ASSIGNMENT -7

SUBMITTED BY

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1. WRAPPER CLASS IN JAVA:

The automatic conversion of primitive data type into its corresponding wrapper class is known as Autoboxing.

valueOf() :method of wrapper classes to convert the primitive into objects.

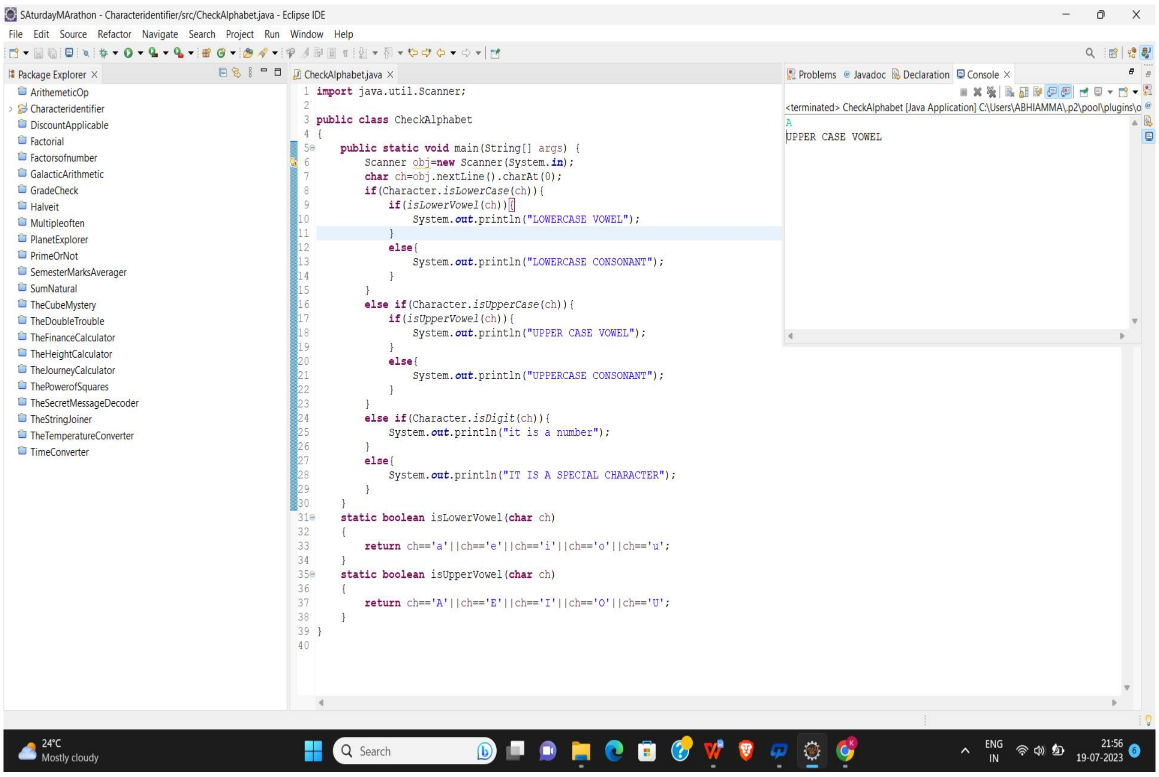
Primitive Type	Wrapper class
boolean	Boolean
char	Character
byte	Byte
short	Short
int	Integer
long	Long
float	Float
double	Double

WRAPPER CHARACTER CLASS METHODS:

- **toUpperCase(char ch)** - Converts the specified character to uppercase.
- **toLowerCase(char ch)** - Converts the specified character to lowercase.
- **toString(char ch)** - Converts the specified character to a string.
- **isDigit(char ch)** - Checks if the specified character is a digit (0-9).
- **isLetter(char ch)** - Checks if the specified character is a letter.

These are the some of the methods of Character Wrapper class in java.

