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Subcode: CSA0914

Assignment - 2

1. (Reverse a program)

Reverse a number:-

Program:-

```
import java.util.Scanner;
    Public class Reversenumber {
        Public static void main(String[]args)
    {
  Scanner Scanner = new Scanner(System.in);
 System.out.print("Enter a number:");
   int number = Scanner.nextInt();
   int reverseNumber = 0;
      While (number != 0) {
            int digit = number % 10;
     ReversedNumber = Reversednumber * 10 +
            digit;
          number /= 10;
    }

System.out.println("Reversed Number: " + Reverse
                    Number);
 }
}
```

input: 10345

Output: 54301

Pseudocode:-

Step1: Take an integer input from the user

Step2: Initialize the variable

Step3: while the input is greater than Zero

Step4: Take last digit of input number the finding Remainder.

Step5: print the Reversed number.

Q. Check Armstrong number :-

Program :-

```
import java.util.Scanner;
Public class ArmstrongNumber {
  public static void main(String[] args) {
  Scanner scanner = new Scanner(System.in);
System.out.print("Enter a number");
int number = scanner.nextInt();
  int original number = number;
int sum=0;
    While (number>0) {
      int digit = number %10;
    sum += digit * digit * digit;
    number/=10;
```

Calculate the GCD of two numbers

Program:-

```
import java.util.Scanner;
Public class GCD calculator {
Public static int findgcd (int a,b) {
while (b!=0) {
        int temp = b;
        b = a %. b;
        a = temp;
    }
    Return a;
}
Public static void main (String [] args) {
Scanner scanner = new scanner (system. in);
System. Out. print ("Enter first number:");
    int gcd = findGcd();
  Scanner. close();
}
}
```

Input: 10,18

Output: GCD is 6.

```
}
if(sum == originalnumber) {
    System.out.println(originalnumber + " is
        Armstrong number!");
}else {
System.out.println(originalnumber + " is not
an armstrong number.");
}
 scanner.close();
}
}
```

Input:- 153.

Output:- 153 is an armstrong number.

Pseudocode:-

* Take two integers from the user n_1 and n_2
* if n_2 is 0 Return n_1 as the gcd.
* Otherwise calculate the Remainder.
* Replace n_1 with n_2 and n_2 with temp.
* final value n_1 is gcd

1. Merge two arrays:

Program:-

```
import java.util.Arrays;
public class MergeSortedArray {
public static int[] mergeSortArray(int[] arr1, arr2)
{
    int n1 = arr1.length;
        n2 = arr2.length;
int[] Mergearray = new int[n1+n2]
    int i=0, j=0, k=0;
while (i<n1 && j<n2){
    if (arr1[i] <= arr2[j]) {
    Mergedarray[k++] = arr1[i++];
} else{
 int[] Merged array = mergesorted array (arr1, arr2);
System.out.println("Merge sorted array: " + Arrays.
to String(merged array));
 }
}
```

input: {1,3,5} {2,4,6}

output: {1,2,3,4,5,6}.

5. Count frequency characters in string:

Program:

```
import java.util.Hashmap;
public class character frequency counter {
Public static void count character frequency
    (String str) {
   Str = str.toLowercase();
for (char ch: str.tochararray()) {
frequency.map.put (ch,frequency); }
}
Public static void main (String [] args)
  {
String input string = " character frequency";
 Count character frequency (input string);
  }
}
```

input: "hello"

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