Class 10

Subject ..... Computer Applications

Topic.... Library Classes

Answers

1. A package is a group of classes, which can be imported to a program so that the user may exercise the implicit facilities available in it.

The default package is java.lang

2. The asterisk (*) sign indicates that all the classes of the imported package can be used in the program.

3. The wrapper class in Java serves two primary purposes:

a) to store primitive values in the object.

b) to convert a string data into other primitive types and vice versa.

4. The function to check whether a character is in uppercase or not is :

Character.isUpperCase(ch);

 It returns true if character is in uppercase, otherwise returns false.

5. The difference between primitive and composite data types are as follows:

a) primitive data type is a fundamental data type whereas composite data type is a set of primitive data types.

b) primitive data types are defined by the system developers whereas composite data types are defined by the users.

6. Integer.valueOf( ) function is used to convert a string to a primitive data type.

For example:

int n;

String s= "24";

n= Integer.valueOf(s);

Here, the value of the variable n is 24 (without quotes).

7. int x = 'A' ;

 Here, the value of x is 65; i.e; the ASCII value of A.

8. Autoboxing is the automatic conversion of primitive data type into an object of its equivalent wrapper class.

For example:

Integer val = new Integer(26) ;

Here, the integer type data 26 is converted into an object val of Integer wrapper class.

Need of autoboxing:

a) to pass a primitive type data to a function that uses a wrapper object as function argument.

B) to add a primitive data in the list of array elements.

PROGRAMS:

Question 1.

```java
// A program to display the number of different characters
import java.util.*;
public class Char_type
{
    public static void main(String args[])
    {
        Scanner sc=new Scanner(System.in);
        char ch;
        int i,n,uc,lc,d,sp;
        uc=lc=d=sp=0;
        System.out.println("Enter the number of characters:");
        n=sc.nextInt();
        for (i=1;i<=n;i++)
        {
            System.out.println("Enter the character:");
            ch=sc.next().charAt(0);
            if(Character.isLetter(ch)==true)
            {
                if(Character.isUpperCase(ch)==true)
                    uc++;
                if(Character.isLowerCase(ch)==true)
                    lc++;
            }
            else
```

```java
        {
            if(Character.isDigit(ch)==true)

                d++;

            else

                sp++;

        }

    }

    System.out.println("The number of uppercase characters are " + uc);

    System.out.println("The number of lowercase characters are " + lc);

    System.out.println("The number of digits are " + d);

    System.out.println("The number of special characters are " + sp);

  }

}
```

Question 2.

```java
// A program to change the case of a character

import java.util.*;

public class Change_case

{

    public static void main(String args[])

    {

        Scanner sc= new Scanner (System.in);

        char ch,chr;

        System.out.println("Enter the character");

        ch=sc.next().charAt(0);
```

```java
        if(Character.isUpperCase(ch)==true)
        {
            chr=Character.toLowerCase(ch);
            System.out.println(" The lowercase of " + ch + " is " + chr);
            System.out.println(" The ASCII code of " + chr + " is " + (int)chr);
        }
        else if(Character.isLowerCase(ch)==true)
        {
            chr=Character.toUpperCase(ch);
            System.out.println(" The uppercase of " + ch + " is " + chr);
            System.out.println(" The ASCII code of " + chr + " is " + (int)chr);
        }
        else
        System.out.println("The character entered is not a letter");
    }
}
```