

Assignment-II

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CSA0914 - Java programming

A2211396 - CSE

①

Reverse a number:

```
import java.util.Scanner;  
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) {
```

```

d = temp % 10; d = temp % 10;
rev = rev + d * d * d;
temp /= 10;

if (n == rev) {
    System.out.println("Armstrong number");
} else {
    System.out.println("Not Armstrong number");
}
}
}
}

```

Input

Enter a number = 153

Output

153 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 = n1;

```

```

int b=n2;
while (b!=0) {
    int temp = b;
    b = b%a;
    a = temp;
}
int gcd = a;
System.out.print("gcd : " + gcd);
}
}

Input : 
Enter a number : 16
Enter another number : 20

```

Output :-

gcd : 4

Merge two array:

```

import java.util.ArrayList;
class merge {
    public static void main(String[] args) {
        int[] array1 = {1, 3, 5, 7};
        int[] array2 = {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 = array2.length;
        int[] mergedArray = new int[length1 + length2];
        int i=0, j=0, k=0;
        while (i < length1 & j < length2) {
            if (array1[i] < array2[j]) {
                mergedArray[k] = array1[i];
                i++;
            } else {
                mergedArray[k] = array2[j];
                j++;
            }
            k++;
        }
        while (i < length1) {
            mergedArray[k] = array1[i];
            i++;
            k++;
        }
        while (j < length2) {
            mergedArray[k] = array2[j];
            j++;
            k++;
        }
        return mergedArray;
    }
}

```

```

while (i < length1) {
    mergedArray[k++] = array1[i++]; i
}
while (j < length2) {
    mergedArray[k++] = array2[j++]; j
}
while (j < length2) {
    mergedArray[k++] = array2[j++]; j
}
return mergeArray;
}

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

```

(5) Count the frequency of characters in a string

```

import java.util.*;
import java.util.Map;
class characterFrequency {
    public static void main(String[] args) {
        String input = "hell";
        Map<Character, Integer> charCountMap = new HashMap();
        freq(input);
        for (Map.Entry<Character, Integer> entry : charCountMap.entrySet()) {
    }
}

```

```
System.out.println(entry.getKey() + ":" + entry.getValue());
```

y

y

```
public static Map<Character, Integer> countCharacter
```

```
Frequency(string str)
```

```
Map<Character, Integer> countCharacter
```

```
char[] charArray = str.toCharArray();
```

```
for (char c : charArray) {
```

```
if (charCountMap.put(c, charCountMap.get(c) + 1);
```

y else {

```
charCountMap.put(c, 1);
```

y

y

```
return charCountMap;
```

y

y

Output :-

h : 1

e : 1

l : 2

o

o : 1