**Question 01**

1. What is the feature?

It's a daily streak button.

2. How does it work?

When a user logs in daily, the streak increases and it's shown in the profile. If the streak breaks, the streak number resets. So in that case users can pay several amounts to keep streak numbers not resetting.

3. How does it promote user engagement and interaction?

So with this feature users will try to log in daily. So vice versa user engagement increases.

**Question 02**

package Ogilvy\_SE\_Test;

import java.util.Arrays;

public class Question\_02 {

public static void main(String[] args) {

int[] input\_list = {30,40,10,40,20};

int result;

result=find\_second\_largest(input\_list);

System.out.println(result);

}

private static int find\_second\_largest(int[] inputList) {

//Sorting the array into the descending order

for(int j=0; j<inputList.length;j++) {

for (int i = 0; i < inputList.length-1; i++) {

if (inputList[i] < inputList[i + 1]) {

int temp = inputList[i];

inputList[i] = inputList[i + 1];

inputList[i + 1] = temp;

}

}

}

//Checking and removing duplicates

int index = 0;

for (int i = 1; i < inputList.length; i++) {

if (inputList[i-1] != inputList[i]){

inputList[index]=inputList[i-1];

index++;

}

}

//returning the second-largest number which contains in index 1;

return inputList[1];

}

}

**Question 03**

package Ogilvy\_SE\_Test;

public class Question\_03 {

public static void main(String[] args) {

String input = "Hello World";

int result;

result = vowelCount(input);

System.out.println(result);

}

private static int vowelCount(String input) {

char[] charArray = input.toCharArray();

//iterating through the array while counting how many vowels are there

int count =0;

for(int i=0;i<charArray.length;i++){

if(charArray[i]=='a'||charArray[i]=='e'||charArray[i]=='o'||charArray[i]=='u'||charArray[i]=='i'){

count++;

}

}

return count;

}

}

**Question 04**

package Ogilvy\_SE\_Test;

import java.util.\*;

public class Question\_04 {

public static void main(String[] args) {

String input = "A man a plan a canal Panama";

boolean result;

result = is\_palindrome(input);

System.out.println(result);

}

private static boolean is\_palindrome(String input) {

//Removing blank spaces

String in = input.replaceAll("\\s", "");

//Converting to the lower cases

String lowerCase = in.toLowerCase();

//creating an array and putting string into the array

String lowerCaseReversed;

char [] lowerCaseArray = lowerCase.toCharArray();

//creating array for the reversed string and reversing the array

char [] loweCaseReversedArray = new char[lowerCaseArray.length];

for(int i=0; i<loweCaseReversedArray.length;i++ ){

loweCaseReversedArray[i] = lowerCaseArray[lowerCaseArray.length-1-i];

}

//comparing two arrays and return the boolean value

boolean isPalindrome = Arrays.equals(lowerCaseArray,loweCaseReversedArray);

return isPalindrome;

}

}

**Question 05**

package Ogilvy\_SE\_Test;

import java.util.ArrayList;

public class Question\_05 {

public static void main(String[] args) {

int [] inputArray = {1, 2, 3, 4, 5, 6};

ArrayList<Integer> results = filterEvenNumbers(inputArray);

System.out.println(results);

}

private static ArrayList<Integer> filterEvenNumbers(int[] inputArray) {

//Creating an ArrayList instead of an array because we don't know about how many even numbers containing

ArrayList<Integer> evenArray = new ArrayList<Integer>();

//Iterating through the array and adding even numbers to the arraylist

for (int i=0; i<inputArray.length;i++) {

if(inputArray[i]%2==0){

evenArray.add(inputArray[i]);

}

}

return evenArray;

}

}

**Question 06**

package Ogilvy\_SE\_Test;

import java.util.Random;

import java.util.Scanner;

public class Question\_06 {

public static void main(String[] args) {

while (true) {

System.out.println("Guess What I'm Thinking");

Scanner Input = new Scanner(System.in);

System.out.println("Enter a number between 01 and 10! (For exit enter 100)");

int numberInput = Input.nextInt();

Random Think = new Random();

int thinkingNumber = Think.nextInt(10);

if (numberInput == thinkingNumber) {

System.out.println("We got a winner!");

System.out.println();

} else if (numberInput == 100){

break;

}else{

System.out.println("Bad luck! Try Again, What I'm thinking was " + thinkingNumber);

System.out.println();

}

}

}

}