Assignment-2

Subject - programming in Java

Code - CSA0914

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Faculty :-

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1. Reverse a number —

Aim — To write a reverse number

pseudo code —

* Create a class in public and create class name —
* Take inputs from user
* Using for loop and while (number != 0)
* digit = num % 10
* rev = rev * 10 + digit
* print reverse

Code —

```
import java.util.Scanner;
public class rev {
  public static void main (String[] args){
Scanner input = new Scanner (System.in);
System.out.print (" Enter a number :");
  int number = input.nextInt();
  int rev = 0;
While (number != 0){
```

```
digit = num % 10;
rev = rev + digit;
number = num/10;
}
System.print("rev" + reverse);
Scanner.Close();
}
```

Output :-

Enter the number - 12345

Reve number = 54321

(2) Armstrong

Aim - To write the java program for armstrong

Pseudo Code -

* Create the Class and Class name in public
* declare the variable
* take and get inputs from user
* take original = num

```
Sum = 0;
```

Code :-

```
import java.util.Scanner;
public class armstrong {
 public static void main (String[] args){
  Scanner scanner = new Scanner(System.in);
 System.out.print("Enter a number");
  int number = scanner.nextInt();
  Scanner.close();
 if (isarmstrong(num)){
 System.out.print(num + " is an armstrong ")
 }
 else {
 System.out.print(num + " is not armstrong ");
 }
 }
 public Static boolean isarmstrong(int num) {
  int sum = 0;
```

```
int org num = num;
while (number != 0) {
int digit = num % 10;
sum += math.pow(digit, num of digit);
is armstrong(" ");
}
Scanner.close()
```

Output :-

Enter the number : 153

153 is an armstrong number.

(3) Aim :- To write a Java program of GCD of two numbers.

Pseudo code :-

1) feature and create and classname in the public

* input from the user

* Enter the first number

Code:

```
public class GCD{
public static void main (String [] args) {
 Scanner scanner = new Scanner (System.in);
System.out.print("Enter first num");
 int a = Scanner.nextInt();
System.out.print("Enter 2nd num");
  Scanner.close();
   int gcd = findgcd(a,b);
System.out.println("GCD"+a+"b+"is:"+gcd);
public static int findgcd (int a, int b) {
   if (b==0){
      return a;
   }
return findgcd (b, a%b);
   }
}
```

Output:- Enter 1st number = 12
Enter 2nd number = 18
GCD of 12 and 18 is 6

4. Aim :- Mergsort array

pseudocode —

* To create class and classname
* Declare variables and take from user inputs
* Declare array1 and array2
* Loop conditions (if) and (else) condition
* print result

program :-

```
public class mergesort ;
public static void main (String[] args) {
  int[] array1 = { 1,3,5,7} ;
  int[] array2 = { 2,4,6,8,10} ;

  int[] mergedarray = mergesortarray
     (array1, array2) ;
```

```
System.out.print("merged array:");
    for (int num : merged array) {
System.out.print(num+" ");
}
}
Public static int[] mergesorted array(int[]
 array1, int[] array2) { int length=
 array.length;
  int length2 = array2.length;
int[] merged array = new int [length1+length2];
while (j<length2){
mergedarray[k+1] = array2[j++];
}
return merged array;
}
}
```

Out:- Merged Sorted array = {1,3,5,9,2,4,6,
4,6,3,10}

5 Aim :- To count the frequency of character in string in Java

pseudo code :-

* scanner hashmap, map, scanner
* create the class and classname in public
* inputs from user
* iterates throug each character of string

program :-

```
import java.util.hashmap;

public class character freq {
public static void main (String[] args) {
Scanner scanner = new Scanner (System.in);
System.out.print ("Enter a string");
Scanner.close();
```

```
public static map<character, integer> freq {
  for (char ch : str. to char array()){
    if ( frequency map . contains ((ch))
  {
 frequency map . put (ch, frequency map . get(ch)+1);
  }
  else{
 frequency map . put (ch, 1);
 }
 return frequency map;
 }
}
```

output :- hello

h:1, e:1, l:2, o:1