CHARACTER WRAPPER CLASS PREOGRAM EXAMPLE:



```java
import java.util.Scanner;

public class CheckAlphabet
{
    public static void main(String[] args) {
        Scanner obj=new Scanner(System.in);
        char ch=obj.nextLine().charAt(0);
        if(Character.isLowerCase(ch)){
            if(isLowerVowel(ch)){
                System.out.println("LOWERCASE VOWEL");
            }
            else{
                System.out.println("LOWERCASE CONSONANT");
            }
        }
        else if(Character.isUpperCase(ch)){
            if(isUpperVowel(ch)){
                System.out.println("UPPER CASE VOWEL");
            }
            else{
                System.out.println("UPPERCASE CONSONANT");
            }
        }
        else if(Character.isDigit(ch)){
            System.out.println("it is a number");
        }
        else{
            System.out.println("IT IS A SPECIAL CHARACTER");
        }
    }
    static boolean isLowerVowel(char ch)
    {
        return ch=='a'||ch=='e'||ch=='i'||ch=='o'||ch=='u';
    }
    static boolean isUpperVowel(char ch)
    {
        return ch=='A'||ch=='E'||ch=='I'||ch=='O'||ch=='U';
    }
}
```

```
<terminated> CheckAlphabet [Java Application] C:\Users\ABHIAMMA\.p2\pool\plugins\o
A
UPPER CASE VOWEL
```

<u>ARRAYS IN JAVA AND ITS METHODS</u>:

An Array is a collection of homogeneous elements in a sequential order and can be retrieved through index.

An Array is an object in java.

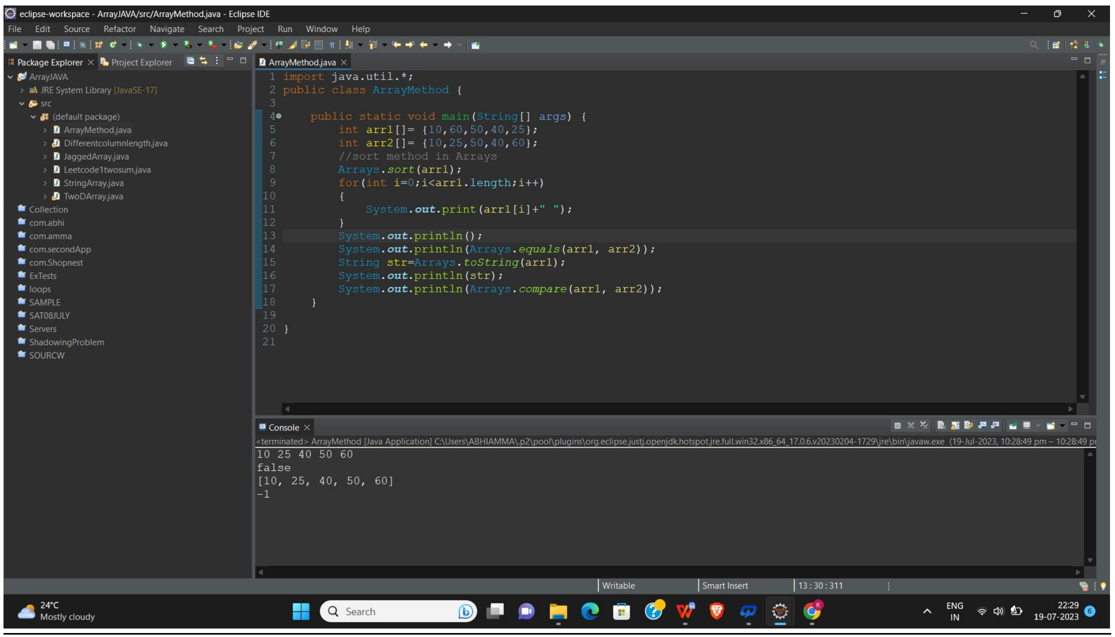
<u>ARRAY METHODS</u>:

The methods will be present in the package.

import java.util.Arrays;

1. length- returns the length of the array
2. toString(Array) : It returns a string representation of the contents of this array
3. compare(array 1, array 2):Compares two arrays passed as parameters lexicographically.
4. sort(originalArray):Sorts the complete array in ascending order.
5. equals(array1, array2): Checks if both the arrays are equal or not.

