really helps to improve the quality of your post. Remember that you are answering the question for readers in the future, and those people might not know the reasons for your code suggestion. – DimaSan Mar 15 '17 at 11:26

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0 votes

You need to convert your string into character..

```
String character = in.next();
char myChar = character.charAt(0);

if (Character.isDigit(myChar) {
  // print true
}
```

Check `Character` for other methods..

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answered Oct 3 '12 at 19:17 — Rohit Jain — 194k • 30 • 284 • 418

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0 votes

I have coded a sample program that checks if a string contains a number in it! I guess it will serve for this purpose as well.

```
public class test {
    public static void main(String[] args) {
        String[] c;
        boolean b;

        System.out.println("Enter the value");
        Scanner s = new Scanner(System.in);
        b = s.next();
        c = b.toCharArray();
        try {
            if (b == true) {
                throw new CharacterFormatException();
            } else {
                System.out.println("Valid String \t" + c);
            }
        } catch (CharacterFormatException ex) {
            System.out.println("Exception Raised-Contains Number");

        }
    }

    static boolean containNumber(String c) {
        char[] ch = new char[10];
        ch = c.toCharArray();

        for (int i = 0; i < ch.length; i++) {
            if ((ch[i] >= 48) && (ch[i] <= 57)) {
                return true;
            }
        }
        return false;
    }
}
```

`CharacterFormatException` is a user defined Exception. Suggest me if any changes can be made.

share improve this answer

edited Jan 28 '16 at 12:57 — Tom — 7,723 • 11 • 32 • 40

answered Nov 5 '15 at 6:03 — Maxx — 0

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Your Answer

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