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X - ICSE
Computer

1. JCL also known as Java Class Library are built in classes provided by Java Class Library to help the programmers with utility functions.
   Eg:- java.io.*; and java.util.*;

2.	Primitive Data Type	Composite Data Type
	• It is a fundamental data type.	• It is a set of primitive data types.
	• It is designed by system developers.	• It is designed by users.

3. A class which wraps the value of a primitive data type in an object is called Wrapper Class. It is present in java.lang package.
   We need a wrapper class to convert any data type into an object.

4. The conversion of primitive data type to wrapper object is called Autoboxing. The conversion of wrapper object to primitive data type is called unboxing.
   The needs of unboxing are:-
   • When a data from array list is to be used as a primitive data.
   • When the value from the wrapper object is to be passed to the function having primitive argument.

Example

5. OUTPUT

A a

5

6.

A

a b

A B C

a b c d

A B C D E

```
class Pattern{
public static void main(String args[]){
for(int i = 65; i<70; i++){
for(int j = 65; j<=i; j++){
  if(i % 2 == 0)
System.out.print((char)(j+32));
else
}System.out.
System.out.println();
  }
 }
}
```

5

Variable Listing

Name	Data Type	Description
i	int	To display it as a pattern
j	int	To display it as a pattern

7)

a) The purpose of Double.toString is that it converts double data type to String data type.

b) The purpose of Character.isDigit is that it checks whether the given argument is a digit or not.

c) The purpose of Character.isWhitespace is that it checks whether the string has a whitespace between it or not.

24+1/25 = 25/25