<u>ARRAY METHODS PROGRAM:</u>



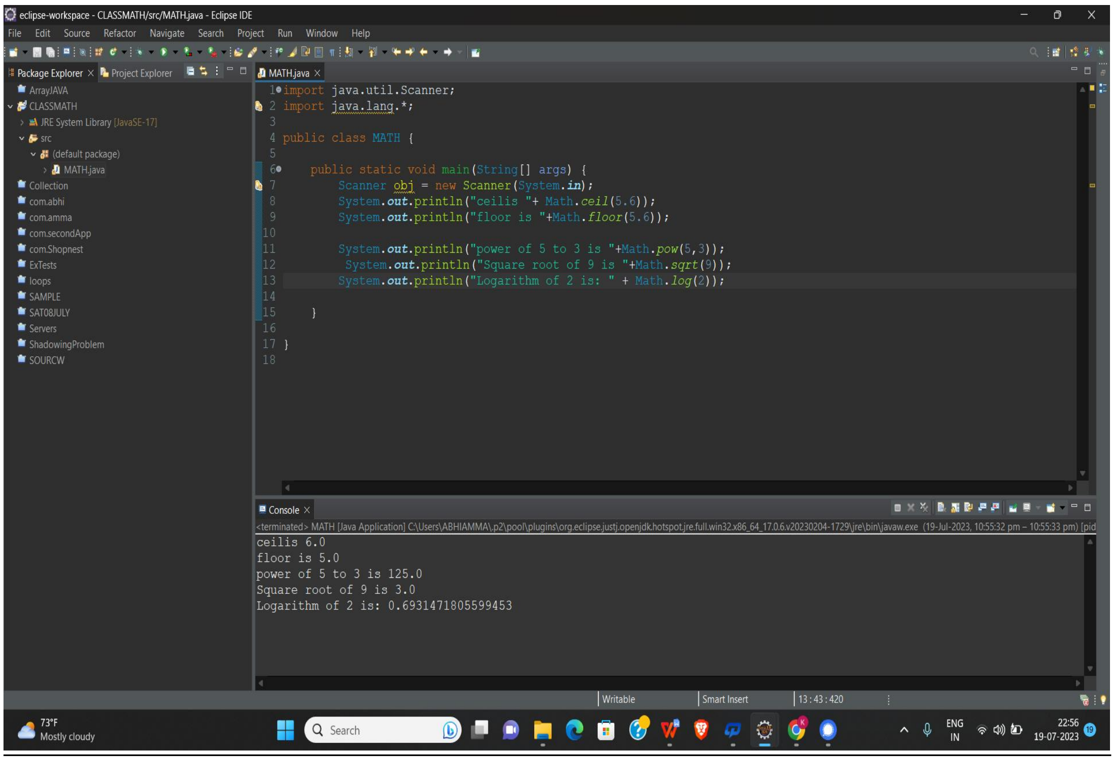
```java
import java.util.*;
public class ArrayMethod {

    public static void main(String[] args) {
        int arr1[]= {10,60,50,40,25};
        int arr2[]= {10,25,50,40,60};
        //sort method in Arrays
        Arrays.sort(arr1);
        for(int i=0;i<arr1.length;i++)
        {
            System.out.print(arr1[i]+" ");
        }
        System.out.println();
        System.out.println(Arrays.equals(arr1, arr2));
        String str=Arrays.toString(arr1);
        System.out.println(str);
        System.out.println(Arrays.compare(arr1, arr2));
    }

}
```

```
<terminated> ArrayMethod [Java Application] C:\Users\ABHIAMMA\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.6.v20230204-1729\jre\bin\javaw.exe (19-Jul-2023, 10:28:49 pm – 10:28:49 pm
10 25 40 50 60
false
[10, 25, 40, 50, 60]
-1
```

MATH CLASS IN JAVA:


eclipse-workspace - CLASSMATH/src/MATH.java - Eclipse IDE
File Edit Source Refactor Navigate Search Project Run Window Help
Package Explorer
Project Explorer
MATH.java
Console

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

public class MATH {

    public static void main(String[] args) {
        Scanner obj = new Scanner(System.in);
        System.out.println("ceilis "+ Math.ceil(5.6));
        System.out.println("floor is "+Math.floor(5.6));

        System.out.println("power of 5 to 3 is "+Math.pow(5,3));
         System.out.println("Square root of 9 is "+Math.sqrt(9));
        System.out.println("Logarithm of 2 is: " + Math.log(2));

    }

}
```

```
<terminated> MATH [Java Application] C:\Users\ABHIAMMA\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.6.v20230204-1729\jre\bin\javaw.exe (19-Jul-2023, 10:55:32 pm – 10:55:33 pm) [pid
ceilis 6.0
floor is 5.0
power of 5 to 3 is 125.0
Square root of 9 is 3.0
Logarithm of 2 is: 0.6931471805599453
```