Q1. Explain foreach() loop in java programming?
Ans: it is used to get value one by one from the array / collection object

Syntax:
for(data type variable : array/collection){

}
Example:
String s="welcome";
char arr[]={'w','e','l','c','o','m','e'};

for(char x:arr){
System.out.println(x);//W,e,l,c,o,m,e
}

Q2. Write a Java program to print sum and average of all array elements using for each loop?

```
class A6{
    public static void main(String args[]){
    int nums[]={10,20,30,40,50};

    int sum=0;
    for(int x:nums){
    sum=sum+x;
```

```
        }

        System.out.println("sum : "+sum);
        System.out.println("Average :
"+(sum/nums.length));



        }
}
```

Q2. Explain String class toCharArray() method in java programming?

Ans: It is used to convert given String into char Array
Syntax:
char[] toCharArray();

Example:
String s="welcome";
char arr[]=s.toCharArray();

```
class A6{
    public static void main(String args[]){
```

```java
String s="welcome";

char arr[]=s.toCharArray();
System.out.println("Using for Loop ");
int i;
for(i=0;i<arr.length;i++){
System.out.println(arr[i]);//W,e,l,c,o,m,e
}

System.out.println("Using for Each Loop ");

for(char x:arr){
System.out.println(x);//W,e,l,c,o,m,e
}


}
}
```

Q3. Write a Java Program to convert given lowerCase String into UpperCase without using pre-defined method?

Example1:
Enter Any String: welcome
Upper Case : WELCOME
Example2:
Enter Any String: WeLcOmE
Upper Case : WELCOME

---

a(97)   b(98)   c(99)
A(65)   B(66)   C(67)
32   32   32

char x='a';

```java
import java.util.Scanner;
class A6{
    public static void main(String args[]){

    Scanner sk=new Scanner(System.in);
    System.out.println("Enter Any String : ");
    String s=sk.nextLine();
```

```java
        String r="";
        for(int x:s.toCharArray()){
            if(x>='a'&&x<='z'){
            x=x-32;
            r=r+(char)x;
            }

            else{
            r=r+(char)x;
            }
        }

        System.out.println(r);
        }
}
```

Q3. Write a Java Program to convert given UpperCase String into lowerCase without using pre-defined method?

Example1:
Enter Any String: WELCOME
Upper Case : welcome
Example2:

Enter Any String: WeLcOmE
Upper Case : welcome

```java
import java.util.Scanner;
class A6{
    public static void main(String args[]){

        Scanner sk=new Scanner(System.in);
        System.out.println("Enter Any String : ");
        String s=sk.nextLine();

        String r="";
        for(int x:s.toCharArray()){
            if(x>='A'&&x<='Z'){
            x=x+32;
            r=r+(char)x;
            }

            else{
            r=r+(char)x;
            }
        }

        System.out.println(r);
    }
}
```

Homework for (10-DEC-2024)

Q3. Write a java program to convert a character of the String if character is UpperCase then it convert into lowerCase and if Character is lowerCase then it convert into UpperCase

Example1:

Enter Any String: WeLcOmE

Toggle Case: wElCoMe