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CSA0914 - Java Programming

Assignment - II

1. Reverse a number :-

```
import java.util.Scanner;
public class Reverse {
    public static void main(String[]args){
        Scanner input = new Scanner(System.in);
        System.out.print("enter a number:");
        int n=input.nextInt();
        int rev=0;
    while (n!=0){
        int d=n%10;
        rev = rev*10 + d
        n=n/10;
    }
    System.out.println("Reversed number:" + rev);
}
}
```

Input :-

Enter a number: 12345

output :-

Reversed number: 54321

2. Armstrong number :-

```
import java.util.Scanner;
class Armstrong {
    public static void main(String[] args) {
        Scanner input = new Scanner(System.in);
        System.out.print("enter a number:");
        int n=input.nextInt();
        int rev = 0;
        temp=n;
    while (temp!=0){
        int d = temp%10;
        rev = rev + d*d*d;
        temp = temp/10;
}
```

```
if (n==rev){
    System.out.print("It is Armstrong number");
}
else{
    System.out.print("It is not Armstrong number");
}
}
}
```

Input :-

Enter a number = 153

output :-

It is Armstrong number

3. Calculate the gcd of two numbers :-

```
import java.util.Scanner;
 class gcd{
  public static void main(String[] args){
   Scanner input = new Scanner(System.in);
   System.out.print("enter a number;");
   int n1 = input.nextInt();
   System.out.println("enter another number;");
   int n2 = input.nextInt();
   int ~~a=a~~; a=n1;
   int     b=n2;
  while (b!=0){
   int temp = b;
        b = b%.a
        a = temp;
  }
 int gcd = a;
 System.out.println("gcd: " + gcd);
}
}
```

Input :-

Enter a number : 16

Enter another number : 20

output :-

gcd : 4

4.3 merge two arrays:-

```
import java.util.Array;
class mergeSortedArrays{
    Public static void main(string[]args){
    int[ ] array1 ={1,3,5,7};
    int[ ] array = {2,4,6};
    int [] mergedArray = mergeArrays](array1 ,array2);
    System.out.println(Arrays. toString(mergedArray));
}
Public static int[] mergeArrays](int[ ] array1,int[ ] array2){
        int length1 = array1.length;
        int length2 =arrg2.length;
        int[ ] mergedArray = new int[length1 + length2];
        int i=0, j=0; k=0;
while (i<length1){
     mergedArray[k++] = array1[i++];
}
 while(j<length2){
        mergedArray[k++] =array2[j++];
}
  return mergedArray;
 }
}
```

output:-

merged array = {1,2,3,4,5,6}

5. count the frequency of characters in a string

```
import java.util.HashMap;
import java.util.Map;
class characterFrequency{
    public static void main(String[ ]args){
        String input = "hello" ~~world~~
```

```
Map<Character, Integer> charCountMap = countCharacter
                                        Frequency(input);

for(Map.Entry<Character, Integer> entry : charCountMap.
                                        entrySet()){
    System.out.println(entry.getKey() + ": " + entry.
                                        getValue());

}
}
public static Map<Character, Integer> countCharacter
                                        Frequency(String str
    Map<Character, Integer> charCountMap = new HashMap<
    char[] charArray = str.toCharArray();
    for(char c: charArray){
if(charCountMap.containsKey(c)){
    charCountMap.put(c, charCountMap.get(c)+1);
}else{
    charCountMap.put(c, 1);
}
}
return charCountMap;
}
}
```

output :-

```
h : 1
e : 1
l : 2
o : 1
```